

Cebu Journal *of* Computer Studies

Volume 1
Number 1

1st Semester of 2018

Online Research Journal of the College of Computer Studies of UCLM
url: <https://uclm-ccs.com/docs/CCS-Journal-Vol-1-No-1.pdf>

College of Computer Studies - UCLM



The Cebu Journal of Computer Studies (CJCS) is a semestral/semi-annual online journal published by the University of Cebu Lapu-Lapu and Mandaue through the office of the Program Research Coordinator (PRC) of the College of Computer Studies. The facts contained in the articles published in this issue of CJCS are those of the authors and not of the Editors of this journal. Any inquiries regarding editorial policies and contributions of this journal may be addressed to the Editor.

Copyright © 2018 by University of Cebu Lapu-Lapu and Mandaue.

All rights reserved. No part of this online journal may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law.

Editorial Board

- Editor : DR. ALEXANDER BUCOL Y.
Program Research Coordinator, College of Computer Studies, UCLM
- Associate Editor : DR. MAURO ALLAN AMPARADO P.
CARES Director, UCLM
- Assistant Editor : DR. AURORA MIRO C.
Dean, College of Computer Studies, UCLM
- Journal Staff : RASTY DEMECILLO P.
Chairperson BSCS Program, College of Computer Studies, UCLM
: SUZETTE BALUARTE B.
Chairperson BSIT Program, College of Computer Studies, UCLM
- Editorial Consultant : DR. ANNA LIZA SON B.
Campus Academic Director, UCLM
- Postal Address : The Editor/Dr. Alexander Bucol
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue
A.C. Cortes Ave., Mandaue City

The Cebu Journal of Computer Studies, is the official research journal of the College of Computer Studies of the University of Cebu Lapu-Lapu and Mandaue, that is devoted to the interests of the students, faculty and staff of the college. The CJCS is a venue for the publication of the capstone project and research outputs of the college. The editors encourage the submission of a variety of manuscripts: reports of research, as well as the capstone projects to be highlighted in this journal.

Cebu Journal *of* Computer Studies

ARTICLES

CAMPUSCONNECT: A WEB AND ANDROID CAMPUS PORTAL by: Daugdaug, Geneva T. and et.al	1
FLOCKERS: A SOFTWARE AS A SERVICE FOR MEETUPS AND EVENT COLLABORATION by: Salundaguit, Christian Van Azen and et. al.....	11
I-QUEUE: A CENTRALIZED QUEUE MANAGEMENT SYSTEM by: Batbagon, Clifford C. and et. al.....	24
ITRACKMINOR: A CURFEW MONITORING SYSTEM by: Limpangog, Vevian and et. al.....	35
ONVET: A WEB AND MOBILE-BASED VET APPOINTMENT SYSTEM by: Timbal, Florie Vieve and et. al.....	42
REDFLAG: A WEB BASED ISSUE TRACKING AND MONITORING SYSTEM by: Abing, Angelee Maree I. and et. al.....	49
TECHNIBAI: A WEB_BASED APPLICATION FOR ONLINE SERVICES by: Cabasan, Jenny Fe Y. and et. al.....	57
UCLM ONLINE ENROLLMENT SYSTEM WITH STUDENT PORTFOLIO by: Arcangeles, Joyce A. and et. al.....	69
UCLM PORTAL by: Agsamosam, Laura and et. al.....	79
WINDOWSHOPPING: AN ONLINE SHOPPING SYSTEM by: Ibalez, Clyde M. and et. al.....	94

CAMPUSCONNECT: A WEB AND ANDROID CAMPUS PORTAL

Daugdaug, Geneva T.
Project Manager
University of Cebu Lapu-Lapu and Mandaue

Enriquez, John Michael C.
Database/Network Designer
University of Cebu Lapu-Lapu and Mandaue

Grumo, Kieth Daisyree
Technical Writer& QA Tester
University of Cebu Lapu-Lapu and Mandaue

Sabordo, Dexter Z.
System Analyst
University of Cebu Lapu-Lapu and Mandaue

Estorgio, Rechie P.
Software Engineer
University of Cebu Lapu-Lapu and Mandaue

Abstract - Web portals have risen in popularity as a way of collecting, organizing and presenting content in a highly uniform, customizable and personalized way. As the technologies that enable the creation and management of these portals have evolved, it is not only information content that is being ordered but also gives interactivity between the users and the administration. Over the years, universities have developed their web portals. Web portals have evolved to enable the ability not only to provide a unified look and feel to the entire universities websites but also to apply personalization and customization to its content. The proponents focus on the lack of information received by the student due to the medium use in spreading school information. Given that now this generation has social media, students are very dependable of school information had received mainly on Facebook. Using such medium of technology for spreading information is not advisable for it is not design for especially for school information intended for students in their respective universities. With this, the proponents specifically aimed to introduce the beauty and functionality in using the current technology such as computers and mobile phones to help both administrators and the students who will be the user of the system. This project is attempted to provide the advantages of the campus portal between the students and the faculty in University of Cebu Lapu-Lapu and Mandaue.

Keywords – campus portal; interactivity; school information; web portal; information content

INTRODUCTION

Web portals have risen in popularity as a way of collecting, organizing and presenting content in a highly uniform, customizable and personalized way (Gante, 2015). As the technologies that enable the creation and management of these portals have evolved, it is not only information content that is being offered but also gives interactivity between the users and the administration. Over the years, universities have developed their web portals. Web portals have evolved to enable the ability not only to provide a unified look and feel to the entire universities websites but also to apply personalization and customization to its content.

The proponents focus on the lack of information received by the student due to the medium use in spreading school information. The students are quite busy on their requirements given by their respective courses. With that, students cannot recognize those activities and announcements posted on the bulletin board. On the faculty side, it is a question on how they can post school information that is recognizable by the students to avoid future complexity between the students and the faculty.

Given that now this generation has social media, students are very dependable of school information had received mainly on Facebook. Using such medium of technology for spreading information is not advisable for it is not design for especially for school information intended for students in their respective universities.

With this, the proponents specifically aimed to introduce the beauty and functionality in using the current technology such as computers and mobile phones to help both administrators and the students who will be the user of the system. This project is attempted to provide the advantages of the campus portal between the students and the faculty.

University of Cebu Lapu-Lapu and Mandaue. It will help students be more active and more updated of what is happening in the school in his/her most convenient time through the Internet. The proponents' primary concern in developing the system is to help the students receive real-time update whether from the school or his department. This will also give the privilege to the faculty and the SAO personnel to efficiently disseminate their announcements and activities with the help of the current technology. Since the application is available on the Internet, it will be easily accessible and always available. The system will involve a series of colleges/departments that covers all the requirements of creating a computerized portal system. The goal of this study is to provide an efficient computer-based system that will add, update and maintain school information and records.

OBJECTIVES OF THE STUDY

The primary objective of the proponents is to develop a web portal for University of Cebu Lapu-Lapu and Mandaue for students and teachers. It helps students to file a report and complains through the portal. The goal of the study is to provide an efficient computer and Android-based system that will easily post updates, view updates, file reports, and complains. Since the application is available on Android, the students can be able to receive notifications.

The specific objectives of the study are:

1. To provide tools for students for:
 - Online grade viewing;
 - Online post viewing;
 - Disciplinary Report information, and;
 - Students forum portal.
2. To provide tools for teachers for:
 - Information or updates posting;
 - Online grade posting and;
 - Students information portal.
3. To provide real-time notification and updates for the users.
4. To create a system where the users can process private messaging.

SCOPE AND LIMITATION

The main objective of the system CampusConnect is to provide tools that allow students and teachers establish communication specifically regarding students' performance and to keep in touch with campus activities.

This study covers:

1. User Management
 - Students. This feature allows the student to register in the system. They can also update their information once they are already registered.
 - Faculty. This feature allows the instructor to pre-enroll the student in the course they have created to enable them to view their posts.
2. Campus Update Posting

This feature enables the student to be updated with campus activities and events.
3. Grade Management
 - Student. This feature allows the students to view their grade online.
 - Faculty. This feature allows the instructors to upload their grade on line.
4. Course Management
 - Student. This feature allows the student to enroll himself in a course using the code given by the instructor. It also allows the student to view updates posted in the course they belong.
 - Faculty. This feature allows the instructor to create the course. It also allows the instructor to post in the class created.
5. Real-time Notification

This feature notifies the student for the new update posted by the instructor.

6. Online Report for Violation

This feature allows the student to file a report regarding incidents, violations, and additional concerns.

7. Online Student Forum

This feature enables the student to comment and post in the forum for their questions and other clarifications.

8. Online Private Messaging

This feature enables the users to create a personal message.

However, this application limits the following functionalities:

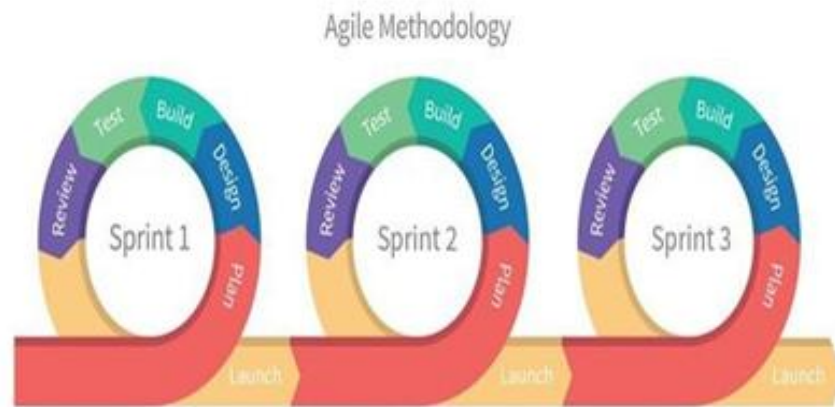
- There is no accessibility for parents or guardian unless student account is given by their children.
- Only registered student can access the system.
- This system requires a reliable Internet connection.
- This application only limits for web and android users only.

RELATED LITERATURE

Pacio on her thesis entitled Online Student Information System of Benguet State University gave emphasis that as main goal of the school to generate and disseminate new knowledge and technologies that will promote sustainable resource development and enrich the competent and effective services geared towards efficiency and economy which is inconsistent with the existing student information system of the Kalinga State University Rizal campus (Pacio, , 2013). Online Information systems could be helpful to accomplish different tasks. It highlights that it can improve the students' academic and attains success in their studies. It performs functions to manage the different features of the students' activities and tasks. Aside from that it also monitors students' involvement and active participation in which is very important because it can give students more opportunities for them to be exposed in real like life situations and this will be beneficial to them in the future as they step ahead. This is where you, as a student, hold your classes, interact with your Faculty-In-Charge as well as with tutors and other classmates, share various resources ranging from documents to videos and sound les, and submit quizzes and assignments, and so much more. Using student number and password, you can log in to the portal. (UPOU- student Portal, 2011). Learning and engagement don't stop the four corners of the classroom. Using our current technology is a great help and gives a lot new experience between the students and the faculty. The system aims to determine the needed contents or features to be included in the development of the portal; to identify the possible advantages of the web portal for faculty, students and College (GANTE, 2015). Web portals are very accessible and widely used in different schools. The proponents can correlate to this article as they propose their web portal. What's something new about this is that the registered users, which will be the students and faculties, can use the forum to post their concerns. In association with the article above, this system will provide and show the necessary information that the faculty and students might be needing.

METHODOLOGY

Software Engineering Methodology



The methodology falls under the software prototyping in software engineering methodology. Agile software development is a set of principles for software development in which requirements and solutions evolve through collaboration between self-organizing, cross-functional teams. It promotes adaptive planning, evolutionary development, early delivery, and continuous improvement, and it encourages rapid and flexible response to change. The proponent will apply the Agile Software Methodology in the system development. This covers the following phases, namely:

PLAN PHASE

This phase focuses mainly on identifying problems and requirements of the system to be developed. The data gathered during the process of planning and identifying the requirements of the system is being applied.

Business Model Canvas: This helps the organizations conduct strategic conversations around businesses. The canvass main objective is to help companies consider a product-centric thinking and towards business model thinking by understanding the nine key points that serve as a vital role in business return on investments. For a start-up, each of these nine components contains a series of hypotheses about the business model that has to be tested.

Gantt Chart: Gantt Chart is a chart in which a series of horizontal lines show the amount of work done or production completed in certain periods of time about the amount planned for those periods.

Functional Decomposition Diagram: It shows the overall processes of the system and how the user may interact with them. It is presented using the top-down presentation wherein the four-main user of the system are shown. The main ones are further broken down to reveal the processes that exist in each of them. In some processes, it shows details of related information that are used.

DESIGN PHASE

This phase focuses mainly on identifying the system functionalities and the design of the system prototype. This includes the regular meeting with an adviser to help and guide us in creating and deciding upon the proper implementation of the system.

Use Case Diagram: It is composed of two components; the Business Use Case and the System Use Case. The Business Use Case is to describe how the business is used by its customers and partners. Activities that directly concern the customer, or partner, as well as supporting or managerial tasks that indirectly concern the external party can be presented. While the System Use Case is a list of actions or event steps typically defining the interactions between a role and a system to achieve a goal.

Class Diagram: Shows the Class Diagram where it illustrates the relationships and source code dependencies among classes in the Unified Modeling Language (UML).

Storyboard: It is a graphic organizer in the form of illustrations or images displayed in sequence to illustrate the important steps of the user experience.

Database Design: Contains all the needed logical and physical design choices and physical storage. Under database design is the Entity-Relationship Diagram and Data Dictionary.

Network Design: This is where network planning and design is an iterative process, encompassing topological design, network-synthesis, and network-realization Under network topology are Network Model and Network Topology.

BUILD PHASE

In this phase, the use of application software to develop the system is present which is the proponent is planning to use. This is where the actual development begin. Along this period, comments and suggestions from the adviser will always be considered.

Technology Stack Diagram: Compose of a logically complete platform for running a service or supporting an application.

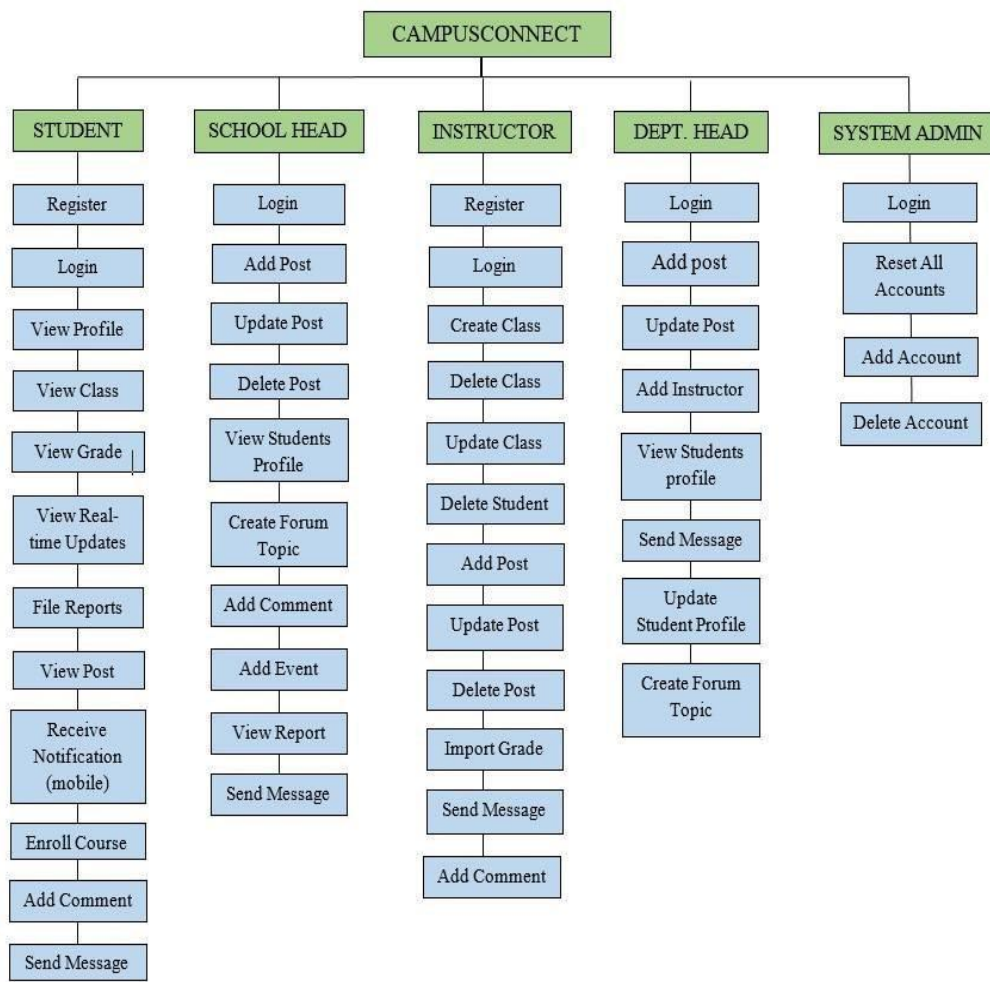
Program Specification: A program specification is a statement of requirements of a program, an expression of a design for a program, and a formal statement of conditions against which the

program will verify. Its purpose is to be executed on a computer and perform that computation. It is composed of a Functional and Non-functional Requirements.

TEST PHASE

This phase focuses on identifying system errors. Once the systems done, this phase is conducted to evaluate the efficiency of the system and checks whether it meets the end-user requirements. It is taken into consideration that there will be issues and that iterations of the previous steps will be done again to remedy these issues to satisfy the users.

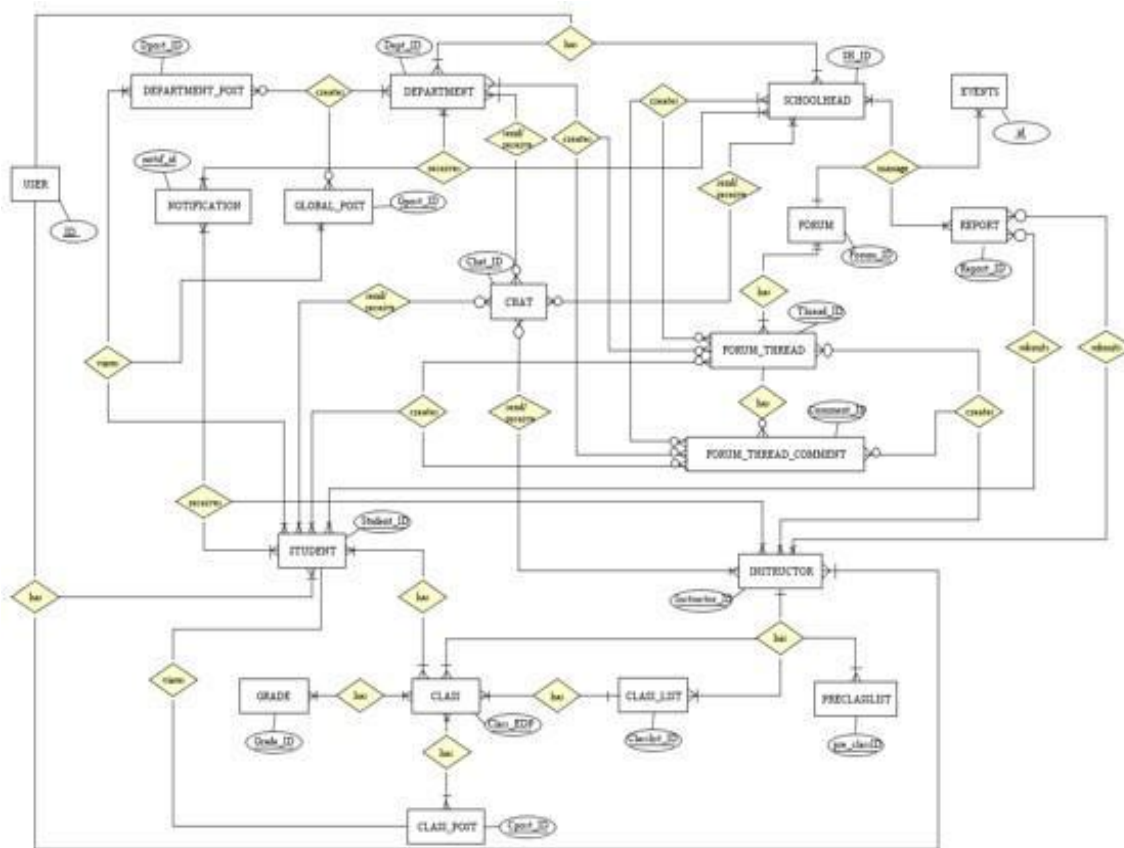
FUNCTIONAL DECOMPOSITION DIAGRAM



It shows the overall processes of the system and how the user may interact with them. It is presented using the top-down presentation wherein the four-main user of the system are shown. The main ones are further broken down to reveal the processes that exist in each of them. In some processes, it shows details of related information that are used.

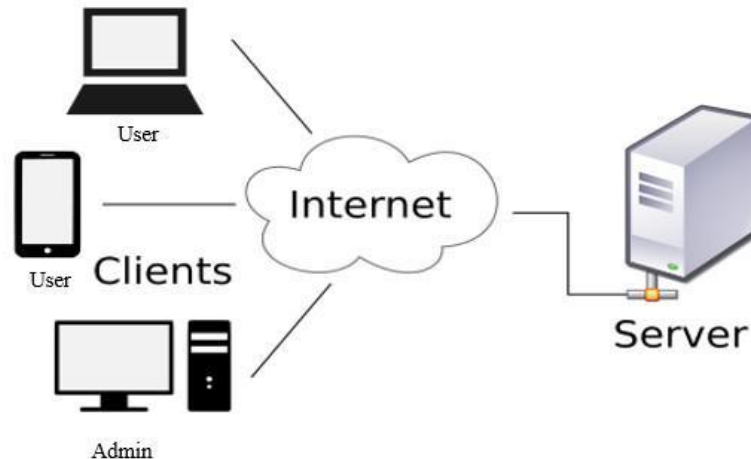
ENTITY RELATIONSHIP DIAGRAM (ERD)

An entity relationship diagram (ERD) is a data modeling technique that graphically illustrates information system entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure. Network planning and design is an interactive process, encompassing topological design, network-synthesis, and network realization, and is aimed at ensuring that a new telecommunications network or service meets the needs of the subscriber and operator.



ENTITY RELIOSHIP DIAGRAM

NETWORK MODEL



The client-server model of technology is a distributed application structure that segmentation tasks or workloads between the providers of a service, called servers, and service requester called clients. Client and servers communicate over a computer network on different hardware, but both belong to the same system. Server host executes one or more server programs which share their resources with the clients. Clients on the other hand, do not share any of its resources but request a server content or function. Therefore, clients initiate communication with the server which waits for an incoming request.

FINDINGS AND CONCLUSION

In conclusion, there is a need for UCLM to implement this system for more efficient and precise distribution of school information. According to our survey there are student who need the system with the following features:

- Online Grade Viewing
- University Updates Posting Department Updates Posting Class Updates Posting
- Online Report Violation and Concerns Online Forum

There is a need to have faster server and bigger capacity of storage for an efficient and faster access of the system.

BIBLIOGRAPHY

GANTE, D. D. (2017). A proposed Web Portal for the College of Computing and Information Technology. Retrieved from Academia: https://www.academia.edu/4083326/A_proposed_Web_Portal_for_the_College_of_Computing_and_Information_Technology

Pacio, R. (, 2013). Online Student Information System of Benguet State University. (OSIS-BSU), Philippines.

FEU INSTITUTE OF TECHNOLOGY. 2017. 17 July 2017. <https://www.feueac.edu.ph/portal/>

University of San Carlos. 2017. 17 July 2017.<https://ismis.usc.edu.ph/>

University of Southern Mindanao. 2017. 17 July 2017.<http://www.usm.edu.ph/>

Bontilao, J. (2015). Student Monitoring System for Basic Education.

Pomperada, J., & San Jose, K. M. (2015).PHP with MySQL.

Star network. (2017). Retrieved from Wikipedia: [https://en.wikipedia.org/wiki/Star network](https://en.wikipedia.org/wiki/Star_network)

Student Portal. (2017). Retrieved from <https://student.portal.chalmers.se/en/Pages/About-the-Student-Portal-.aspx>

Studymoose. (2017). Retrieved from <https://studymoose.com/background-of-the-study-essay>

Tabar, E.(2011).University of Cebu Lapu-Lapu and Mandaue Web Portal.

What-is-client-server-model. (2017). Retrieved from Quora: <https://www.quora.com/What-is-client-server-model>

FLOCKERS: A SOFTWARE AS A SERVICE FOR MEETUPS AND EVENT COLLABORATION

Salundaguit, Christian Van Azen
College of Computer Studies
University of Cebu Lapulapu Mandaue

Mercado, Jeric Joseph
College of Computer Studies
University of Cebu Lapulapu Mandaue

Novo, Joven
College of Computer Studies
University of Cebu Lapulapu Mandaue

Abaño, John Miguel
College of Computer Studies
University of Cebu Lapulapu Mandaue

Abstract - The Web has grown into one of the most important channels to communicate social events nowadays. However, the sheer volume of events available in event-based social networks often undermines the users' ability to choose the events that best fit their interests. With the rapid growth of event-based social networks, the demand of event recommendation becomes increasingly important. Different from classic recommendation generally faces the problems of online and offline social relationships among users and implicit feedback. This paper presents a Software as a Service for Meetups and Event Collaboration which allows event organizers to post and promote their events and also participants to register to an event that best fits their interest. It discusses the design requirements, features, and implementation of the system. It is shown that this system has a number of advantages over traditional organizing events methods, including scalability, real-time feedback on the status of the events and securing the payment transaction between the participants and the event organizers. The system does not only contain online social interactions as in other conventional online social networks but also includes valuable offline social interactions captured in offline activities. Although the online system is a clear improvement over traditional event system, it is also shown that small details can interfere with usability, but still unaddressed, requirement. The objective of the study is to make use of the smartphones and the Internet by developing a social media application that centralizes events or meet-ups, find friends over the Internet and more importantly, an application where face-to-face socialization makes possible.

Keywords – social networks; social relationships; meetups; collaboration; social interaction

INTRODUCTION

Just imagine what would happen if people were made to stay all alone at some place for a long period without any interactions with people? Any normal person would be exhausted of the loneliness. The reason behind this is that humans are social animals and they love living amidst people. In today's modern world, things are changing and machines are overpowering humans making them more gadget-dependent. People communicate with each other via social media platforms, chat messages and special apps on their smartphones. But face-to-face interaction is becoming something of the past. Society, on the whole, is suffering. Various research studies are being carried out to understand the value and importance of socializing with striking results regarding a wholesome human development. People who have been brought up in a lonely ambiance tend to develop more problems as they grow up than people who have been brought up amidst lots of social contacts. It is high time to make use of the smartphones and the Internet. Going out with people and see how direct interactions and socialization can change people's worldview and their overall wellbeing is possible in this modern world. People can socialize face-to-face with other Internet users by arranging meet ups on social media. Through social media sites, they can set up meetings, events and discuss a venue where they want to gather. Facebook, Meetup, Twitter, LinkedIn, Google+ are the most popular social media site where people can do those things. But there are little problems; Facebook is more on virtual socialization though users can set up meetings and events, they are not focused on it. Some people are not only into socializing but are into business; they set events to gather prospect clients for their company. There are also people who are into computer gaming, people who are into an outreach program. These people need social media to fulfill their goal. The Meetup system has an advantage over Facebook when it comes people meet-ups. It has categories of people's interests which users can select to search and join an event of their interest. However, there are things that are not found in Meetup features, for example, users cannot create their category of interests and attendees of the event cannot evaluate the event. The proponents have come up a solution to the problems which other social media sites do not have. Flockers is a software as a service for meet-ups and events collaboration; it is a system which focuses on meet-ups or events collaboration. The same as the Meetup, Flockers also enables users to organize and join an event. It has advantages over the existing social media sites for it allows users to create their category of interest, evaluate the event attended and much more. The researchers believe that these advantages will benefit the users. Flockers users can access all the features by registering an account, once he is registered he can then login into the system. In creating an event, the user must need a PayPal account for a subscription. In addition to creating an event, when the user cannot find the interest for his event, he can create a new category and can then proceed. Moreover, the user who will organize an event can set a registration fee for other users to join. Upon joining an event, the user can search for an event by category of interest. The system will also allow the user to process registration fee. Users who will join the event can interact other Participants through chat. When the event ends, the Organizer can create a question for evaluation about the event and let the attendees answer it. Furthermore, users can send personal messages to other users.

OBJECTIVES OF THE STUDY

The objective of the study is to make use of the smartphones and the Internet by developing a social media application that centralizes events or meet-ups collaboration.

Specific Objectives

The specific objectives that the proponents would like to achieve include the following:

1. To create a system where people can organize events or meet-ups.
2. To create a system where people can find friends over the Internet.
3. To develop a system where face-to-face socialization makes possible.

Scope and Limitations of the Study

The system will be performing different functions such as:

Scope:

1. Register user account
2. Manage user account
 - a. Upload profile photo
 - b. Update user information
3. Create event
 - a. Event title
 - b. Event information
 - c. Event cover photo
 - d. Registration amount if necessary
4. Subscribe to a plan as payment when creating an event.
 - a. Monthly subscription of event publication
5. Update event details
6. Search for an event
7. Display upcoming event
 - a. Event title
 - b. Event information
 - c. Event cover photo
 - d. Participants
 - e. Organizers
 - f. Discussions/ comments
 - g. Display related events according to the category.
8. Join an event
9. Process virtual order slip
 - a. Oder slip can have one or more participants
10. Process evaluation for the events.
11. Manage event history

- a. The admin can upload photos which were taken during the event.
12. Display event happenings/ history
 - a. Photos
 - b. Attendee's discussions of the event.
13. Send Notification via Short Message Service (SMS)
14. Send messages
 - a. Group message
 - b. Private message
15. Generate reports
 - a. Event(s) organized
 - b. Event details
 - c. Event Participants
 - d. Accumulated total amount and number of tickets purchased by Participants.

Limitation:

1. The users cannot access the system without Internet connection.
2. Event's venue will only be available in Cebu.
3. When creating an event, the admin must have a PayPal account for a subscription.

REVIEW OF RELATED LITERATURE AND STUDIES

Theoretical Background

The realm of Social Networking Sites is increasingly emerging as the subject of research in the field of social sciences. Scholars in many fields have begun to investigate the various aspects of Social Networking Sites. Many studies have been conducted around the world to investigate how these sites may influence issues of identity, privacy, social capital, youth culture, education and interpersonal relationships. Therefore, an attempt has been made in this chapter to review studies and articles related to the theme of the research. The review of literature allows us to study the main perspectives similar studies conducted in the same field. This will give a proper guideline to the research work and enable integration of the past studies leading to the expansion of knowledge. Social networking has had a great effect on how people communicate with each other. It has made it incredibly easier to connect with people that you might not know or people that you have not been able to talk to in years. Networks like Facebook and Twitter make it easy to also create communities that you can feel a part of. Social networking is a nice form of entertainment, is great for meeting people with similar interests, and is definitely useful for staying in touch with old friends/acquaintances. It can also be a very effective promotional tool for businesses, entrepreneurs, writers, actors, musicians, or artists. Most of us have hobbies or things that we are keenly interested in, like books, television, video games, or movies and etc. Social networks allow us to reach out to others that have the same interests (Nations, 2017). Since their introduction, social network sites have attracted millions of users, many of whom have integrated these sites into their daily practices. As of this writing, there are hundreds of social networking sites, with various technological affordances, supporting a wide range of interests and practices. While their

key technological features are fairly consistent, the cultures that emerge around social networking sites are varied. Most sites support the maintenance of pre-existing social networks, but others help strangers connect based on shared interests, political views, or activities. Some sites cater to diverse audiences, while others attract people based on common language or shared racial, sexual, religious, or nationality-based identities. Sites also vary in the extent to which they incorporate new information and communication tools, such as mobile connectivity, blogging, and photo/video-sharing and etc. What makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks. This can result in connections between individuals that would not otherwise be made, but that is often not the goal, and these meetings are frequently between “latent ties” (Haythornthwaite, 2005) who share some offline connection. On many of the large social networking sites, participants are not necessarily “networking” or looking to meet new people; instead, they are primarily communicating with people who are already a part of their extended social network. Recent years have witnessed the popularity of event-based social networks (EBSNs). In EBSNs, event recommendation, as an essential topic in recommender systems, plays an important role in recommending the most relative events to users who are likely to participate. The services allow users to organize, participate, comment and share offline events such as cocktail parties, seminars, concerts, product launching and a lot more. The work (Liu and et al. 2012) studied the heterogeneous property of EBSNs on community and information. The work (Zhang and et al. 2013) studied the new group recommendation method based on the event-based social network. In this era, the development of technology and its accessibility has enabled rapid expansion and popularity of Social Networking Sites. Consequently, this global phenomenon is affecting interpersonal relationships of many. This aspect only stresses upon a detailed research work to be carried out involving interpersonal relationships and Social Networking Sites. Therefore, to have a clear view, it is highly essential to have the knowledge of existing studies and articles with regard to Social Networking Sites. As a result, this aids in better formulation of the present study and a proper understanding of the diverse opinions existent. All the studies mentioned in the review give a plethora of views about Social Networking Sites and correctly position the importance of the present study.

Related Literature

Social networks gave a big help to everyone, especially among the students’ businessman and other members of the society. Social networks have different features that may enjoy by the people all around the world, what the problem is, people loses their self-control in using them (Orellana, M.K, 2013). Facebook is the most popular social networking site today wherein people may share and upload videos, pictures, messages and chat. Twitter is also famous to every people nowadays wherein people can share their feelings, thoughts and ideas. Through twitter, they can easily be connected to their favorite celebrities and they can also be updated on what is trend all around the world. Aside from these two, Tumbler, MySpace, and Bing also became a raging craze to everyone. Social networking communities will definitely stay due to its millions of users. In addition, students today stay on these accessibilities of information they may get in social networks. Social network may help them in giving knowledge in thesis and journals but still

negative effects of this still overweighs especially about losing their self-control (Orellana, M.K, 2013). Social networks bring a big benefit about communication because through this we can easily communicate our loved ones despite of the geographic distance. Social network may also help celebrities to be more contact to their fans because through these sites they can easily post what are the recent happenings about them. Through social networks we can be updated in every happening not just in celebrities but also the recent updates to our country and also in the whole world (Nations, 2017). Social networking sites can be a good way to make connections with people who has similar interests and goals. Communication is one of the main things why social networking had been viral. Social networking sites are the huge place to gather information on what is trending nowadays. Trending topics regards celebrities, politics, sciences, technologies, discoveries and amazing facts (Desreumaux, 2015). Businessmen have noticed also the value of social networks in our life that's why they used it to promote their products. Social marketing was often used at the present time due to people used social networks frequently. Social networks are not always good for us because other people use it inappropriate way wherein some people are posting pornographies sites and nude photos that frequently students may see. Many studies have shown that the extensive use of social networks can actually cause addiction to the users. Students tend to focus on cyber games that block the focus on their studies. A person gets lazy of works due to over usage of social networking sites and online games.

Related Studies

Review of the relevant studies is an essential part of any study. The survey of the relevant studies is a crucial aspect of the planning of the research. In the words of Turney and Robb (2014) "The development of a research design, scope of the intensity and care with which a researcher has examined the literature related to the proposed research and the identification of a problem and determination." Here are some of the existing applications related to Flockers.

- City Socializer
- Event Ninja
- Social Cast
- Hash Meet
- Verlocal
- Meetup

RESEARCH METHODOLOGY

This chapter uses the descriptive development approach for the study of Flockers: A Software as a Service for Meetups and Event Collaboration.

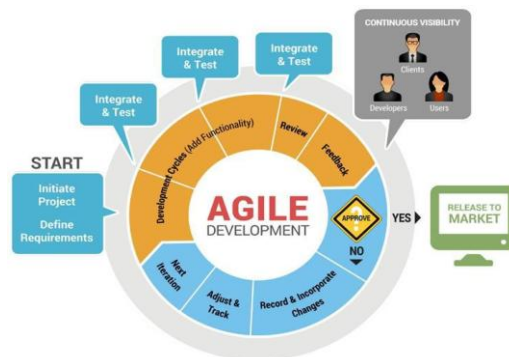
Research Environment

This study is conducted in the University of Cebu Lapu-Lapu and Mandaue (UCLM). The University was founded in the year 1995. April 1, 1964. A group of young men with vision and

foresight, spurred by altruistic motives to help mold the moral and intellectual life of the youth, banded themselves together to form an educational institution - the Cebu College of Commerce. February 1972, Approval by Securities and Exchange Commission (SEC) on the change of name of the institution from Cebu College of Commerce to Cebu Central Colleges (CCC). May 8, 1992, Approval by the Securities and Exchange Commission (SEC) on the change of name from Cebu Central Colleges to University of Cebu (UC). June 1, 1992, Atty. Augusto Go was installed as the first President of UC by then DECS Secretary Isidro D. Cariño. May 21, 1995, A satellite campus of UC was opened in the vicinity of Lapu-Lapu and Mandaue, hence, UCLM. April 1999, UCLM has been approved as an international center of the City and Guilds of London Institute to offer Pitman Qualifications and following International Programs: Food Preparation & Culinary Arts, Food & Beverage Services, Accommodation, Operations & Services. June 2001, UCLM became an accredited Networking Academy for CISCO courses from Module 1 to Module 4. December 7, 2001, Inauguration of the UCLM 7 - story annex building. June 2003, Inauguration of the UCLM grade school building. June 2006: Inauguration of the UCLM new building.

Software Engineering Methodology

This part of the study covers how the system developments were being processed or what software development life cycle is used during the elaboration of the survey. The purpose of this is to have an acceptable and structured plan to monitor the progress of the system development. The proposed system will use a software development method which collaborates with self and team organization that helps to promote continuous improvement and flexible response to change. The system involves software development principles to follow to make the system work successfully. The procedures serve as a different strategy to be implemented to have an efficient system. At this point, the system used a method called Agile Software Development (ASD). Agile software development is an umbrella entitled for a set of approaches and practices depending on the values and propositions expressed in the Agile Manifesto. Solutions evolve through collaboration between self-organizing, cross-functional teams utilizing the appropriate methods for their context (Agile Alliance, 2016). Agile software development (ASD) defined as a methodology for the creative in software application development operation that foresees the need for flexibility and applies a level of pragmatism into the delivery of the finished product.



AGILE SOFTWARE DEVELOPMENT DIAGRAM

Planning/Conception-Initiation Phase

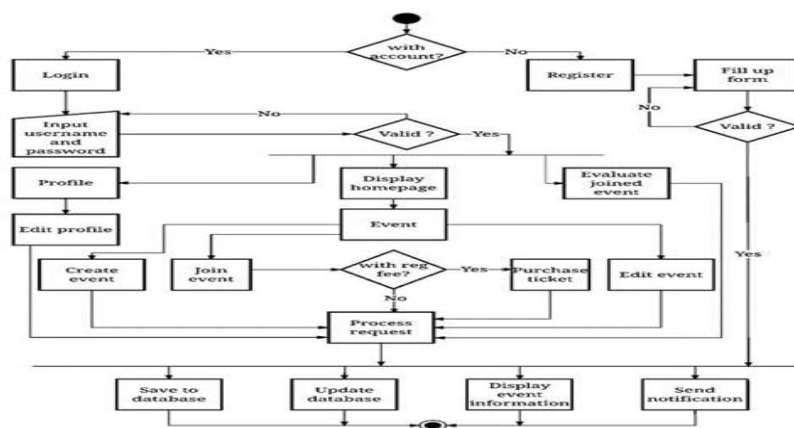
The planning/conception-initiation phase consists of those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.

Business Model Canvas

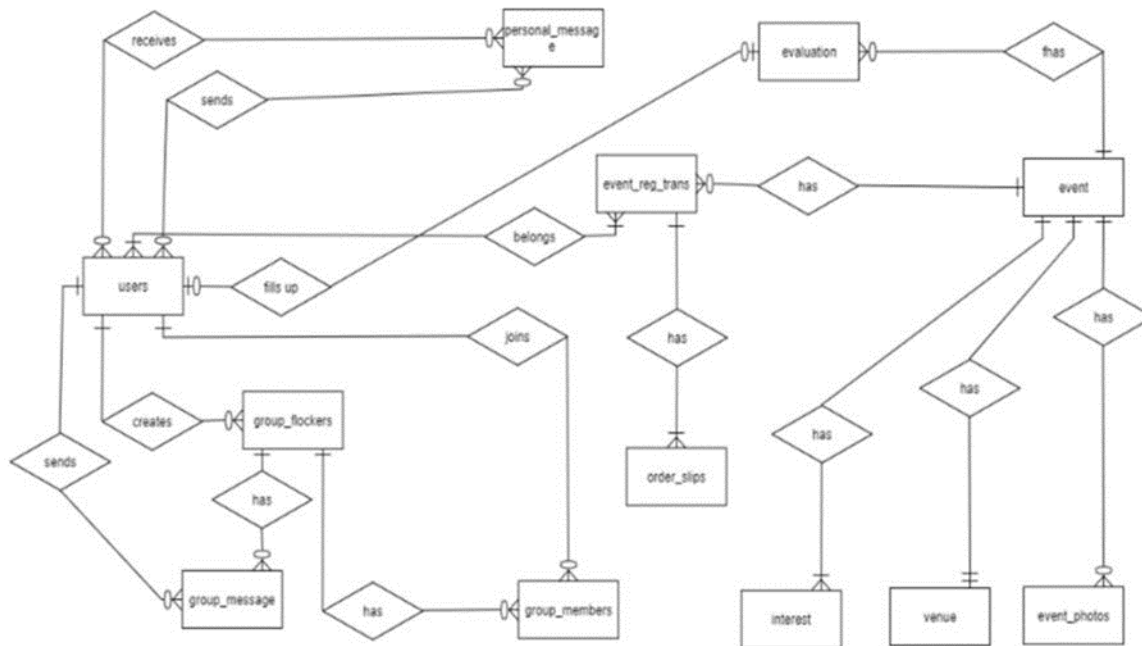
Key Partners ✓ Event Organizers ✓ Sponsors	Key Activities ✓ Provide event details <ul style="list-style-type: none"> • Event venue • Event time • Topic • Organizers • Joiners ✓ Search events ✓ Join upcoming events ✓ Create events ✓ Search group ✓ Join group	Value Proposition ✓ Provide reliable information ✓ Show accurate event maps and location ✓ Notify joiners ✓ Easy join events and groups ✓ Interact with other users	Customer Relationships ✓ Web ✓ Mobile	Customer Segments ✓ Joiners ✓ Organizers ✓ Locals
Key Resources ✓ Reliable Supplier		Channels ✓ Web ✓ Mobile		
Cost Structure ✓ Website development and maintenance		Revenue Stream ✓ Event organizer's subscription		

BUSINESS MODEL CANVAS DIAGRAM

Program Workflow



PROGRAM WORKFLOW DIAGRAM



Entity Relationship Diagram of Flockers

CONCLUSION

In this paper, we have identified and formally defined a new type of event-based social network, Flockers. By using the Meetup dataset, we studied the unique features of Flockers including payment transaction, online chat box, event evaluation, community structures and information flow over Flockers. Our research revealed many aspects of Flockers that are significantly different from conventional and traditional event-based social networks. We hope this paper paves the way for future studies on this interesting type of social networks. Therefore, the researcher concludes that the proposed system “Flockers: A Software as a Service for Meetups and Event Collaboration” can help event organizers and participants. The system aims to help event organizers posting and promoting their events at a least cost than traditional ways of promoting and advertising. The system also helps participants find and register to the events that best fits their interest than doing the old ways of searching events.

RECOMMENDATION

Based on the findings and conclusions presented, the following recommendations are suggested:

1. The researchers recommend that the Organizers should improve their way of advertising their events and communicating to their audiences or participants. Organizers should

- provide detailed information about their events. Provide them with several reasons why the event would benefit them and show them what problems their event can potentially solve.
2. The researchers recommend that Organizers should have a target audience and make sure that their audience is aware of their events. Organizers should reach a large audience of potentially qualified people if they want to fill their events. The researchers recommend that one of the best way to reach a qualified audience is to develop a partnership with relevant outlets.
 3. The researchers recommend that event Organizers should track their spending when it comes the event venues and other responsibilities. Organizers should simply track their spending during the planning process and assess along the way. This can result in overspending, and organizations might find themselves literally paying for it in the end.

BIBLIOGRAPHY

- Desreumaux, G. (2015, May 6). The 10 Top Reasons Why We Use Social Networks. Retrieved from wersm.com: <http://wersm.com/the-10-top-reasons-why-we-use-social-networks/>
- Guide To Socializing And Meeting Friends At Meetup.com Events. (2017, January 22). Retrieved from <http://www.succeedsocially.com>: <http://www.succeedsocially.com/meetup>
- Turney and Robb (2014). Chapter 2 - MMCA. Academia. <https://www.academia.edu/31181854/CHAPTER-2-MMCA>
- Jeffries, A. (2011, January 21). The Long and Curious History of Meetup.com. Retrieved from observer.com: <http://observer.com/2011/01/the-long-and-curious-history-of-meetupcom/>
- Josh, P. (2015, February 11). Why Meetups Are Important To Networking and Growth. Retrieved from professorjosh.com: <http://professorjosh.com/2015/02/11/why-meetups-are-important-networking-growth/>
- Martin. (2014, October 15). Using Meetup for Business Purposes. Retrieved from www.cleverism.com: <https://www.cleverism.com/using-meetup-business-purposes/>
- Meetup (website). (2015, May). Retrieved from www.wikipedia.org: [https://en.wikipedia.org/wiki/Meetup_\(website\)#cite_note-5](https://en.wikipedia.org/wiki/Meetup_(website)#cite_note-5)
- Nations, D. (2017, May 10). What is Social Media? Explaining the big trend. Retrieved from lifewire:<https://www.lifewire.com/what-is-social-media-explaining-the-big-trend-3486616>

Orellana, M. K. (2013, March 20). Social Networking Sites: Review of Related Literature. Retrieved from Blogspot: <http://rrlmara.blogspot.com/>

Robinson, A. (2010, July 17). Database design for a social networking site. Retrieved from stackoverflow.com: [http://stackoverflow.com/questions/3271182/data base-design-for-a-social-networking-site](http://stackoverflow.com/questions/3271182/data-base-design-for-a-social-networking-site)

Sander, T. (2005, September 4). "E-associations? Using Technology to Connect Citizens: The Case of." Retrieved from www.hks.harvard.com: <https://www.hks.harvard.edu/saguaro/pdfs/e-associations.pdf>

Teodorescu, C. (2016, July 6). The importance of meetups to you and your development. Retrieved from community.envato.com: <http://community.envato.com/the-importance-of-meetups/>

Training Evaluation Form. (2015, March 15). Retrieved from [cal.org](http://www.cal.org): <http://www.cal.org/caelanetwork/profdev/states/iowa/training-evaluation.pdf>

Liu, X., and et al. 2012. Event-based social networks linking the online and offline social worlds. In KDD12. ACM.

Zhang, W., and et al. 2013. Combining latent factor model with location features for event-based group recommendations. In KDD2013. ACM.

I-QUEUE: A CENTRALIZED QUEUE MANAGEMENT SYSTEM

Batbagon, Clifford C.
University of Cebu Lapu-Lapu and Mandaue

Jayme Jr., Oscar B.
University of Cebu Lapu-Lapu and Mandaue

Pradilla, Jessaly P.
University of Cebu Lapu-Lapu and Mandaue

Abstract - Queue Management System has been a problem for many years in many domains including the Financial, Health Care, Public and Retail Sectors. In this age of technology, it is not only important to organize the existing queue, but to gather statistics about the queue in order to identify trends that could be anticipated. For many hospitals, and other companies these needs are not addressed in a sophisticated manner. This study will suggest that a Queue Management System will improve the satisfaction of a client as well as the company. On the other hand, the University of Cebu Medical Center Inc. (UCMed) and other companies are currently facing some challenges with regards to their way of transaction processes. At the same point, the process is slow, inefficient, unsystematic and unorganized because of lack of communication and proper dissemination of transaction processes. Furthermore, the company uses a traditional way of transaction which are often manifested by congestion and long delays in client care. The purpose of the research study entitled "I-Queue: A Centralized Queue Management System" is to help the clients facing some challenges with regards to their way of transaction processes. This research aims to increase or to improve the processes of transactions in an efficient, systematic, (within departments) to have a proper dissemination and communication with the use of technology. It also aims to improve the processing methods of the clients which makes it easier to process by using technological advancement. It is designed to be user friendly and complete with features necessary to generate reports made by this system. The proponents made use of the descriptive methods of research which identified the existing problems in using queuing system for daily transaction processes in different departments. These features are available via web and mobile devices. Through the aid of the system, communication and proper dissemination of transaction process will be solved and will be more convenient because the system provides transaction process assigned in designated areas along with the token number. With the system, clients are free to go everywhere inside the company premises because the system is powered by Android application. Access of the development system will become wider because the platform that will be used for the development is web-based or WLAN. Also, the web application will serve as a centralized Queue Management System for all departments that uses the system.

Keywords – centralized queue management system; i-queue; queue management; queue; queuing system

INTRODUCTION

The use of technology is increasing day by day; they are all depending on technology and using various technologies to accomplish specific tasks in their lives. Today, they have various emerging technologies which impact their lives in different ways. Technology is being implemented in almost every section of their lives and business structures. It does not matter

which industry they are dealing with technology will be used in a definite manner. So, embracing it and learning how to use technology in whatever they do is very important. As the world keeps on developing, technology will be altered, what is working today might not be working anymore. So, it is better to stay up-to-date with new emerging technologies and learn how to embrace and use them in their day to day activities. With the integration of web technology, the basic activities of people are now done more systematically and more conveniently. Technology is an important factor in the health care industry from communication between healthcare professionals and patients to computer-assisted medical procedures and other innovative technology. A simple instance of such development is the Queue Management System that is used to control queues. Queues of people form in various situation and locations in a queue area. The Queue Management System is important and valuable because it can immediately help the client as well as the hospital in making their process more efficient, systematic and organized. Furthermore, client can also feel comfortable because instead of falling in line they just have to seat back and relax while waiting for their turn either make other transaction while waiting, with that they can manage or estimate there time wisely. Queue Management System has been a problem for many years in many domains including the Financial, Health Care, Public and Retail Sectors. In this age of technology, it is not only important to organize the existing queue, but to gather statistics about the queue in order to identify trends that could be anticipated. For many hospitals, these needs are not addressed in a sophisticated manner. This study will suggest that a Queue Management System will improve the satisfaction of a client as well as the company. On the other hand, the University of Cebu Medical Center Inc. (UCMed) is currently facing some challenges with regards to their way of doing transaction. At the same point, the process is slow, inefficient, unsystematic and unorganized because of lack of communication and proper dissemination of transaction processes. Furthermore, the company uses a manual, not centralized and LAN (Local Area Network) platform queue management system and the costs are exacerbated by inefficiencies in hospital processes, which are often manifested by congestion and long delays in client care. Also, in this software uses multiple PC for server installation and more hassle because in every location/department that used this software will need to install every single PC that is connected to it. It is really alarming and needs to have an innovative technology to pinpoint of what is really the cause of delays. Through the aid of the system, communication and proper dissemination of transaction process will be solved and will be more convenient because the system provides transaction processes in the designated areas along with the token number. With the system, clients are feel free to go everywhere because the system is powered by Android application. Also cost of expensive PC used for server and software installation will be lessen, access of the development system will become widen because the platform that will be used for the development is web based. Also, the web application will serve as a centralized Queue Management System for all departments/location that uses the system.

OBJECTIVES OF THE STUDY

General Objectives:

The main objective of this study is to develop a Web and Mobile base application System I-Queue (A Centralized Queue Management System) and to explore clients ow data through the developing of a queuing system which can aid in improving the rate of satisfaction and in decreasing the inconvenience usually experienced by the clients and the hospitals.

Specific Objectives:

The system specifically aims to:

- Provide a centralized web-based queue management system;
- Provide a system powered by Android application;
- Provide a system that may lessen the inconveniences of the clients; and,
- Provide a system that can generate data analytics;
- Use appropriate technology for clients such as;
 - internet access
 - mobile access; and
- Enhance process of doing the following activities;
 - process transaction and updating
 - report generation; and
 - data analytics

SCOPE AND LIMITATION

The study focuses on a Web and Mobile based application System. To identify the limitations of this study, the researchers have determined the scope and limitation.

Scope

Client

- Enables the client to choose for location/department to be served
- Enables the client to print token number
- Enables the client to utilize real-time queuing system through mobile and web application
- Enables the staff to create/modify/log pend-ing transaction
- Enables the staff to send SMS to pending client or to any business transaction

Admin

- Enables the admin to manage users account
- Enables the admin to manage Login
- Enables the admin to manage Department
- Enables the admin to view data analytics

- Enables the admin generate/print data analytics

Limitations

- The system is that it will not identify clients name in every transaction.
- The system is that it will not cater reservation.
- The system is not all data are generic
- The system is sounds is dependent to query also to the server
- The system is that it has limitation with regards of the number of departments use to be centralized.

THEORETICAL BACKGROUND

Queuing theory is the mathematical study of queuing, or waiting in lines. Queues contain customers (or \items") such as people, objects, or information. Queues form when there are limited resources for providing a service. For example, if there are 5 cash registers in a grocery store, queues will form if more than 5 customers wish to pay for their items at the same time. A basic queuing system consists of an arrival process (how customers arrive at the queue, how many customers are present in total), the queue itself, the service process for attending to those customers, and departures from the system. Mathematical queuing models are of-ten used in software and business to determine the best way of using limited re-sources. Queueing models can answer questions such as: What is the probability that a customer will wait 10 minutes in line? What is the average waiting time per customer? The following situations are examples of how queueing theory can be applied:

- Waiting in line at a bank or a store
- Waiting for a customer service representative to answer a call after the call has been placed on hold
- Waiting for a train to come
- Waiting for a computer to perform a task or respond
- Waiting for an automated car wash to clean a line of cars (Lim, 2018)

RELATED LITERATURE

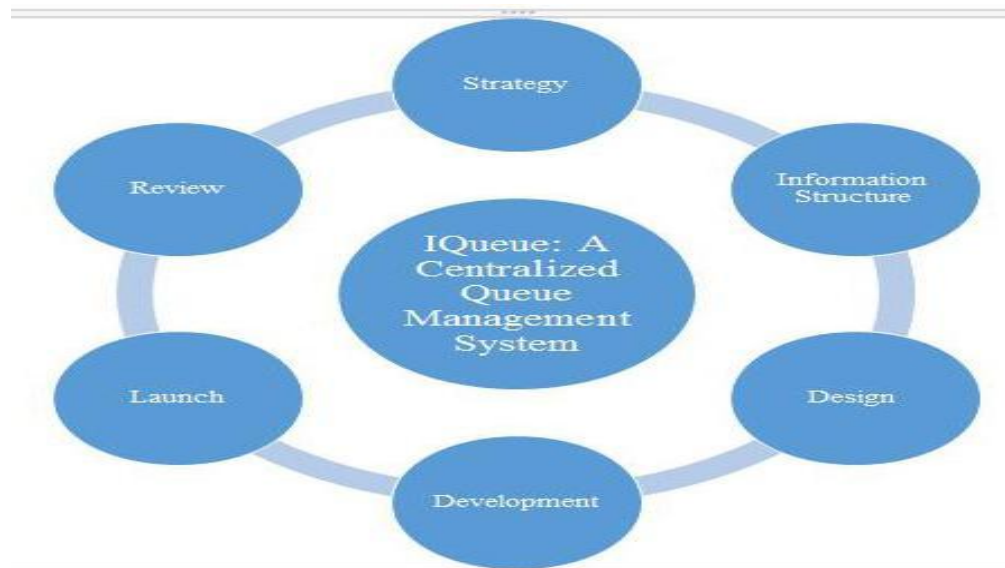
This chapter primarily presents the different researches and other literature's form both foreign and local researchers, which have significant bearings on the variables included in the research. It focuses on several aspects that will help in the development of this study. The study is generally concentrating on the feasibility of creating a centralized web-based and mobile application Queue Management System. The literature of this study come from journals, articles, electronic materials such as PDF or E-Book, and other existing theses and dissertations, foreign and local that are believed to be useful in the advancement of awareness concerning the study. According to EMSE, a mathematical method of analyzing the congestion's and delays of waiting in line. Queuing theory examines every component of waiting in line to be served, including the arrival process, service process, number of servers, number of system places and the number of "clients" (which might be people, data packets, cars, etc.). Real-life applications of queuing theory include providing faster

client service, improving traffic flow, shipping orders efficiently from a warehouse and designing telecommunications systems such as call centers (eqmsConsulting, 2014). According to Healthcare, in a typical healthcare center, it consists of one or more service counters with one or more servers where clients are entertained. Mostly, queues formed at healthcare facilities are ubiquitous and cause a lot of frustration as prolonged delay in services are observed. This results in client discomfort resulting in medical conditions that can increase subsequent treatment costs and poor health outcomes (eqmsConsulting, 2014). Now in the 20th Century there are new ways of using queuing system through technology According to Wavetec, a complete system that caters to diverse queuing needs from a basic queuing system to a sophisticated, multi branch, and multi-region enterprise solutions. Our queue management system allows customers and visitors to enter a queue by taking a ticket via different channels such as Self Service Ticketing Kiosk, Web Ticketing, Mobile App and Online Appointment. Now a days, queuing systems are in self-service ticketing kiosk, web ticketing, mobile app and online appointment. Over the year queuing system developed and evaluated. This makes people who wait in line less hassle and more comfortable (eqmsConsulting, 2014). Web Applications are dynamic web-sites combined with server side programming which provide functionalities such as interacting with users, connecting to back-end databases, and generating results to browsers. There are two main categories of coding, scripting and programming for creating Web Applications: Client Side Scripting/Coding - Client Side Scripting is the type of code that is executed or interpreted by browsers. CSS is generally viewable by any visitor to a site (from the view menu click on "ViewSource" to view the source code). These are common Client Side Scripting technologies: HTML, CSS, Java-Script, Ajax, jQuery (JavaScript Frame-work Library - commonly used in Ajax development). Server Side Scripting/Coding is the type of code that is executed or interpreted by the web server. SSS is not view-able or accessible by any visitor or general public. These are the common Server Side Scripting technologies: PHP (very common Server Side Scripting language Linux/Unix based Open Source free redistribution, usually combines with MySQL database), ASP (Microsoft Web Server (IIS) Scripting language), ASP.NET (Microsoft's Web Application Framework - successor of ASP), Python (general purpose high-level programming language and Server Side Scripting language - free redistribution) (Bernard Kohan, 2018). Web applications are popular due to the ubiquity of web browsers, and the convenience of using a web browser as a client, sometimes called a thin client. The ability to update and maintain web applications without distributing and installing software on potentially thousands of client computers is a key reason for their popularity, as is the inherent support for cross-platform compatibility (iCityWork, 2017). Another reason for its popularity is its cost-effective development. There is no need to develop and test it on all possible operating system versions and configurations. This makes development and troubleshooting much easier and for web applications that use a Flash front end testing and troubleshooting is even easier. Also, it covers easier installation and maintenance. Once a new version or upgrade is installed on the host server all users can access it straight away and there is no need to up-grade the PC of each and every potential user. Rolling out new software can be accomplished more easily, requiring only that users have up-to-date browsers and plug-ins. As the upgrades are only performed by an experienced professional to a single server the results are also more predictable and reliable (Magic Web Solutions, 2018). There are essentially two ways to deliver an application on Android: as a client-side application(developed using the Android SDK and

installed on user devices in an APK) or as a web application (developed using web standards and accessed through a web browser there's nothing to install on user devices). If you chose to provide a web-based app for Android-powered devices, you can rest assured that major web browsers for Android (and the Web View framework) allow you to specify view-port and style properties that make your web pages appear at the proper size and scale on all screen configurations (developers, 2018). Android provides access to a wide range of useful libraries and tools that can be used to build rich applications. Example, Android enables developers to obtain the location of the device, and allows devices to communicate with one another enabling rich peer-to-peer social applications. In addition, Android includes a full set of tools that have been built from the ground up alongside the platform providing developers with high productivity and deep in-sight into their applications (openhands alliance, n.d.). Android is an open source and Linux based Operating System for mobile devices such as smartphones/tablet computers. It was developed by the Open Handset Alliance, led by Google, and other companies. Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android. The first beta version of the Android Software Development Kit (SDK) was released by Google in 2007 where as the first commercial version, Android 1.0, was released in September 2008 (tutorials-point, 2017).

METHODOLOGY

Agile Software Development



AGILE SOFTWARE DEVELOPMENT DIAGRAM

STRATEGY

The process of strategy is to have consultation regarding system development, make some research, get competitive analysis and set goal setting.

INFORMATION ARCHITECTURE

The process of information architecture is to analyze the content of the system development, site mapping and deep analysis.

DESIGN

The process of design is meet the mod-ern technology and can support long term development.

DEVELOPMENT

The making of the system. This part will be the implementation of the methods plan during the planning process and the system structure during the system drafting this part will also with the process of forming the completed system.

LAUNCH

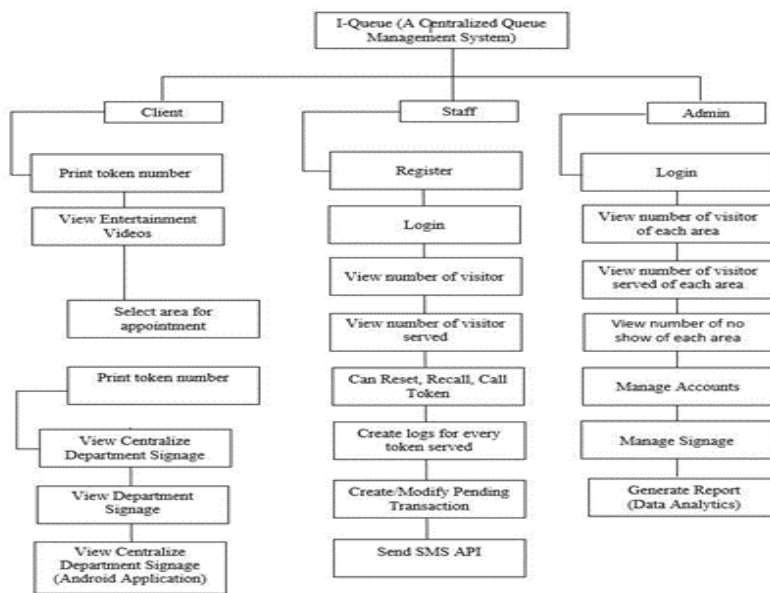
This is to migrate the system development into live to domain. This is the most important part of the system development because this is where we do the bugging and error tracing during and after development, also during the system usage testing. This process will also be the part where we do editions and updates to the system structures and the development methods.

REVIEW

This process is the general overview after launching the system. Making analysis on customer comments and provides maintenance scheduling.

FUNCTIONAL DECOMPOSITION DIAGRAM

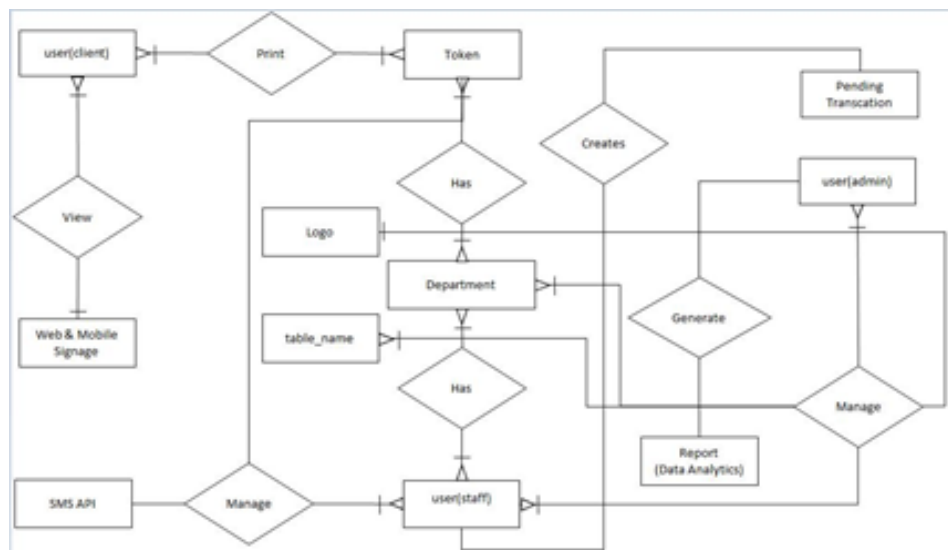
Functional Decomposition Diagram is a method of business analysis that compares distinct functional relationships that operates on complex business processes. It emphasizes on how the overall functionality is developed and its communication between various segments.



FUNCTIONAL DECOMPOSITION DIAGRAM

ENTITY RELATIONSHIP DIAGRAM

An entity-relationship diagram (ERD) is a data modeling technique that graphically illustrates an information system’s entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.



ENTITY RELATIONSHIP DIAGRAM

NETWORK MODEL

Network models are used to conceptualize how networks should work so that hardware and network protocols can inter-operate. The I-Queue (A Centralized Queue Management System) network Model follows the TCP/IP model. TCP/IP provides end-to-end connectivity specifying how data should be packetized addressed, transmit-ted, routed and received at the destination. This functionality is organized into four abstraction layers which are used to sort all related protocols according to the scope of networking involved. I-Queue (A Centralized Queue Management System) it is Network Model based its architecture from various computer networks. The Internet uses TCP/IP protocol suite, also known as Internet suite. This defines Internet Model which contains four layered architecture. OS I Model is general communication model but Internet Model is what the internet uses for all its communication. The internet is independent of its underlying network architecture.

This model has the following layers:

- Application Layer: This layer defines the protocol which enables a user to inter-act with the network. For instance, FTP, HTTP etc.
- Transport Layer: This layer defines how data should ow between hosts. The major protocol in this layer is Transmission Control Protocol (TCP). This layer ensures data delivered between hosts is in order and is responsible for end-to-end delivery.
- Internet Layer: Internet Protocol (IP) works on this layer. This layer facilitates host addressing and recognition. This layer defines routing.
- Link Layer: This layer provides a mechanism for sending and receiving actual data. Unlike its Open Systems Interconnection (OSI) Model counterpart, this layer is independent of underlying network architecture and hardware.



NETWORK MODEL DIAGRAM

CONCLUSION

Through this proposed system, lack of communication and unorganized dissemination of transaction process will be solved and will be more convenient to the clients, hospitals and other companies. Also, helps lessen the burden of traditional ways experiences. Choosing departments, print token number, and utilize real-time queuing system through web and mobile app.

RECOMMENDATION

The proponents are hoping that will implement the develop system a centralized and a real time queuing system in a web and mobile applications. The proposed system is highly recommended to the users to have an internet connection to access the application and available web browsers. By accessing the features just download the I-Queue Android Application.

BIBLIOGRAPHY

Web Sources

Android Studio. (2018). Retrieved from Android Studio: <https://developer.android.com/studio/features.html>

Bernard Kohan. (1996-2018). Comentum, San Diego Office. Retrieved from Comentum Corp: <http://www.comentum.com/guide-to-webapplication-development.html>

Brennan, K. (2015, January 9). SENCHA INC. Retrieved from SENCHA INC: <https://www.sencha.com/blog/the-rise-of-web-technology/developers>. (n.d.). Retrieved from <https://developer.android.com/guide/webapps/index.html>

eqmsConsuting. (2014). Retrieved from wavetech the technology partner: <http://queuemanagementsystems.com/solutions/healthcare/>

iCityWork. (2017). Web Application Development. Retrieved August 31, 2017, from iCityWork:

Laurent, S. S. (2014, January 29). O'Reilly Media, Inc. Retrieved from O'Reilly Media, Inc.: <https://www.oreilly.com/ideas/web-application-development-is-different-and-better>

Ltd, B. S. (2013-2018). Business Smart Solutions Pty Ltd. Retrieved from Business Smart Solutions Pty Ltd: <http://www.smartqueue.com.au/overview/smartqueue-integrated-multimediaqueue-management-system.html>

Magic Web Solutions. (n.d.). The Benefits of Web-Based Applications. Retrieved August 31, 2017, from Magic Web Solutions

<http://www.magicwebsolutions.co.uk/blog/the-benefits-ofweb-based-applications.html>

open handset alliance. (n.d.). Retrieved from open handset alliance:
<https://www.openhandsetalliance.com/android-overview.html>

PARTTEAM. (2017, 05 18). OEMKIOSKS. Retrieved from OEMKIOSKS:
<https://www.oemkiosks.com/blog/4-tips-improve-service-quality-queuemangement/WpwHIGpuapo>

Tutorials Point. (2018). Retrieved from Tutorials Point: <https://www.tutorialspoint.com/rebase/rebase-overview.html>

tutorialspoint. (2017). Retrieved from tutorialspoint India: <https://www.tutorialspoint.com/>

ITRACKMINOR: A CURFEW MONITORING SYSTEM (WITH A MOBILE APPLICATION SUPPORT)

Limpangog, Vevian B.
Project Manager
University of Cebu Lapu-Lapu and Mandaue

Pentoy, April Ann
Hipster
University of Cebu Lapu-Lapu and Mandaue

Sab, Mark Genesis
Programmer/Hacker
University of Cebu Lapu-Lapu and Mandaue

Abstract - The Philippines has a relatively high crime rate involving minors (18 years below) in Southeast Asia. Most of the minors are not aware of their safety. They don't pay attention to this matter as this is a serious issue in the country. The Philippines has a high rate of criminal cases, in this situation minors can put their life at risk for example, lots of cases where children were reported are being kidnapped or lost, children that are about to go home from school or hanging out with friends and there are also reported incidents that minors commit a crime. In this, researchers initiated a helpful technological solution regarding this serious issue in the society. Through data gathering, researchers conducted a survey of parents, minors and barangay representatives, each participant was being asked if they agree to use a technology that will help monitors minors' safety without compromising their privacy. Based on the survey parents agreed to develop a system that will lessen their worries about the safety of their children. In this matter, the curfew law that implemented in the Philippines Called the "Safe Hour for Children Act" will easily implement with the help of iTrackMinor monitoring system. This will enhance the manual monitoring of children during curfew hours. As peer barangay representative stated that during curfew hours, they could not monitor all minors especially minors tend to hide during curfew hours. The idea of iTrackMinor - A Curfew Monitoring System (with a Mobile Application Support). Is to help barangays' who implemented curfew law lessens their manual monitoring of minors. The system will monitor minors before curfew hours. This is to help minors regarding their safety and preventing them to commit a crime or be the victim of the crime. The researchers will make a way to monitor the minors with the approval of the parents/guardian, the monitoring system will use GPS technology to monitor the minors via Smartphone. This will improve the implementation of the curfew law for minors.

INTRODUCTION

Modern technology has become such an important part of human lives that without it, the world would be radically different. Technology has advanced with years and it has changed the

way people purchase products, the way people live, the way people communicate, the way people travel, the way people learn and so many changes have been brought about by these continuous technological advancements. It answers most of the mankind problems. It makes the task much easier, organize, and efficiently without making much effort. As people's demands and lifestyle change, the urge for advancing the type of a technology we use is high. One of the developments of the advancing technology is the Monitoring technology. People used monitoring technology like GPS (Global Positioning System) it allows small electronic receivers to determine the latitude, longitude, and altitude of a point it locates precisely something or someone that is embedded in it such as cars, Smartphones, bags, and many more it can also track people especially children like minors to provide information in an efficiently to determine the current location of the child to get rid of the anxiety of the parents/guardians. With the benefits of GPS, the government can use it as a way to protect its citizens especially minor to avoid crime and accidents without stepping any rules of human rights. There were 24,000 minors among the 800,000 drug users and dealers who had registered with the authorities by November 30, according to police statistics. But less than two percent of those minors, or about 400 children, were delivering or selling drugs. Only 12 percent, or 2,815, were aged 15 or younger. Most of the 24,000 minors were listed as drug users." The drug war death toll includes at least 29 minors who were either shot by unidentified gunmen or accidentally killed during police operations from July to November 2016, according to the Children's Legal Rights and Development Center (CLRDC) and the Network against Killings in the Philippines, both Manila based advocacy groups. (Cullen, 17 February 2017). There is some insufficiency on the implementation of curfew law for minors. The people were well informed about the implementation, but still there are still minors roaming around during the curfew hours without the supervision of the parents. Crimes still are at high peak during the curfew hours. Where there is still some disorderly conduct occurred. Also, some parents/guardians do not care for their child which makes it harder for the barangay to successfully implement the curfew law. Due to the problems encountered by implementing the curfew law for minors in a Barangay, the researchers have proposed a system iTrack Minor Curfew Monitoring System that will benefit the interest of the barangay and the parents/guardians. The researchers will make a way to monitor the minors with the approval of the parents/guardian; the monitoring system will use GPS technology to monitor the minors via Smartphone where it can send SOS for emergencies, can view announcements, parents/guardian where it will improve the implementation of the curfew law for minors. As researchers, it is an achievement to be able to make a solution to develop the way on how the barangay implements the curfew law for minors by using today's technology and be able to prevent children to commit a crime and lead them into the right path. Hoping the proposed system can make a difference in the world.

OBJECTIVES OF THE STUDY

The main objective of the study is to analyze, design and develop ITrack Minor: A Curfew Monitoring System for Minors (with a Mobile Application Support). Below is the breakdown of specific objectives of the research:

Specifically, this system aims to:

- To develop an automated system for monitoring minors easy, fast and reliable;
- Real-time monitoring minors before curfew hours.
- To lessen the parent's burden of their minor's safety.
- To provide a user-friendly web and Android application that enables the government and parents to monitor the minors before curfew hours on their locality via mobile GPS.
- To improve the notification of possible danger and report.
- To provide Fast and reliable generation of reports.

SCOPE AND LIMITATIONS

The following are the scopes of the project are determined per the platform that consists of the different uses of the system:

1. Barangay representative (Admin):

- The system will register the users with different access level such as:
 - Admin for Barangay representative for users to monitor minors.
 - Minors for users being monitored
 - Parents/Guardians for users to monitor minors
- The system will monitor a minor's location through a GPS.
- The system can record report regarding minor's violation.
- The system notifies to Parents and Minors.

2. Minors:

- Minors are tracked by the system via GPS mobile.
- Minors will receive a notification through SMS an hour before the curfew time
- Minors can send an emergency alert in case of emergency.
- Minors can view barangay announcement activity.

3. Parents/Guardians:

- Parents/Guardian will monitor the minor's location through GPS mobile.
- Parents/Guardian can view barangay announcement.
- Parents/Guardian will receive a notification through SMS.

Limitations:

The proposed system is limited to the following:

- Minors Smartphone is expected to turn on GPS and enabled internet connection for monitoring purposes.
- The parents should go to the barangay to register his/her minor for verification purposes.
- Minors who are homeless and no parents/guardians are not covered.
- Parents and minors who don't have mobile phones.

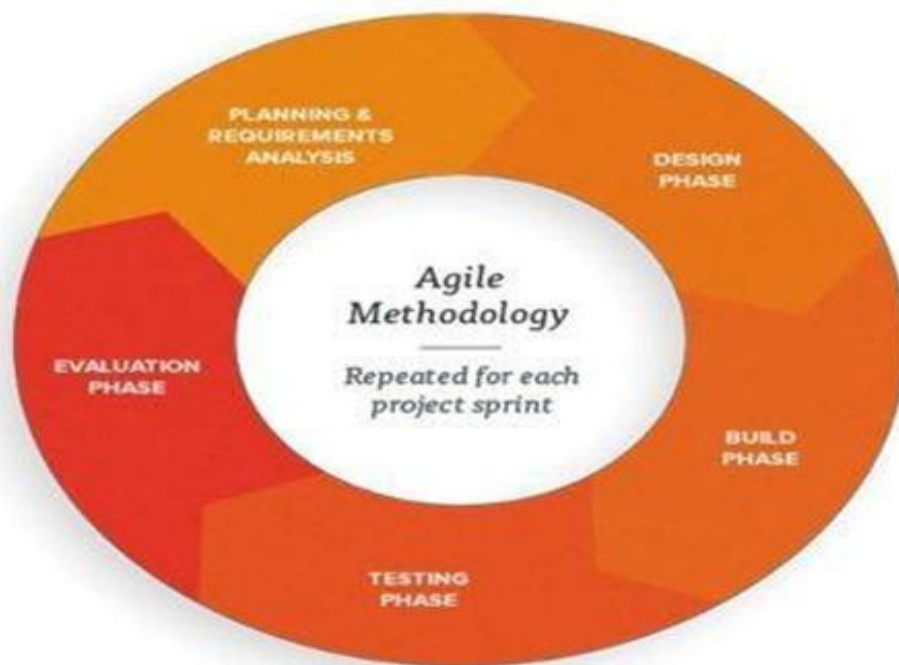
RELATED LITERATURE

According to the abstract of Tracking System Using GPS and GSM: Practical Approach quoted that; “The ability to track, trace and control anything by anyone from anywhere on the planet has been a mankind’s unfulfilled desire. The usefulness of GPS and GSM has been popular in their context; integrating these technologies can prove to be flamboyant application for vehicle tracking as well as personal tracking firstly GSM (Global System for Mobile) which is a set of standards to describe technologies for Second Generation (2G) and GPS (Global Positioning System) which is a satellite-based navigation system consisting several satellites revolving around the earth. (Darolekar, Chikane, Diwate, Deshmukh, Shinde, 2012)”. This system has a Global Positioning System (GPS) which will receive the coordinates from the satellites among other critical information. A tracking system is very important in the modern world. This can be useful in soldier monitoring, tracking of the theft vehicle and various other applications. The system is microcontroller based that consists of a global positioning system (GPS) and global system for mobile communication (GSM). This project uses only one GPS device, and a two-way communication process is achieved using a GSM modem. GSM modem, provided with a SIM card uses the same communication process as we are using in a regular phone. (Pankaj J.S, 2013). GPS tracking device for children is an extremely versatile device that has the potential to keep the parents informed about their child where about. This GPS child locator is time and again incorporated with the latest technology to make it more and more advanced for the better performances and uses. It is all due to the effort of the latest technology that the device has to get a key ring sized that can be instantly and inexpensively used to keep tabs on kids anytime and anywhere. GPS child locator system has a transmitter that can be attached to a wrist or kid’s schoolbag or to a cell phone or computer. The transmitter with the help of existing GPS network calculates its position and then transmits to the cell phone or computer. The individual’s position is usually given as a map coordinate and if the person is using any Smartphone or a computer then the location is presented in real time on a high-resolution map, just like Google maps. GPS tracking device for children has come as a boon for parents who are extremely concern and stressed about their children when they are outside their protection. With GPS child tracker around parents can have 24/7 track on their kids thereby assuring them complete safety and protection. (Afifi, 2013). Having these technologies can make a greater change on how to easily monitor children particularly minors and those who have a mental illness. It can make the minors be safe and lessen the anxiety in the parents. To monitor the children through GPS using the web and mobile application and it can also be implemented on the barangay to be more effective during the curfew hours their tasks. They see these devices as essential in virtual meetings. As industries go paperless and choose sustainable ways to proceed with transactions, Filipino employees go the extra mile to support this change. About 82 percent of respondents said that their companies advocate the sustainable practice, especially with going paperless in their tasks. These facts overshadow the misguided notion that Filipino employees have a long way to go compared with other Asian employees. Filipinos are hardworking, adaptive, and responsive to the demands of the industry. Thus, they are a great group to work with.

METHODOLOGY

Agile Model

A software development methodology or system development methodology in software engineering is a framework that is used to structure, plan, and control the process of developing an information system. One of the methodologies software engineering used is Agile Software Development methodology. Agile hardware development refers to the development of specifications for devices that are intended to be manufactured. Agile processes are not limited to the world of software development. They can be applied in other contexts, such as IT Operations and Production support, where they provide the benefits Agile is known for. Agile Hardware implementations can be put in place by using the same framework as our typical Agile Software Development transformations. Start off with assessing the organization's current state, then move to plan and preparing by and putting together a transition backlog, start execution with training and coaching, spread the cultural shift with change management and maintain and scale the transformation.



AGILE METHODOLOGY DIAGRAM

Business Model Canvas

The following figure is the Business Model Canvas for ITrackMinor: A Curfew Monitoring System that is a Mobile and Web Application. This application uses mobile phones running Android Operating System and a Windows PC to assist in the monitoring of curfew for minors by the government. It can provide monitoring of minors via GPS and to guide them with their curfew rules and guidelines and to use this application. The safety of the youths will be monitored especially unexpected events that might occur.

Entity Relation Diagram (ERD)

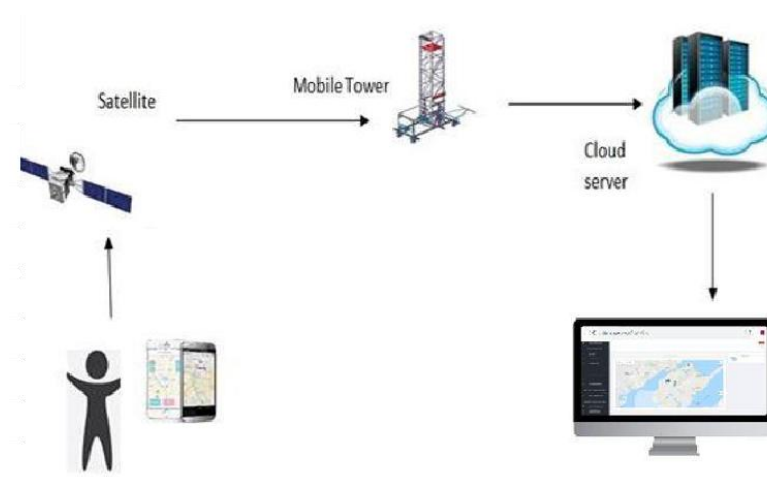
The Entity Relationship Diagram (ERD) illustrates the relationship among entities in a database.

The three main components of an ERD are the following:

- The entity is a person, object, place or event to data is collected;
- The entity shows the relationship among entities;
- The cardinality defines the relation between entities in terms of numbers.

Network Design

Network Design as defined is a structure that is independent and widely dispersed. In addition to that, Network Design involves evaluating and scoping the network to be designed. The whole network design is usually seen as a network diagram that serves as the blueprint for the physical network. Typically, network design includes a logical map of the network to be designed, cabling structure, IP structure, network security and overall network security processes, and quantity, type and location of network devices such as routers, switches, and servers.



NETWORK DESIGN DIAGRAM

CONCLUSION

To conclude, the main cause of the problem is the lack of monitoring power by the government and technology that will help solve and lessen the problem. Through the proposed project of the researchers, Technology can help lessens the crimes involving minors as researchers utilized a Web and mobile-based application with tracking device system that will help minors to be able to track by the government and this will help those minors who don't obey curfew rules during curfew hours.

RECOMMENDATION

We recommend that our proposed system to be developed further, so that it can help not only in the local community but also the whole country. Features can be added to enhance the system such as Geo-fencing, in which a guardian need to select the boundary area to get notified once a minor reach nearby boundary. As well as adding the ability to share the track and other related information obtained via SMS, Bluetooth or mail.

BIBLIOGRAPHY

Internet Sources

Afifi, A. M. (2013, October). Research papers. Retrieved from International Journal of Scientific and Research Publications

<http://www.ijsrp.org/research-paper-1013/ijsrpp2259.pdf>

Blanco, N. (2011, November 23). KRUSADA: Juvenile Delinquency. Retrieved from ABS-CBN NEWS: <http://news.abs-cbn.com/current-affairsprograms/11/21/11/krusada-juvenile-delinquency> Blog: LiveViewGPS. (2017, July 12). Retrieved from LiveViewGPS

<https://www.liveviewgps.com/blog/study-revealsbenefits-gps-tracking-devices-autism-children/>

BrickHouse Security. (2016). Sotto, G. B., Cuesta, M. K., Jabanés, L. A., Silawan, J.

E-REKLAMO: A WEB -BASED AND SMS - BASED BARANGAY COMPLAINTS WITH ANALYTICS. Cebu: University of Cebu

Blanco, N. (2011, November 23). KRUSADA: Juvenile Delinquency. Retrieved from ABSCBNNEWS:<https://news.abs-cbn.com/current-affairsprograms/11/21/11/krusada-juvenile-delinquency>

ONVET: A WEB AND MOBILE-BASED VET APPOINTMENT SYSTEM

Timbal, Florje Vieve
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Dimacali, Emmanuelle Jay
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Guiteng, Al-sadi
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Mahusay, Gian
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Tatoy, Roselyn
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Abstract - In today's generation, number of people are increasing together with the number of persons having pets. Pets are cute, cuddly and most of all a man's companion. It is a true identification that humans have a big heart for pets, and not just for being a pet but also for taking care and loving them. In the current system of setting appointment, when scheduling, the customer has to ask the veterinary through a phone call. Agreements will be made over the phone such as the time of the scheduled assignment. In this case, everything that the vet and the customer have agreed will be just written manually like the listing of customers scheduled for appointment. The purpose of the study namely OnVet: A Web and Mobile-Based Vet Appointment Services is to eliminate the problem on manual process for making appointment. This will ease the work of the veterinary clinics as well as the customer for a faster and less hassle work. It is user friendly as the system will give all the list of veterinary clinics that are registered in the system together with their services offered that the customer can avail. The system will also display the location of the veterinary clinics in case that the customer may not know the location of the said establishment. By this, making appointment will be much easier than the manual process and this aims to really enhance the existing automation and computerization of the veterinary clinics. The findings, on the survey in which it leads to a result that making the system is in need to be built as for the same reasons for the veterinary clinic: they like to have the system and they need the system for easy appointment. Thus, this leads the proponents to build the system OnVet. As to the proponents, the creation of the OnVet system is a big help for the pet owner to ease the problem when it comes to having appointment and also for the veterinary clinics to replace the manual process to an easy one by using the system OnVet.

Keywords – OnVet; vet appointment; mobile based vet appointment; veterinary clinic; pets

INTRODUCTION

People who own a pet love their pets as they treated as their child or a family; they give shelter, groom, food, and health service. But, due to technology growth as well as the economic growth, people are affected, demands in work and technology are high at risk. Gadgets emerging from the market affected the way people drive their life, they're bombarded with hectic schedules, and the tendencies on pets are affected as they are not taken well. There are many veterinary clinics nowadays. Vet Clinic offers services for pets such as vaccination, grooming and the like which are essential for pets health. As the vet clinic owner, they would always find a strategy on how to make their vet clinic an ease accessible for their customers. Since technology has become a part of our daily lives, most vet clinics are posting it on-line. On the customer side, the online presence of the vet clinic is very important especially when it comes to setting an appointment schedule to a vet. Appointment scheduling is the main part of a medical practice management. (GEIS, 2017). The customer decides the day of the appointment, and the vet will give a specific time and the customer should be able to cancel it or accept it. It is significant because it is the only resource for customers to use the services. Without proper scheduling, the clinic will quickly become chaotic, unorganized mess. (AppointmentPlus, 2013) It would be really hassled for the vet as well as the customers for it will cause to raise stress and would make it hard for managing time. According to Rauno Rungas, the CEO of re-minder, the appointment scheduling system is so easily jolted into inefficiency because of three primary factors. First, appointments take longer than expected. The second reason is that customers show up late to their activities. And the third one is problems compound throughout the day. Which means many late activities will make everyone else late. (Rungas, 2015) In the current system of setting Appointment, when scheduling, the customer has to ask the vet through a phone call. Agreements will be made over the phone such as the time of the scheduled assignment. In this case, everything that the vet and the customer have agreed will be just written manually like the listing of customers scheduled appointment time which is not a good idea because it may lose. Because of the manual process, customers wouldn't notified about their scheduled appointments. Some may forget, some may be late especially if the customer tends to run on a tight schedule. When entering information manually or listing it down, or even finding customer's records, it takes up a lot of time. And also, the main problem about the manual listing is human error. Since technology has become an inseparable part of our life, it could be a tool or instrument for every pet owner to use it for their pet needs. Owning a lively pet may sometimes prove exasperating, but it appears all the effort is worth it. To overcome this, a new system should be implemented to make it easier for every pet owner. It should be accessible, fast and reliable for them. And thus, the researcher is tasked to develop a system OnVet: A Web and Mobile-Based Vet Appointment System for pets. This system will help the pet owners to lessen the burden and hassle in scheduling appointments for their pets and will also help the vet clinic owners to manage and monitor vet clinics.

OBJECTIVES OF THE STUDY

The system aims to fulfill the following specific objectives:

1. Enhance the existing automation/computerization of vet clinic.
2. Provide an online access for the vet clinic and customers to communicate.
3. Determine the availability of the vet clinic for the customers for appointment scheduling.
4. Identify the ways on how to take good care of pets and maintain pets record of a customer.

Scope and Limitations:

The system OnVet will uphold all sets of functionalities upon its due completion, comprising the primary scope of the system.

1. Development of a Web-based system for:
 - Customer Account Management
 - Owner Account Management
 - Admin
2. Mobile application for:
 - Customer Account Management

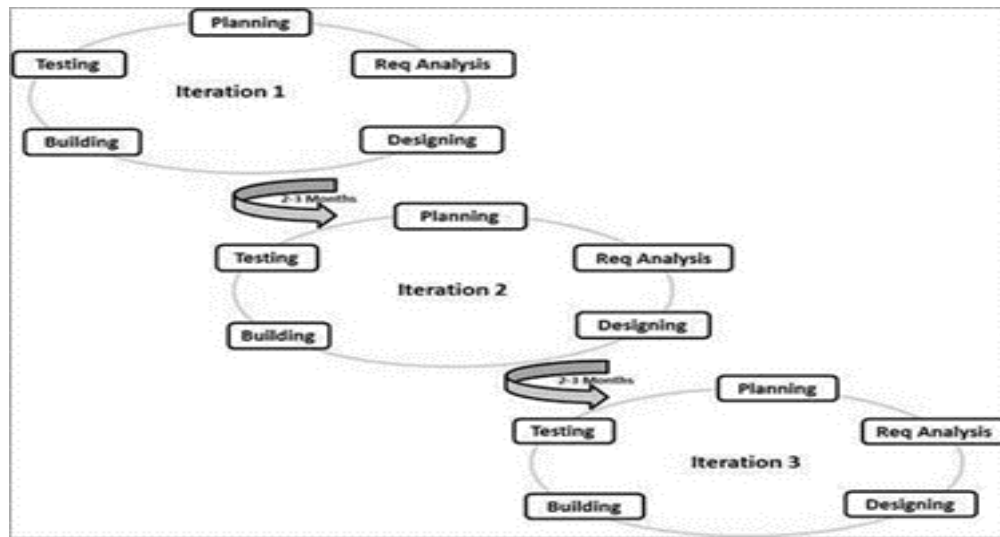
However, the study is limited to the following:

- The application system is dependent on the Internet connection.
- The mobile application is runnable on an Android smart phone.
- Registered customers can schedule an appointment online.
- Those registered vet clinic will be shown in the system.

METHODOLOGY

Agile Model

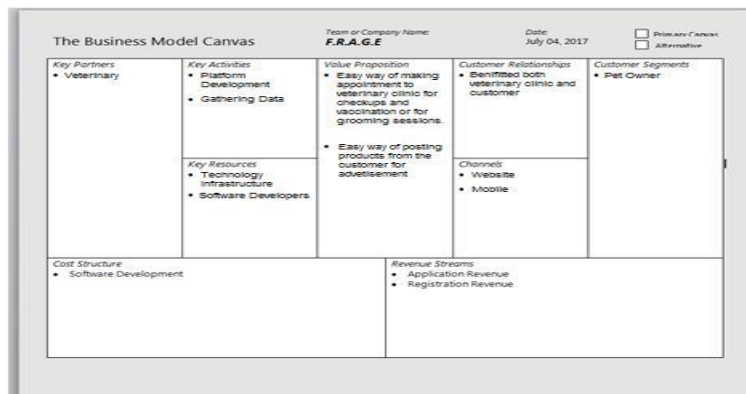
The agile model is a recent practice of soft-ware development and is incorporated as the modern incremental method with a few tweaks in its phases but however retain the basic principles of the traditional predecessor. The agile model would best suit the development stage whenever the project demands a crunch time for release thus giving developers better guidelines in completing projects and given to the delivery rate of the project to client specifications, changes could be done easily without having to start from scratch making this technique dynamic to up-dates and changes.



AGILE MODEL DIAGRAM

Business Model Canvas

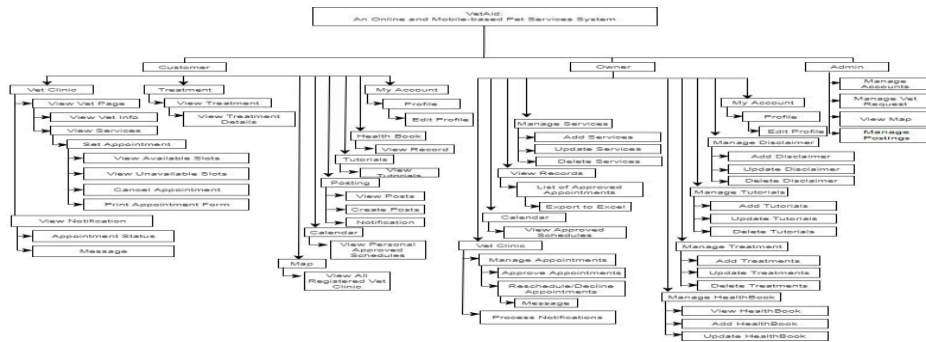
Business Model Canvass is a strategic management and lean startup template for developing new or documenting existing business models. This will inform the investor about the view of the proposed system, who will be the key partners that will fund the proposed system. Key activities being done by the system, value propositions which answer why is the system created, how this is involved with customer relationship, key resources which states the resources involved that will be used in developing the system and who are the proponent involve in the study. The customer segments present the target market where the proposed system will be implemented. The channels, present the ways on how to market the business happens while the cost structure presents where the cost of the business.



BUSINESS MODEL CANVAS DIAGRAM

Functional Decomposition Diagram

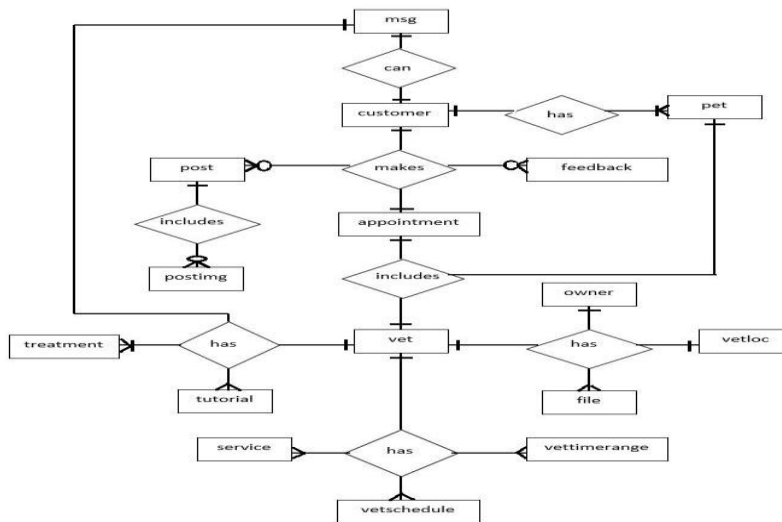
Functional decomposition diagram as shown below represents the breakdown of business processes that the system does. The processes mainly cover about activities that the end user can perform within the system.



FUNCTIONAL DECOMPOSITION DIAGRAM

Entity Relationship Diagram

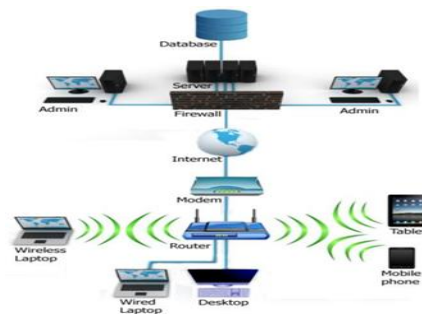
Entity-Relationship Diagram as shown below is a data model describing the data or information aspects of business domain or its process requirements, in an abstract way that lends itself to ultimate being implemented in a database such as relational database.



ENTITY RELATIONSHIP DIAGRAM

Network Model

Network design refers to the state of planning the way of implementing the computer network infrastructure. It is mainly executed by several performing roles in the industry which are the network designers, engineers, IT administrators and other related entities. Network design is being done before the implementation of a network infrastructure. Network design performing way involves evaluation, understands and scopes the relative network to be implemented. It is usually represented as a network diagram that serve as the whole ow of how the implementation of processes being executed physical network. Typically, network design includes the logical maps network to be designed, cabling structure, quantity, type and location of network devices, IP addressing structure, and also network security architecture and overall network security processes.



NETWORK MODEL DIAGRAM

RESULTS AND FINDINGS

The researchers have found out the following:

- There are 58.3 percent people who owns a pet.
- 33.3 percent of the pets do not have a regular check-up.
- Many conflicts and problems in the appointment schedule.

CONCLUSION

It is concluded by the researchers that the system helps the pet owners set an appointment with the veterinarian using the application. OnVet lessens the burdens of the pet owners specially in making appointment with the veterinary clinic.

RECOMMENDATION

The researchers have made the following recommendations for the future application:

- The future system must have an appointment notification for veterinary
- The future system can easily find a veterinary clinic
- The future system must keep track of records

BIBLIOGRAPHY

- AppointmentPlus. (2013, June 25). to Schedule Patients. Retrieved October 7, 2017, from AppointmentPlus: www.appointment-plus.com/blog/why-appointment-scheduling-is-important-in-medial-offices
- AVMA. (2017). Retrieved October 13, 2017, from <https://www.animal-welfare-companion-animals.aspx>
- Gekas, A. (2011, February 28). Health Benefits of Owning a Pet. Retrieved August 22, 2017, from <http://www.womansday.com/life/petcare/a2352/10-health-benefits-of-owninf-a-pet-116238>
- Huxley, A. (2010, May 11). Retrieved August 17, 2017, from tirely4you.com/2010/05/11/
- Rungas, R. (2015), Retrieved October www.qminder.com/appointments-vs-walk-ins/
- Service, G. E. (2017). GEIS. Retrieved October 10, 2017, from Management Info: www.medicalpracticemanagementinfo.com/appointment-scheduling.html
- Strand, P. (2014, June 10). Retrieved October 13, www.naiaonline.org/articles/article/what-is-animal-welfare-and-why-is-it-important
- hash.P8U1UPuH.0YKdohM.dpbs (2017). Vault.com. Rtrieved October 13, 2017, from Veterinary Care and Animal Care: www.vault.com/industries- professions/industries/veterinary-medicine-and- animal-care.aspx

RED FLAG: WEB-BASED ISSUE TRACKING AND MONITORING SYSTEM

Abing, Angelee Maree I.
University of Cebu Lapu-Lapu and Mandaue

Dela Cruz, Jessie D.
University of Cebu Lapu-Lapu and Mandaue

Pangatungan, Ma. Jessa L.
University of Cebu Lapu-Lapu and Mandaue

Parohinog, Carmel S.
University of Cebu Lapu-Lapu and Mandaue

Quevedo, Jerame L.
University of Cebu Lapu-Lapu and Mandaue

Abstract - University of Cebu Lapu-Lapu and Mandaue is one of the most famous universities here in Cebu that has democratic quality of education. And each year the population of the university increases due to its good service and quality education. And some of the students here in the university encountered some issue inside the university but they don't know where to address their issues and concerns. This is the common problem of the UCLM community nowadays that their issues and concerns are just taken for granted. And the University of Cebu Lapu-Lapu and Mandaue wants to prevent this kind of situation, but the problem is that they don't receive any complaints from UCLM community because the UCLM community doesn't know where to report their issues and concerns. The purpose of the study namely "REDFLAG: Web-Based Issue Tracking and Monitoring System" is to automated system for reporting and solving issues in the University. This will serve as a big help of the university especially for the UCLM community because it's easier for them to directly report their issues and concerns online with hassle free process. They no longer need to go to the specific department to report their issues and concerns. The system will be one to send or address the issue to the assign or designated department to fix the problem. And the UCLM community will receive notifications if their issues were already fixed or under process. And they can also check the update of each issue from time to time. As to the proponents, creation of the REDFLAG system is a big help for the University to easily assist, monitor and fix issues and concerns of the UCLM community encountered inside the University.

Keywords – redflag; issue tracking; issue monitoring; report issues; web based issue tracking and monitoring system

INTRODUCTION

Nowadays, technology is apparently known. It always becomes part of the daily routine of humans. Many people embrace technological changes, believing that through technology their lives will be made more accessible. Moreover, modern technology provides a more convenient lifestyle of people in the society. Technology devices, and platforms, particularly Internet, affect the traditional way of dealing with daily activities and different transactions. It has been the lifeline to the development and a better standard of living to every individual. It serves as an essential channel in various areas such as communication, business, education, medicine, politics, etc. It just proves how technology invades and suits the level of needs and services in the different field and it also includes managing the problem inside the University of Cebu Lapu-Lapu and Mandaue (UCLM) Campus. In this way the personnel may quickly take action on many issues related to the University; and how they help the school campus achieve its goals. Therefore, it is more important to have a computer-web based application for the current University human resource system, including its entire workforce, which has the ability in screening, tracking and monitoring application processes associated with filling vacancies. With Internet integration, issue posting, the tracking of problems and the ability to store reported issue electronically, screening and conduct all operations from a centralized computer terminal. Also, student or user communication has become much more accessible and shorter and can be consumed anytime and anywhere; and has made life convenient, time-saving, and of fewer difficulties for addressing the issues. More than 2 billion people use the Internet worldwide every day for research, meeting people, looking for personal gain that is suited to their individual needs, etc. Because of modern technology, particular issues encountered by the users can be more accessible and shorter as possible. If the user reports their concerns, some problems just taken for granted, that causes the problem to get bigger. That's why the researchers had been triggered to come up with this study to integrate the most efficiently managed for all the student seeking for the reported issues quickly to improve the services on how to efficiently address the problems making it hassle-free. The issue monitoring process of UCLM is done by directly reporting the issue to the concerned personnel. Just for example a concern about the punctuality of the teacher, this kind of problem will direct to the dean where the teacher belongs. Redflag: Web-based Issue Tracking and Monitoring System will provide the solution for this concern. It will improve the services on how to quickly communicate between personnel and school administrator, improve school campus, and boost enrolment registrants respectively. Maintaining the quality of the school, issuing updates (which will be available online) for the users who will possibly report their issues are also part of the system functionalities. Easy monitoring of the personnel' requests for immediate actions, request updates, and comparative reports are also some essential things present in the proposed system. Furthermore, with Redflag, it will hopefully help the students or users not only in their daily routines, but also in their endeavors and developments, and communications majorly. The organization also seeks to ensure that the individual student is satisfied with the system benefits that he or she receives. In this study, the researchers have found out that technology nowadays has improved the people's lives in a way that things are getting more comfortable to make things possible. Thus, the researchers decided to develop a system entitled Redflag: web-based issue

tracking and monitoring system that will be capable of reporting an issue and monitoring it from time to time.

OBJECTIVES OF THE STUDY

The study aims to develop an application that will track and monitor the responses of the concerned UCLM personnel on the concerns and issues reported by the UCLM community. The study specifically aims to:

1. Determine the status of issue reporting, tracking, and monitoring in the University.
2. Determine the problems of reporting and solving issues in the University.
3. To propose an automated system of reporting and solving issues in the University.

SCOPE AND LIMITATION OF THE STUDY

The system focuses on developing an application that helps the UCLM Community in addressing their issues or concerns to the responsible personnel to fix and resolve their issues.

- The user will be able to report their issues and concerns.
- The user will be able to upload a video/picture for issue evidence.
- The user will be able to view their issue history.
- The user will be able to create feedback.
- The user will be able to manage their account.
- The user will be able to comment to the personnel.
- The admin will be able to see all posted issues.
- The admin will be able to accept or decline post.
- The admin will be able to assign the problem to the responsible personnel.
- The admin will be able to manage account.
- The admin will be able to create department and categories.
- The admin will be able to send email notification.
- The personnel will be able to view posted issues.
- The personnel will be able to fix and solve reported issues.
- The personnel will be able to update issue status.
- The personnel will be able to generate report.
- The personnel will be able to manage account Limitation.
- The system needs an internet connection to function.
- The system will only authorize and accept students that are currently enrolled at the University of Cebu Lapu-Lapu Mandaue Campus.
- The system doesn't work using smartphones.

REVIEW OF RELATED LITERATURE AND STUDIES

Related Literature

The further understanding of the study, there are different sites related to the proposed system. These websites are One desk, Backlog, Redflag alert, and Redflag group are essential in broadening the knowledge of the researchers. These will also guide the researchers to achieve their target objectives by getting ideas on other existing applications and make improvement as possible. These related literature provide the researchers with some insights and directions in the conduct of the study. The primary product of this project will be a user-friendly information system that would be able to manage and process information needed by the students from the University community. It will also have the capability to apply them in all departments and offices in the university premises. The advocates believe that the success of this study would make a big help to provide an excellent service to the university since this is a system that would process the school issues and complains. In each university, there is in-charge to repair the equipment of the school. But the problem is that it takes a week or more before they will fix the issue because the maintenance department may not timely receive any report that would let them know that there may already be defective equipment just like air-conditioner to name some. Using the system, it helps the maintenance department to get all reports or complains of the UCLM community through online with a hassle-free process. But not just only the air-conditioner issue that the students may have encountered inside the University, there are still many issues which personnel and students may struggle just like the accounting process, dirty comfort rooms, broken doors, defective parts and components of some PCs. And using the Redflag system, the time management, efficiency, and productivity can be easily achieved by the recipients of the output of this system which in return would give them more time to do or process an essential thing. The Redflag is a web-based system that will process issues, concerns and modifies sensitive Redflag Tracking and Monitoring through a secured network interface. It is designed to handle a universities-range of monitoring relating to the school problems, defective equipment, student issues and administration reports. This application software is equipped with an integrated system to cover all the school issue, activities, and problems of the school which will aim to provide solutions and ways for the entire University community.

Related Studies

The study has similar websites and applications, and some of the features have similarities to the proposed project. It will guide the researchers in creating the system. The University wants to have an easy way in reporting their issues with hassle free process to improve the facilities of the school. For this reason, Redflag has a web application on the internet nowadays for a comfortable and flexible way of handling issues and give an immediate solution. The proponents have chosen some significantly related studies. These are the following: 1. OneDesk Inc. is leading the market in providing products that help the company realize the benefits of social product development, co-creation, and customer-driven innovation. This blended suite of cloud-based applications incorporates powerful tools including customer feedback management, innovation

and ideas management. Customer service and help desk, requirements management, innovation and ideas management, customer service and help desk, requirements management, project management, release management, issue tracking and road mapping. OneDesk located in Montreal, Canada. The mission of this website is to help companies build better products faster through collaboration, co-creation and community engagement. 2. In 2002, Shinsuke Tabata, CMO, coordinated a meeting with Masanori and Toshitaka. Through his new acquaintances, Shinsuke learned about the Mobster community and became a member. The Mobsters have since released much open-source software including a wiki engine, a bug tracking system which became the initial framework for Backlog – an application launcher, and a code generator. The Mobsters didn't stop the software. The community also took and book publication, wrote articles for Java programmers, and launched an internet broadcast radio program called 'Mobdio' in 2003. The Mobsters would collaborate with Mobdio listeners' overs the airwaves to edit and improve their wiki engine. The art of collaboration gradually became an essential and cohesive experience for Masanori, Toshitaka, and Shinsuke. Team collaboration would become the framework for Nulab Inc. 3. In 2009 we set out on our own, and since then we have undoubtedly helped prevent many businesses going bust as well as helping to create thousands of jobs within the UK as our customers grow as a result of our service. Red Flag Alert started life as an internal database tasked with identifying new business opportunities for an insolvency company. Due to its unique 'health rating' system and two million data updates per month, it did this incredibly well.

RESEARCH METHODOLOGY

In this chapter covers the methodology used in the study. The geographical area where the study conducted that will help to strengthen the project. The instrument used to collect the data, including methods implemented to maintain the validity and reliability of the project.

Software Engineering Methodology

Agile Methodology

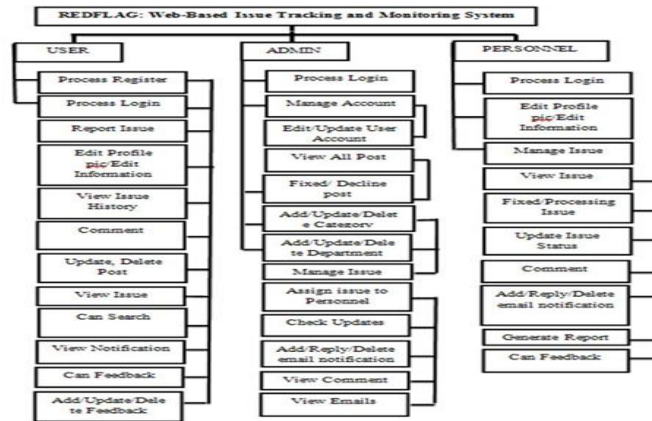
Agile software development is a software development under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams. It advocates adaptive planning, evolutionary development, early delivery, and continuous improvement, and it encourages rapid and flexible response to change.



AGILE METHODOLOGY DIAGRAM

Functional Decomposition Diagram

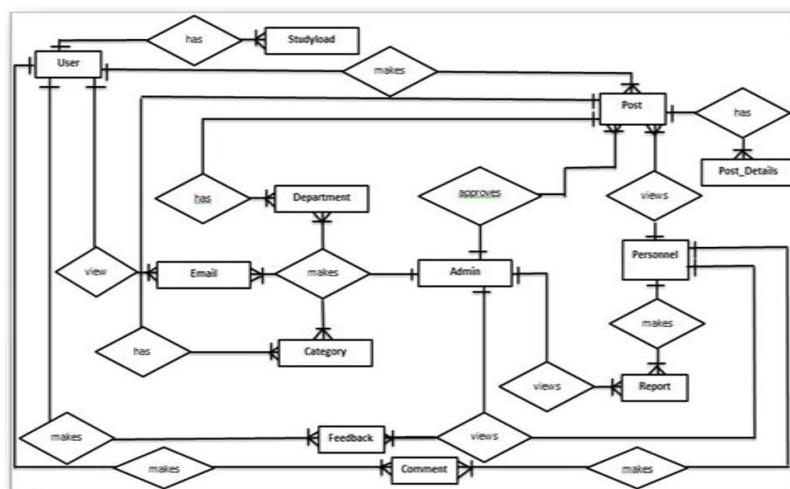
The Functional Decomposition Diagram (FDD) is a tool that depicts the hierarchy functions, processes, and sub process within an organization. This section describes the users of the system on a functional level which further advances the comprehension of the proponents, readers and possibly future researchers that may improve the current system.



FUNCTIONAL DECOMPOSITION DIAGRAM

Entity Relationship Diagram

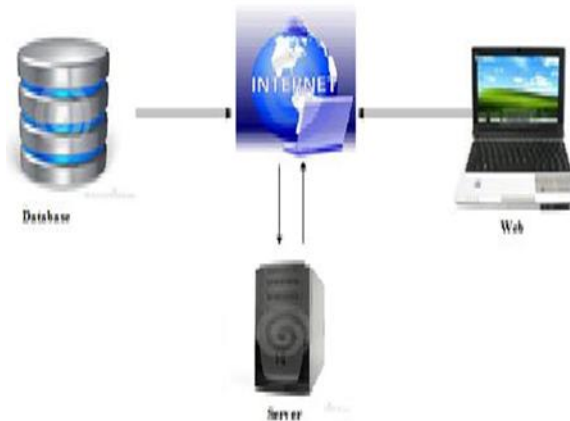
Entity Relationship Diagram shows a graphical representation of entities and their relationship to each other, typically used in computing regarding the organization of data within databases.



ENTITY RELATIONSHIP DIAGRAM

Network Model

A network model is a database model designed as a flexible approach to representing objects and their relationships.



NETWORK MODEL DIAGRAM

CONCLUSION

Evaluation of report issue's general experience: Users need an assistance regarding about their issues and concerns in the university. Users doesn't know where to address their concerns and concerns. Evaluation of deployed system - Some functionality be considered and added to the system for further enhancement and to complement with what potential users would require. As per usability testing around 85 said that the color choice has a great appeal given the system category. Professional inputs for further system enhancements is necessary. Further customization needed to make the look and feel more professional.

RECOMMENDATIONS

Based on the foregoing findings of the study, the proponents recommend for the implementation of the system, Reflag: Web based Issue Tracking and Monitoring System. The system will be a great help in community campus to easily address the issues of the students to the responsible department through online. It will be an edge for them, most especially for students because it easier for them to report their issue with hassle-free process.

BIBLIOGRAPHY

- Redflaggroup. (2003, May). Retrieved from Redflaggroup.com: <https://www.redflaggroup.com/global-offices/>
- backlogtool. (2004, March 14). Retrieved from backlogtool.com: <https://backlogtool.com/>
- pocketstop.(2006, June). Retrieved from pocketstop.com: <http://pocketstop.com/redflag>
- redflagalert.(2009, March). Retrieved from redflagalert.com: <https://www.redflagalert.com/about>
- openbudget.(2015, jan 15). Retrieved from openbudget.com: <http://openbudgets.eu/post/2016/01/15/red-flags/>
- techwalla editor.(2015). Retrieved from techwalla: <https://www.techwalla.com/>
- Onedesk.(2016, April). Retrieved from Onedesk.com: <https://www.onedesk.com/features/issue-tracking/>
- E., K. (2001, september 21). software requirements specification. Re-trieved from wikipedia: <http://en.wikipedia.org>
- Eric Maass, P. D. (n.d.). Applying Design for Six Sigma to Software and Hardware Systems Book. Retrieved from bls.gov: <https://www.bls.gov/>
- Rodbertus's. (n.d.). yourarticlelibrary.com/economics/theory-of-rent. Retrieved October 20, 2015, from yourarticlelibrary.com: <http://www.yourarticlelibrary.com/economics/theory-of-rent/ricardos-and-modern-theory-of-rent-explained-with-diagram/39140/>
- Video Rental System. (n.d.). videorentalsystem.podbean.com. Retrieved October 20, 2015, from videorentalsystem.podbean.com: <http://videorentalsystem.podbean.com/v>
- Volkov, M. (2010, April). volkov. Retrieved from blog.volkovlaw.com: <https://blog.volkovlaw.com/>
- Wheels car rental system. (n.d.). wheelsys.com. Retrieved October 20, 2015, from wheelsys: <http://www.wheelsys.com/>
- books.google.com. Retrieved October 20, 2015, from Google.com: <https://books.google.com.ph/books?id=gl6NWekFSyICamp;pg=PT54amp>

TechNiBai: A WEB-BASED APPLICATION FOR ONLINE SERVICES

Cabasan, Jenny Fe Y.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Espinosa, Mariel M.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Hiyas, Hilario S.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Pogoy, Mark Kevin S.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Tadlip, Juner A.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Abstract - The purpose of this research study entitled “TechNiBai: A WEB-BASED APPLICATION FOR ONLINE SERVICES” is to end the problems of the household about their broken appliances on where to find the right technicians for them in the nearest store as possible. It is designed to be user-friendly, easy to access and complete with features necessary to provide reports such as generating itinerary which include timetable, information and view of the shops with its distinct technical supports. All of these system facilities are available via web. The proponents made use of the descriptive method of research which identified the existing problems in travelling taken from the respondents’ answers of the survey questionnaires and interviews conducted. The proposed system will also provide a transaction schedule for the both parties. With the use the TechNiBai planning and finding the right technical support will be easier and more enjoyable and hassle free.

Keywords – TechNiBai; online services; web-based application; technical support; application for online services

INTRODUCTION

As the year continues to grow, the technology continues to rise for people contribute innovative things day by day. A lot of technology has been invented like mobile devices, television sets; washing machines and etc. Technology makes the work easier, more efficient and faster. Individuals apply technology in almost everything they do; they use technology in work,

communication, transportation, learning and much more. With the help of technology, people simplify the way they do things. Computer problems are a fact of life. It is common knowledge that PCs (personal computers) will eventually crash and burn, but most PCs are built to last at least 10 years, with "open" upgrade capabilities that can improve memory and CPU speed. However, most warranties are for no more than two years and by then performance, speed has likely slowed down. The majority of PC problems is due to simple owner-operator maintenance neglect (Techwalla editor, 2015). In addition, people have the technology at home that use to help in their household work and in their personal interest. It is important to remember that technology is simply going to go bad. There are common problems that the appliances and mobile devices face that we expected to happen. When we encounter problems with our computer or another device like an error message to a computer or worse, comprehend what the computer or the device problems that have and how to fix them can be difficult, especially if people do not know as much as they like about their computer. Replacing a computer or appliances are very expensive for us, particularly to those who do not have much money to buy another one. That is the reason why most of us are in need of technical support that will help to fix the problem. Technicians are people that individuals need to fix their devices, which they provide more benefit to us than buying a new product that cost much than fixing it. Sometimes if they do not know where they find a technician, they just search on the internet to find them or find a shop that offers technical services. However, the problem is finding them is not easy, households cannot locate the nearest technician near them. Individuals must have to think that it could happen to everyone that encounters many kinds of problem to a computer or any devices and it could be a sound hassle for the household if they know that a particular technician or a shop and the household are not in the same place. Therefore, the importance of having a web application that would help the people easily find the exact technician and a particular shop that offers technical services. They can easily locate the shop with a technician, lookout list of a technician with their personal information and viewing list of services offers. The shop that has a membership to the website are allowing advertising their product, like when the owner of the shop gives discounts. Furthermore, communication with the owner of the shop and the household are much easier, especially when the shop offers home service to their customer and offers a trustworthy technician. Much convenient to them to find a shop that it could be much better that they can find that is nearest from their homes the help of "TechNiBai". The researchers believe that having this implementation is a big help to the industry and people want to have a good service and good people that they can find.

OBJECTIVES OF THE STUDY

The objectives of this study are to help the user in terms of finding the shop and the technicians. The proponent will develop this system so households can easily locate the specific technician and its shop; furthermore, it provides specific technical services.

Specific Objectives

The aim of the researchers is to develop a system that will:

- Enable user to locate technicians and shops

- Enable user to transact schedule to the shop owner for fixing the item defect.
- Enable user to post hardware or software defect.
- Provides information of different professional technician regarding on their credential background
- Provides a variety of technician information regarding hardware and software repair shop.
- Provides an efficient and actual location in regards to the repair shop provided with shop owner information.

The system further aims to:

1. Identify the existing technical services in terms of 1.1 Locating Technician Shop
 - Determine Legitimate Technician and Shop
 - Scheduling repair transaction and transaction support
 - Notify and Comment
 - Provide Ratings
2. Evaluate “TechNiBai” in terms of:
 - Accessibility;
 - Efficiency; and,
 - User Friendliness
3. Improve the procedure in technician, technical support and services.

Scope and Limitation

This study focuses on giving the location of the shop, providing a technician and giving specific technical services of “TechNiBai System”.

Scope

- The user will be able to register.
- The user will be able to view different shop.
- The user will be able to locate shops.
- The user will be able view technicians’ information.
- The user shall be able create transaction schedule to a shop owner for fixing the device problem.
- The user will upload an item picture that they want to repair.
- The user will message the shop owner.
- The shop owner will be able to register.
- The shop owner will be able to add technicians.
- Shop owner shall communicate to the user.
- The shop owner will be able to upload a video/picture with the approval of the admin.

Limitation

- The system will be only for Lapu-lapu City.
- The household will not interact with the other household.

- The system will not be capable to accept payment.
- The system will be available for those who have an internet connection.
- The system will not accept a freelance technician

REVIEW OF RELATED LITERATURE AND STUDIES

Theoretical Background

Technologies have been part of the daily life bases of this era, software, hardware, engineering has been progressing for the past years, and more technicians are likely needed. Technicians solve technical problems in research and development, manufacturing, inspection and much more. The work is more application oriented and more limited in scopes specialization. Thus, technology is vital in today's world and makes everything easier, technology has made an impact on retail. People do not need to leave their houses in order to get what they want; they just go online and shop. This becomes more useful in every area in the community most especially for the household. Somehow, in a customer service culture, trust is of the utmost importance in a customer and online shopping relationship. According by J. Lawson, Monique Heery (ICT Systems Support Level 2) p. 163. The technical skills required will vary according to the customer's needs. Technical skills are the skill that help desk or field technician needs to support a specific product and technology. All organizations would like their staff to maintain a good level of technical knowledge, so that all the important and vital information is available to them to perform their duties to a professional standard. This will form part of an organization's vision/mission. Eric Maass, Patricia D. McNair (Applying Design for Six Sigma to Software and Hardware Systems). The concept of "cost of quality" in its most extended states is a very powerful metaphor for the effectiveness of a development cycle. Simply stated, It is the allocation of all effort into two categories "value added: and "defect detection and Extraction "and the use of the proactive tooled and technique to increase the first at the expense of the second. Let me elaborate. If we hypothesize a perfect product development cycle, crystal clear definition optimally tied to the user target, rendering of this description into the relevant software and hardware sub-elements. A study done in 2015 the U.S. Bureau of Labor Statistics (BLS, www.bls.gov), the median annual salary earned by computer user support specialists was \$48,620 in May 2015. The employment of computer support specialists, including technical support technicians, is expected to grow by 13% between 2014 and 2024, per the BLS. This represents faster than average employment growth compared to the average for all career fields. Technical support technicians can provide in-house support a particular company's staff, or work remotely, providing assistance and troubleshooting to customers via phone or email. Either way, a high school degree and computer expertise may be the only requirement, although an associate or bachelor's degree in computer science will likely improve job prospects. Excellent customer service skills are an essential skill on top of knowledge of computer systems. Abandonment of shopping carts: In the year 200, three out of four e-shoppers worldwide did not complete the purchase after they placed products in an online shopping cart abandonment rate in the U.S.is 78%, compared to 73% elsewhere (Ernst & Young, 2001). Lack of customer trust related to a problem with customer service is the lack of trust that the user feels toward online vendors. Trust issues have consistently been of concern to online users since the early era of e-commerce. For the online user who has yet to make an online purchase, the single

most frequent reason is lack of trust. A similar result found by ePulse which showed that concern about security of the transaction was the top reason for losing customers in the e-tailing industry (Pastore, 2000).

Related Literature

According to International Society for Technology in Education (ISTE) 2017, technology needs to be maintained, and user like teachers, students and all who work in the industry or not that use technology needs just-in-time help when troubleshooting problems. Whether human or virtual, technical support ensures that the technology continues to function, remain up to date and is fully usable by people. In a standard-ready system, teachers are supported in their technology use — both in learning how to use it and in applying it to their classrooms. They know how to get technical help without significant lags. Key considerations for planning include sufficient infrastructure to support ideal levels of technology use, Access to technology specialists, diversified responsibility for technology use, implementation and support. According to Gay Gordon-Byrne, buying, Supporting, Maintaining Software and Equipment: An IT Manager's. Defects in electronic design, workmanship and manufacturing may appear outside the initial warranty period and be highly impactful to the user. This means that defect support is an ongoing process for both hardware and software vendors until the next release of a replacement version. Most manufacturers announce the end of their willingness to undertake problem determination and creation of fixes with an "End of Services Life (EOSL)" announcement. The intent of an EOSL is twofold. First, to reasonably alert customer that they should not expect any further defect support and, second, and most important to use that event as a marketing push to upgrade the customer to the next release or next model. Defect support is intentionally stopped for the older models and the release is technically "frozen". One measure of reliability that seems to apply to both hardware and software is mean-time-between-failure (MTBF). MTBF is defined as the sum of the mean-time-to-failures (MTTF) and mean-time-to-repair (MTTR). It is important to consider how long it takes to repair a failure when considering writing a reliability specification. It may not always be wise to use a system with frequent failures and short repair times, but that may be preferable to a system that is down for months at a time when it does fail. There is the possibility that fixing one cause of failure may introduce other software defects (Lazaroni et al., 2011). According to Mike Antich, searches to fill open technician positions are becoming lengthier. One fleet that operates in-house maintenance operation reported that it looks six months to find a qualified candidate to fill a single open position. Moreover, the situation seems to be getting worse. One reason, among many, for the decreased number of applicants is the low salaries offered by government fleet operations compared to private sector employers. Government wages are simply not competitive. Dealerships, which face the same technician shortage. Therefore, one creative approach is to develop strategic alliances and to nurture them as prospective future employees. In addition, one proactive approach is to offer technicians flexible shifts with more time off. A second proactive strategy is to create a scholarship program for students interested in studying automotive and fleet maintenance. A third proactive approach is to develop on-site mentoring programs; however, some fleets have been unable to do so because of concerns about liability exposure should a student apprentice be injured while training on government premises. Some fleets base wages on the level

of certification, which gives employees the ability to determine their own salaries while improving their skill levels. This provides a good enticement to not only attract new hires, but also to retain technicians. Along these lines, recruitment and employee retention can be enhanced if a technician's job descriptions are written so that promotions and pay are based on performance and not seniority. Unless fleet managers start to think out of the box and begin employing proactive and creative recruitment strategies, they will continue to be victims of a technician shortage that promises to continue for many years into the future (Mike Antich, 2014). The National Centre for Technical Development and Modernization will, at least initially, not offer training itself, but act as a "one-stop shop" experts and resources for universities trying to train up their own technicians, Mr. Croft explained. Former technicians who have worked "at the coalface" will in part staff it, he said (Terry Croft, 2016).

Related Studies

Service Pro Mobile Technician. Productive service technicians are the key to both great customer service and an efficient, profitable field service operation. Unlock the potential of your service technicians with service Pro® Mobile. Service Pro® Mobile technician software works seamlessly with Service Pro® software in the home office, placing the entire service team in communication throughout the workday.

Technician Locator: Find a Technician by Zip Code. ASI is pleased to announce the launch of its Technician Locator on the ASI website. ASI recently collaborated with Dental FixRX to provide installation and support service for dental delivery systems. They also have a database of independent technicians that we been building on for more than 20 years. Together, this list of technicians offers coverage across the United States and includes Alaska and Hawaii. Puerto Rico, Canada and the UK are also represented. Finding technicians to install and service your ASI dental delivery systems is easier than ever. Simply enter your zip code in the space provided. The Locator will present you with a list of nearby technicians. Some technicians cover a very large or particular area.

Bullseye Store Locator. Comprehensive store locator software, which includes a robust API. Simple implementations can also be configured with their interface, which can be set up in minutes. Upload locations in a csv file, or automate the location, maintenance of CRM systems like Salesforce.com. Configure a locator on your website, Facebook, phone system, or other application. A variety of reports are included to display usage based upon user search, searches, dealer exposure in the search results, and more.

MobyServices. During the last 7 years, they worked with many businesses and delivered solutions in eCommerce, hosted solutions, customized applications, etc., During our interaction with numerous customers, and they constantly heard that the management is not supported with the required tools to evaluate the performance of their field staff and Role, it's more about ethos process. This made them to think of the possibilities to provide a solution, which should be cost-effective, easy to use, faster implementation. Sumudra Technologies strongly believe the client

interactions, and understanding their day-to-day activities/problems, suggestions, improvements, and they take them very seriously, analyze the root cause of the problem, and returned to the client with a solution. They are aware that markets are very dynamic and MobyServices™ is going through constant change, which is the core-strength of the application. This helps customers to not to spend additional budgets and additional training, updates are always part of the respective package. MobyServices™ brings true value and unique proposition to its customers at a ridiculously low-cost. From field staff management, work order scheduling and tracking the status, and improving the performance and providing the market intelligence, accounting, etc., All these features are 10 times cheaper than the most of other FSM solutions.

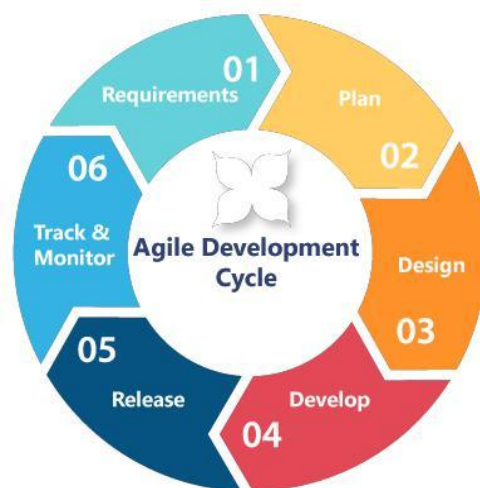
RESEARCH METHODOLOGY

In this chapter covers the methodology used in the study is described. The geographical area where the study was conducted that will help to strengthen the study. The instrument used to collect the data, including methods implemented to maintain the validity and reliability of the instrument are described.

Software Engineering Methodology

Agile Model

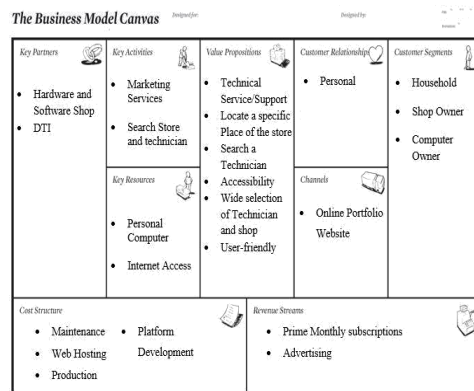
Agile software development is a software development under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams. It advocates adaptive planning, evolutionary development, early delivery, and continuous improvement, and it encourages rapid and flexible response to change.



AGILE METHODOLOGY DIAGRAM

Business Model Canvas

Business Model Canvas for TechNiBai: A Web-based application for households who seek for technical support for the hardware and software defects. This application is via the internet that can provide shops and technicians information. It can also provide the exact location of where to find the shop.



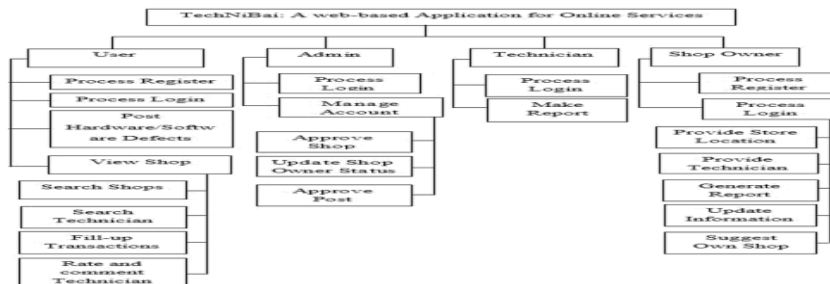
BUSINESS MODEL CANVAS DIAGRAM

Gantt Chart

Gantt charts are a project-planning tool that can be used to represent the timing of tasks required to complete a project. Each task takes up on a row. Dates run along the top in increments of days, weeks or months, depending on the total length of the project. A horizontal bar whose left end marks the expected beginning of the task and whose right end marks the expected completion date represents the expected time for each task. Tasks may run sequentially, in parallel or overlapping.

Functional Decomposition Diagram

Functional decomposition diagram is a method of business analysis that dissects a complex business process to show its individual elements. It is also to facilitate the understanding and management of large and/or complex processes and can be used to help solve problems.



FUNCTIONAL DECOMPOSITION DIAGRAM

Business Use Case

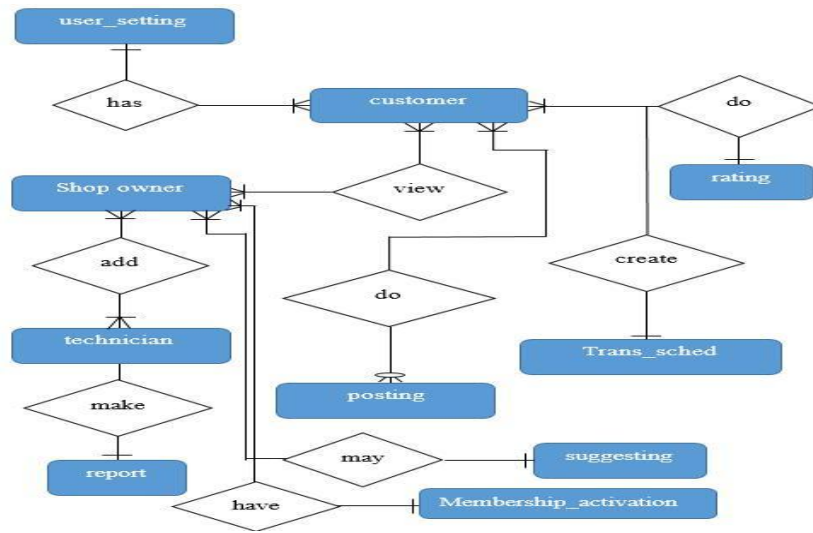
A primary purpose of the model of business use cases and actors is to describe how its customers and partners use the business.



MAIN BUSINESS USE CASE DIAGRAM

Entity Relationship Diagram

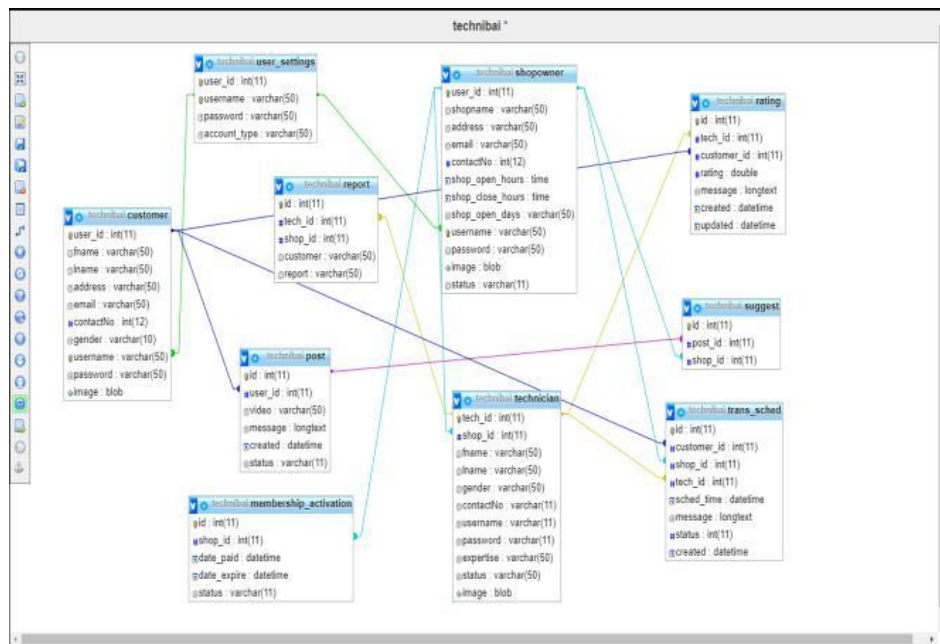
An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regards to the organization of data within databases or information systems.



ENTITY RELATIONSHIP DIAGRAM

Database Design

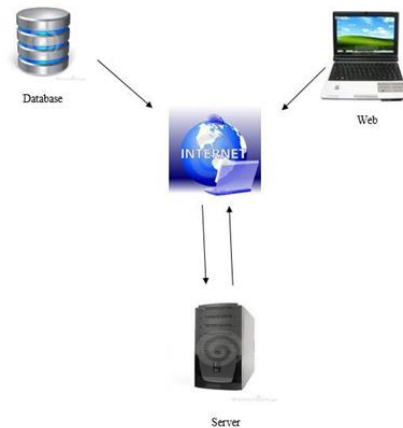
Database design is the database structure that will be used as plan to store and manage data. It shows the entities and attributes as well as the relationship of the entities with the other entities.



DATABASE DESIGN

Network Model

A network model is a database model that is designed as a flexible approach to representing objects and their relationships.



NETWORK MODEL

CONCLUSION

Households encounter technical problems at home that needs fixing and there is a great demand in finding services efficiently and effectively. Nowadays households own computers with internet connection and so finding services are mostly done online. There are a lot of available websites and applications to access however going through the whole web page and application is a hassle and the reliability of services and technicians is suspect. Therefore, a user-friendly web based application that the proponents are proposing is just what all the households need. “Tech Ni Bai” helps households locate shops nearby and find skillful technicians conveniently with regards to repairs of any software and hardware devices. The web application allows users to view technician’s information and make contact with the shop to recommend the right technician. The application also helps shops find potential clients to serve and it involves marketing their shop just within the location without having to pay for advertising.

RECOMMENDATIONS

The following are the recommendations offered to future researchers to further the improvement of the system:

1. Location can be widened instead of just one location. More locations within the province could be added and this could mean adding new function to the system locator.
2. Create message box to be used for interaction of users from one household to next.

BIBLIOGRAPHY

(N.d.). Retrieved from <https://www.bls.gov/>

(N.d.). In J. L. Andrew Smith, ICT Systems Support Level 2 Book (p. 163).

Bigelow, S. J. (1996). The Tab Electronics Technician's On-Line Resource. Retrieved from amazon: <https://www.amazon.com/Electronics-Technicians-Line-Resource-Reference/dp/0070362203> Company Search. (N.d.). Tech Support services.

Retrieved from consumer affairs: <https://www.consumeraffairs.com/tech-support-services/>

Cullata, R. (2017). INTERNATIONAL SOCIETY FOR TECHNOLOGY IN EDUCATION. Retrieved from ISTE: <https://www.iste.org/>

Dao, T. (2015). Many fleet managers say one of the biggest challenges is in finding qualified technicians in their operation. Public fleet maintenance is not a well-known profession, and unfortunately, for those who do know about it, it's not known as a well-paid profess. Retrieved from government-fleet: <http://www.government-fleet.com/article/story/2015/06/grow-them- or-steal-them-the-struggle-to-find-good-techs.aspx>

Dufresne, S. (2016). Basic Electronics. Retrieved from hackaday: <http://hackaday.com/2016/08/19/books-you-should-read-basic-electronics/>

Eric Maass, P. D. (N.d.). Applying Design for Six Sigma to Software and Hardware Systems Book. Retrieved from bls.gov: <https://www.bls.gov/>

Ernst&yYoung. (2001). EY. Retrieved from EY: <http://www.ey.com/>

Gibilisco, S. (N.d.). Tab Encyclopedia of Electronics for Technicians and Hobbyists

UCLM ONLINE ENROLLMENT SYSTEM WITH STUDENT PORTFOLIO

Arcangeles, Joyce A.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Tampus, Christian C.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Chavez, Jennieverb O.
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Abstract - The burden of the online processing of enrollment was a dilemma for most of the students and staff. Most of them found that the current system of enrollment is inconvenient, tedious and needs for a faster, correct, organized storing and easy retrieval of the students' portfolios (such as viewing of grades, subject taken and achievements). Based on the findings, the current system is insufficient because of some major problems in terms of checking and inputting student information, slow retrieval of the students' portfolio and time-consuming. Through data gathering, the researcher conceived an idea that will replace the current system of enrollment in the University of Cebu Lapu-Lapu and Mandaue with the use of the PHP language for web-site development. The researchers proposed the UCLM Online Enrollment System with Student Portfolio based on the findings of the research survey to lessen the burden of the students and staff through augmenting the current system. The study presented innovation from traditional to advanced enrollment system. The proposed system will provide an accuracy and efficiency. It also eliminates the inconvenient ways of enrollment and viewing of portfolio processes. The researchers decided to apply the descriptive method for the study. They conducted surveys and interviews for data gathering for the necessary information, ideas, views, and perceptions of the respondents in different areas of the current enrollment system, the gathered data were tabulated, analyzed and presented. The objective of this study is to develop an online system that will make the enrollment easier, fast and can obtain the student information, class schedule, grades, achievements and existing account. The proposed system entitled: UCLM Online Enrollment System with Student Portfolio is more convenient than the current system, yet it will require a strong internet connection once it is fully developed and implemented.

Keywords – online enrollment system; student portfolio; portfolio; current enrollment system; uclm enrollment system

INTRODUCTION

Computerization is a control system that manages processes in industrial work-place. It reduced human errors and processing time, thus it can boost productivity and resulted into high quality of

product produce. In Information System, computerization is concerned about interrelating different but inter-dependent transactions. This can result in a system with well-integrated processes that can perform much faster and more accurate than a manual system. Enrollment is the process of entering and verifying data of student to register on a particular school. Different interrelated processes build up enrollment procedures called Enrollment System (ES). ES are used particularly in recording and retrieving students' information. Tracking students information is also one feature of ES, in which the school can trace the standing of a student. Verifying payments was also added to update or browse students' billings. Enrollment System is a good example of a computer generated process. This can lessen the workload and provides accurate information needed of the school. As a result, it will benefit not only the student but the administration as a whole. In big organizations, technology is their main line in every transaction most especially in handling a thousand people. Educational organizations that deal in managing people to meet the need and has a purpose in pursuing collecting goals, managing structures that determine relationships between the different activities that will affect the environment in carrying an open system with different responsibilities, roles, and authority. Schools and Universities are an organization that deals with both educators and students. They offer education where students can learn both academic and values. Both education and school have the process of the integration of technology. The portfolio is one way of proving and promoting the achievements and the competence of the student. It can help the educators in monitoring and evaluating the learning progress of the student. In some schools, the portfolios are the way to see the students' critiques and the evaluation of their work and the progress of its academic works. It serves as the learning growth document that can help students in reflecting on where they started, developed, and ended up at the conclusion every semester and school year. Enrollment is the process of entering and verifying data of students to enroll in a particular school. Enrollment system is used particularly in recording and retrieving students' information. Tracking students' information is also one feature of the enrollment system, in which the school can trace the standing of a student. Also, parents looking to enroll their children in various schools can do it proficiently from home by visiting the schools' online systems without physically visiting the school to get enrollment forms, as previously was the case. Hence it saves time and makes the process efficient. Moreover, the system makes and editing fast and efficient. Enrollment plays the most vital part of every school, especially in a school that offers all levels of education. Having poor enrollment system like the manual process is a struggle to both enrollees and staff of the school as it takes a lot of processing and also time-consuming. Enrollment is also the busiest schedule in every institution, especially in the registrar section. It is a challenge on how making the enrollment runs smoothly and with the right description and prescription of every enrollees document. It is also the reason why the students can have the subject that should not be taken prior to their prospectus and requisites. The process of enrollment is prone to errors and consumed too much of the time. Student, records staff cashier and other departments are affected by the problems of the manual process of enrollment. The progress of today's technology led to discovering the numerous things. The advantages of the enrollment system using the internet that makes the enrollment to be done easily that results in utilizing the various systems being revolutionized. Enrollment system serves as the brain of a computer system in enrolling different levels of education that can enable them to access the institution efficiently while allowing the storage of information in the utmost safest manner. Many

schools today adapted this in-novation in the offering of their services. On-line enrollment systems allow students to enroll through internet which reduces the pa-per cost and human error, avoids the loss of records, eliminates the process repetition and reduce the problems of the traditional enrollment systems, as the manual process serves to be troublesome than the modernized transaction. An online enrollment system is very essential in an educational organization. In alignment to the above statements, the need to conform to technology advancements is appropriate and timely for the University of Cebu Lapu-Lapu and Mandaue specifically in the enrollment system. Thus, the researchers have designed and developed the Student information system to provide student, staff, administration, and other stake-holders have an easier, faster and convenient system. The system is also capable of let-ting the registered students enroll, process adjustments and view dissolved schedules on-line. The system includes the student port-folio which is a compilation of educational evidences. This is capable of storing important and pertinent information of students such as personal information, submitted requirements, study load, grades, prospectus, achievements, skills, best works and projects.

OBJECTIVES OF THE STUDY

The main objective of this study is to develop an Online Enrollment System with Student Portfolio for the University of Cebu Lapu-Lapu and Mandaue.

Specific Objectives

1. To enhance the enrollment system in UCLM in terms of:
 - Processes.
 - Records management; and
 - Reports generation.
2. To provide a system that will secure and maintain the data integration from the student information to enrollment processes; and.
3. To provide student portfolio which maintains students pro le in terms of:
 - Grades;
 - Prospectus.
 - Submitted requirements;
 - Statement of account;
 - Achievements and recognitions;
 - Skills and special talents; and
 - Best works and projects

Scope and Limitations of the Study

The study aims to develop an Online Enrollment System with a Student Portfolio for the tertiary level of the University of Cebu Lapu-Lapu and Mandaue.

The proposed system focuses on the following functionalities:

Student

- Can view schedules for enrollment both old and new student.
- Can enroll online.
- Can view their portfolio (profile, schedules, grades, prospectus, statement of account achievements and skills).
- Can update enrolled subjects, achievements and skills.
- Can update their achievements and skills in both academic and sports.
- Can check their submitted requirements if it is complete or not.
- Can enroll by choosing a block / section.
- Can view dissolved schedules.

Admin

- Can view and update his / her profile.
- Can add schedules for enrollment.
- Can add new student.
- Can add and update students' credentials.
- Can search and enable old student account to enroll.
- Can add staff.
- Can dissolved schedules.

Staff

- Can view and update his / her profile.
- Can add schedules for enrollment.
- Can add new student.
- Can add and update students' portfolio.
- Can search and enable old student account to enroll
- Can post dissolved schedules.

Limitations of the system

- This system cannot compute statement of accounts.
- Cannot enroll new students directly.
- This system is for University of Cebu-Lapulapu ang Mandaue only.
- Will not allow insertion once the subject is already closed.
- The students' accounts should be activated first in school before students can enroll outside the school.

REVIEW OF RELATED LITERATURE AND STUDIES

Theoretical Background

This study aims to come up with an enrollment system with student portfolio for the University of Cebu Lapu-Lapu and Mandaue which includes pertinent data such as students' personal information, grades, study load, prospectus, and statement of accounts, achievements, skills, best works and projects. This study is anchored to the management theory of enrollment system. According to Orehovec and Ingold, true enrollment management is a concept and a process. Organizational reporting structures become trans-parent while integration efforts between offices and divisions work synergistically to improve services and allow the strategic management of the enrollment process. Enrollment is a 'cradle to grave' process that starts at the first point of student contact (the prospect) and continues to and through graduation. Arguably, for effective enrollment management to occur, critical elements must be present. While not exhaustive, the following list contains elements that are necessary for successful enrollment management: leadership, team-work, strategic planning, comprehensive programming, knowledge about the competition, critical timing, accurate, secure and available data along with appropriate support systems, clear and workable strategies, and the necessary resources (Ingold, n.d.). The system will make the work of the enrollment personnel, college heads, campus and academic director faster, easier, and more comprehensive with the help of computerized enrollment system that can reduce the man-power needed to facilitate an enrollment process. By having this computerized, it is more accessible to those wishing to enroll especially if it is accessible through the web. This would also cut down on the human error aspect as well as double entries from two people enrolling at the same time. The computerized enrollment system enables the college staff to keep information about students, courses, and generate the enrollment list and send message to the students. According to the University of South-eastern Philippines, a well-built one will re-duce the load on the people that normally have to-do all the work. Enrollment system is a good step for the school. Enrollment system is useful especially when the school retrieves the important information from the student. In the enrollment system, the school can trace what are the standings of the students. Lack of enrollment system in a school it can lead to chaos and troubles, the students will be confuse on what they should do and how they will do to be able to enroll (Philippines, n.d.) The advancement of technology has brought a lot of impact on society as it be-comes more and more influential in today's world. Innovations and upgrades are being discovered and achieved almost every day. These changes have brought our humanity a non-stop changing era as they often create new ethical questions since various implementations of technology influence the value of civilizations. In many societies, technology has helped acquire more progressive steps, means, setups and systems to enhance every aspect of people's daily lives and in the business profession (Sejuela, Advancement of Technology, 2015). Enrollment System is a good example of a computer-generated process. This can lessen the workload and provides accurate information needed for the school. As a result, it will bene t not only the student but the administration as a whole. The use of the Internet has been extremely fast since it can now be accessed almost anywhere by numerous means. The internet allows computer users to remotely access the computers and information stores easily, wherever they may be across the globe. They may do this

with or without the use of security, encryption and authentication technologies, depending on the requirements. The simplified using of the internet has directed to a multiplicity of new opportunities both for business and scholastic institutions (Sejuela, The Use of Internet, 2015). Enrollment is very useful in retrieving vital students' information. Without it can lead difficulty both for the administration of school and student in the school process. The transformation of the manual enrollment transaction to automate and now into web-based automation is one example of what has driven partly by the rapid technological innovation. Anyways, just to make work easier and faster like enrollment transactions are possible with the emergence of computer technologies.

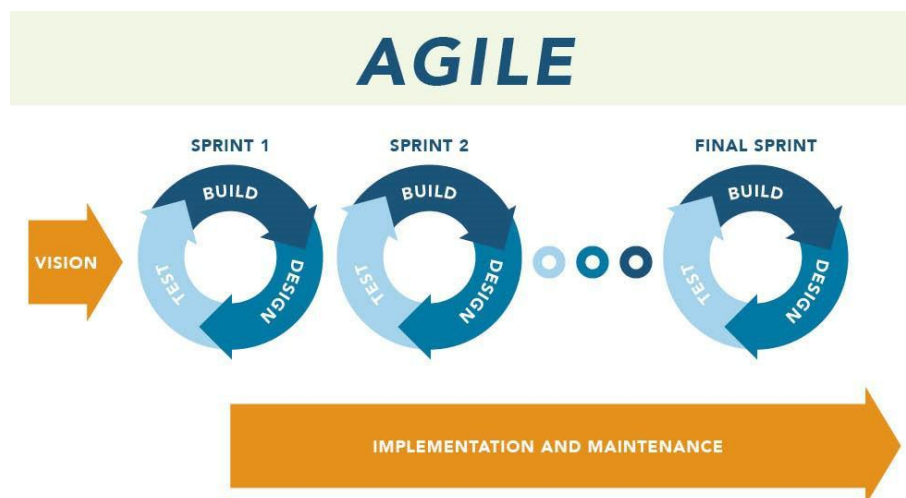
RESEARCH METHODOLOGY

This chapter presents the software methodology applied in the development of the UCLM Online Enrollment System with Student Portfolio.

Software Engineering Methodology

Agile Methodology

Agile software development is a methodology for the creative process that anticipates the need for flexibility and applies a level of pragmatism to the delivery of the finished product. Agile software development focuses on keeping the code simple, testing-of-ten, and delivering functional bits of the application as soon as they're ready. It fundamentally incorporates iteration and the continuous feedback that it provides to successively re ne and deliver a software system.



AGILE METHODOLOGY DIAGRAM

The proponent will apply the Agile Software Methodology in the system development. This covers the following phases, namely: Discover. This phase focuses mainly on identifying problems and requirements of the system to be developed. The data gathered in the interview as well as observation are being applied. Discover includes BMC (Business Model Canvas), Validation Board, and Gantt chart. As the proponents applied these tools, they were able to know the specific problem that they are trying to address, able to know the respondents and their concerns, able to know the system requirements and able to identify the amount of work that has to be done and how long would it take to be finished.

Business Model Canvas

Is a strategic management and lean startup template for developing new or documenting existing business models. Figure 7 shows the BMC of the UCLM Online Enrollment System with Student Portfolio. The developed business model can-vas application was used as part of the service design process to develop value proposition.

Validation Board

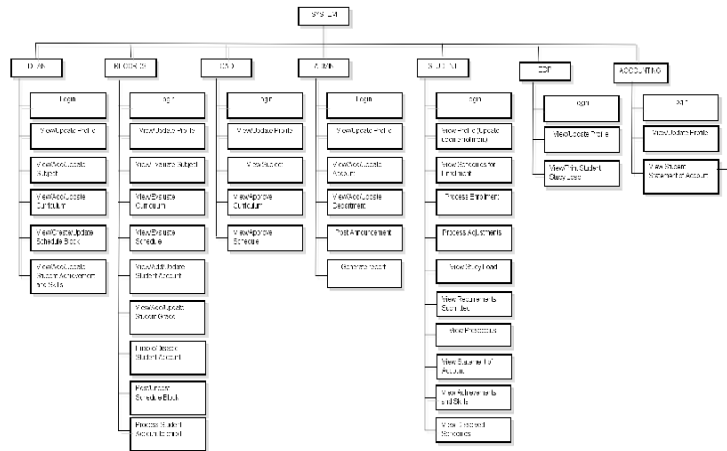
Is a great tool to help entrepreneurs stay focused on taking action while implementing the Lean Startup process. The proponents will use this tool to be able to know the potential customers and avoid the risk of losing or failing in the near future. Figure 8-9 shows the validation board (stage 1 and stage 2) of the UCLM Online Enrollment System with Student Portfolio where the researchers test lots of assumptions, learn from the testing and design a better value proposition.

Gantt Chart

Is the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods. The project schedule including start and finish dates of the activities from what is usually called the work breakdown structure of a specific construction project.

Functional Decomposition Diagram

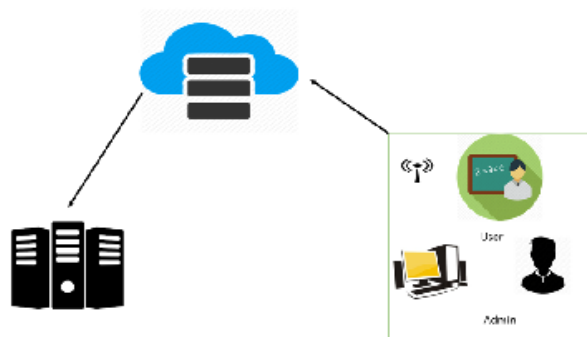
Is used to facilitate the understanding and management of large and/or complex processes and can be used to help solve problems. This shows the scope of the system processes shown in the functional decomposition corresponds to the various functional relationships as how the original complex business function was developed. It mainly focuses on how the overall functionality is developed and its interaction between various components.



FUNCTIONAL DECOMPOSITION DIAGRAM

Network Model

This shows the process of receiving and transmitting of data from the database. The network model of the system that is used is a three-tier Client-server network, for it is suitable for the implementation of the UCLM Online Enrollment System with Student Portfolio. This system is composed clients (department staff and students), the server and the network devices and the databases. It is applied when data are transmitted or received through a network. The process starts when the enrollment period is open and both of the users (staff , admin, and student) will log in to the system. All the catered transactions will be sent to the server and be recorded in the database.



NETWORK MODEL DIAGRAM

CONCLUSION

The study concluded that the manual process of enrollment in a big university like University of Cebu Lapu-Lapu and Mandaue is not efficient and time-consuming as all triggering people experience the following: redundancy and repetitive process, slow process in checking and tracking of subjects, losing of records, student enrolling to a subject with prerequisites, student will enroll to the close subject using insertion. Through the proposed system of the proponents and with the use of advance technology, this system can help students, enrollment personnel, college head, academic head do faster transactions online. To conclude, the main cause of the problem is the slow processes, and time-consuming and hassle transactions and technology can help lessens the problem.

RECOMMENDATIONS

The proponents are looking forward that the system will be implemented in University of Cebu Lapu-Lapu and Mandaue, as the system will be a big help in molding the current process to a modern and adopting the new technology environment. Since, the study focuses on the University of Cebu Lapu-Lapu and Mandaue the proponents also looking forward that the proposed system will be implemented not just by the environment where the study being done, but also in the other campuses or other universities in the region that is in need of modernizing their enrollment process. However, the proponents lack strategies to implement some functionalities. Some recommendations are: mobile application, online payments, withdrawal of enrolled schedules and reservation.

BIBLIOGRAPHY

Internet Sources

Adrian, A. (2011).Enrollment System. Retrieved from <https://www.slideshare.net/EzhrihmCradan/cha2-28073663>

Enrollment System (ES). (2011). Retrieved from www.scribd.com

Enrollment System Related Literature and Studies. (2013, August 27). Retrieved from <http://www.voy.com>

Information and Communication Technology (ICT).(n.d.). <https://www.tandfonline.com/doi/full/10.1080/09687769.201>

Jefels (2015, March 31). Retrieved from <https://www.techwalla.com/articles/importance-of-ict-in-primary-education>

McHenry, S. (2010). Retrieved from <https://www.slideshare.net/EzhrihmCradan/2-28073663>

Online Enrollment System in Colegio de San Antonio de Padua. (n.d.). Retrieved from <https://prezi.com/bvxnugpjwaaa/online-enrollment-system/>

Online Enrollment System of Liceo de Cagayan University..(n.d.). Retrieved from <https://ejournals.ph/article.php?id=5509>

UCLM PORTAL

Agsamosam, Laura
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Mapait, Abdulracham
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Roble, Sheila
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Sta. Cruz, Rociel John
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Zabate, Nio Joevel
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Abstract - This paper presents an online grade management system that was developed to collect process, and return the grades produced by juries using series of rubrics. It discusses the design requirements features and implementation of the online grading system, as well as reactions from course faculty and staff members. It is shown that this system has a number of advantages over analog grading methods, including scalability, real-time feedback on the status of grading, the reduced potential for human error in compiling grades the ability for jury members to grade remotely and to revise their grades after submission, the ability for course administrators to easily review grading results and remove statistical outliers from the score set, the ability to return both provisional and final grades to the course faculty, staff, and students in a timely manner, and the ability to archive and export grading data for future use. Although the online system is clear improvement over paper-based rubrics, it is also show that small detail scan interface with usability and thus user satisfaction and that compatibility with mobile devices is a necessary, but still unaddressed, requirement.

Keywords – uclm portal; online grade management system; online grading system; analog grading methods; grade management

INTRODUCTION

Creating a campaign is one of the popular method in gathering voluntary contribution for money or in other words a fundraising event, especially to those kids who need assistant in their educational medical, and significant needs, by lending them the burden of financial problem will be lessen and will give hope to them facing their everyday challenges in life. Since technology is obviously rampant it is considered as a convenient and useful tool to link with other people. Online fundraising is a big advantage to those per-sons who wants to help children who were less fortunate and from remote areas. Computers and smartphones are the standard technology used by people. Instead of doing the work manually, these technologies make the work computerized and automated. In just a click and everything will be easier and faster. People can now just bring their work anywhere, anytime and even in any place through online. Due to online streaming, computers and smartphones are prominent that people are now more reliant on these technologies hence this become more useful in all aspects of their life. Along with software innovation, the manipulation of these technologies turned out to be more capable of doing the process much easier than before which become more useful in recording and storing data. Nowadays, computerized record system is one of the most significant software innovation in the world. Also, some of this system are now accessible online through mobile and web applications. This system is helpful in different areas of the community like in business, hospitals and most especially in school. Obviously, a school has a lot of files and data of students like grades students info and assessments that is so important and needs to be stored properly. Storing and recording of data is one of the problems of many registrars most especially if the school is using the standard style. According to Richard Breitmeyer, there are seven disadvantages when using a manual system rather than computerized record system. First, inconsistency in data entry, room for errors, wrong information. Second, significant ongoing staff training cost. Third, a system is dependent on the good individual. Fourth, reduction in sharing information and customer services. Fifth, time-consuming and costly to produce reports. Sixth, lack of security. Lastly, duplication of data entry. Thus, by using this Computerized Record System in school can lessen some of these problems and can make the work rapid and trouble free. In the University of Cebu Lapu-Lapu and Mandaue (UCLM) campus they are now using the manual system and grade kiosk for the inquiry of grades. In the manual system, students will just have to wait for the time the Registrar's Office will release the grade slip while in grade kiosk, it is a system which a student can just inquire their grades inside the school campus. There are three grade kiosk functioning in UCLM which become the problem of most student because they just have to fall in line and wait for few minutes to see their grades. The process of the two systems both are time consuming and tedious. In order to lessen the work of the registrar and to reduce the students falling in line, the researchers come up an idea to develop the old grade kiosk into UCLM Portal. Through online inquiry of grades can now be done anywhere through smartphones and computer thus the distribution of grade is now accurate and efficient. With this enhance system, the students can not just view their grades but also they are now updated for any news and events of UCLM. Aside from that, the system can now be accessible by an instructor so that the encoding and computing of the grades and also the attendance can be done through online. In addition, the parents can now also access the system. For the reason that they can now monitor the grades and everyday progress of their student. This

becomes the advantage for these three users at the same time for the school. Having the UCLM Portal, the school system will now transform into a new and improved one which can now make the transportation of the information much quicker and easier. Eliminates tons of paper used in printing the grades. Minimize the work of the registrar. It can also speed up processes that are in a rush. It can lessen the burden of both students and the office staff. The students will finish their processes quickly and easily while office staff will do their job with hassle-free. In addition, it also helps the instructor to lessen their role in computing the grades because of its automatic computation of grades. Enhancing the school system will help makes the school more progressive and productive. It will help promote the schools name and the best quality education they offer. Well organized and proper functioning school system will bring the school to a more advanced and better education service. A highly improved and developed school system gives the school a big credit. Enrollees from distant places will be encouraged and motivated to enroll knowing that the school has the capacity, credibility, and qualifications of an excellent and efficient institution. Effective and efficient school can be attained if first and foremost they have a well developed and updated school system. It is very essential in every school especially in big universities which frequently initiate high-end school system because in that way they can indeed produce brilliant and exceptional professionals.

OBJECTIVES OF THE STUDY

General Objectives

The primary purpose of UCLM Portal is to enhance the current grade kiosk system in UCLM into an online grade management system via Android and Web app that provides the student and parents an easier, convenient and hassle free process of inquiring grades and also update and notify them of some news and events. In addition, the system has now an automatic computation for grades.

Specific Objectives

- To develop a new regime that will shorten the process of inquiry of student grades
- To produce a new system that will let the instructor easily encode student scores and generate grades online
- To develop a new system that will let the instructor manage grades easily
- To produce a new system that will let the students view their subjects enrolled
- To create new system that will let the students view grades via Android and Web app
- To create a new system that will let the parents view the grades of their students online
- To develop a new system that will let the parents view the student's attendance records
- To develop a new regime that will notify the students parents dean and instructors for any UCLM News Events and Updates
- To produce a new system that will be more secure which cannot be retrieved by the unauthorized person to prevent loss of records

Scope and Limitation of the Study

Scope

- The system can provide grades to a student through online via the Android app and The Web.
- The system can also provide student information and updates.
- The system can compute grades through online system.
- The system can allow instructor change their password for security purposes.
- The system administrator can add, edit, and view of Students, Instructors, Dean, SAO and Parents.
- The system administrator is the only one who can register the Instructor Student, Dean and SAO staff.
- The system can now let the parents register and login to view the grades of their students by just using the ID number of their students.
- The system can notify Instructors, Students, Dean and Parents in the news and activities of UCLM.
- The Students and Parents can download and print the grades
- Only the students of UCLM and their parents are allowed to inquire grades

Limitation

- The computation cannot be done through the Android application.
- The online system process depends on Internet connection.
- The system will not be responsible for any wrong grades submitted.
- The system cannot be used as conversation.
- The system only allows three-person user per student for parent registration.

REVIEW OF RELATED LITERATURE AND STUDIES

Theoretical Background

Technologies along with innovations have now occupied the world. Everything a person do can now be related to technologies. Thus, this becomes more useful in every area in the community most especially in educational institutions. Educational institutions hold most of the important information of the students. Grades is one of the significant sample information which in fact the most protected among all. It is the student's ticket to the next level in getting their goals. It is the sum of all their hard works and determination. Thus, delivering this safely to them assures that they really got the real one. Below are articles and theories which the researcher used to relate to their system. According to Marzano, grades are typically defined as the numbers or letters reported at the end of a set period as a summary statement of evaluations made of students by the teacher. It reflects and measures the performance of a student and determines whether a student passes the subject or not. Gutek states that the purpose and efficiency of assigning individual grades to

students remains an accepted and established practice among educators as a part of the goal of educating students. Furthermore, teachers typically assign grades at the end of a designated grading period. Within education, grades are the most powerful message teachers can send to parents and students. Teachers need to look at the reasons for grading, which are to communicate to parents, to provide incentives to learn, and to provide information for student self-evaluation. The importance of grades is so ingrained in American educational culture that the practice of giving and receiving grades often goes unchallenged. Building and nurturing more efficient school/community relations is an important part of raising a school's effectiveness at achieving its primary goal raising student achievement. Studies show that making the students, parents and community feel part of the school increases the efficiency of the school and helps all parties involved. Grading is one of the least liked, least understood and least considered aspects of teaching. After years of work, we have developed a grading system that is entirely different from traditional and reformed approaches to grading and which meaningfully incorporates and integrates the collection of evidence, the evaluation of proof, and the reporting of judgments about that evidence. This system satisfies the requirements of good grading system and answers many of the problems faced by more traditional methods by substantially changing the way in which grade information is aggregated, resulting in a final course grade that aligns qualitative evaluation with course learning objectives and carries a direct qualitative meaning of the course learning objectives. According to Patrikakou, Weissberg and Rubenstein (1998), many changes in schools today can be credited to the utilization of computer technology. Students and parents are becoming more comfortable with computer technology and have the opportunities to communicate electronically with their school and teachers from home and the workplace. Web-based computer technology is proving to be a useful tool to promote communication between home and school, encouraging active collaboration among educators, parents, and students to build greater student achievement in school. According to West (2000), technology provides tools to help schools administer an immense amount of information regarding students. One such tool is an electronic grade book that allows the teacher to record, average, and report grades. The grade book can state the level at which the objectives were met. The grade book can also be the tool that reports and links period-by-period attendance to the school management system. The Internet provides Parents Avenue into the classroom to view grades, attendance, assignments, and exam schedules. This serves as a link for teachers and relatives in the electronic world (Trejos, 2000). According to West (2000), technology provides tools to help schools administer an immense amount of information regarding students. One such tool is an electronic grade book that allows the teacher to record, average, and report grades. The grade book can state the level at which the objectives were met. The grade book can also be the tool that reports and links period-by-period attendance to the school management system. The Internet provides Parents Avenue into the classroom to view grades, attendance, assignments, and exam schedules. This serves as a link for teachers and relatives in the electronic world (Trejos, 2000). According to Maynard and Howley (1977), parental involvement makes a difference in the academic progress of children. When parents get involved in education, children try harder and accomplish more at school (Maynard and Howley, 1977). Culyer (1988) identified three critical parental responsibilities: send the children to school to learn, support the school, and compensate the children for academic gains. While many factors sway children's scholastic successes, Faucette (2000) found that the exact forecaster does not deal

with income or social status, but rather the degree to which children's families can create an environment that supports learning, provides high expectations of their children, and includes active involvement in their children's education.

Related Literature

The purpose of this chapter is to present the different researchers and related studies from various sources that contribute significant impact in our re-search. This reference helps support the goal of our research. It provides information that is essential to elaborate the importance, significance and the useful-ness of this particular research. The study is concentrating on the feasibility of creating an online student information system for schools, especially prominent universities. This literature includes books, journals, articles, electronic materials such as PDF or e-book and other existing theses and dissertations, foreign and local that are believed to be useful in the advancement of awareness concerning the study.

Online Grades Provide Access and Accountability

According to Debbie Hamilton, implementing an online grade book program has been one of the best steps they have taken to a school to improve home-school communication and enhance student learning. In schools from Pennsylvania to New Mexico, student grades are just a click away. Teachers use online grading systems to keep parents (and kids) informed about what students are doing in class and how well they are doing it. Administrators say the improved communication makes students more account-able for their work and eliminates unwelcome "surprises" on report cards. Included: Getting-started ad-vice from schools with online grading systems. The feedback they have received indicates that over 90 percent of the parents love the program.

Quick and Confidential Grading

Eisenhower Middle School started using an online grade book program school-wide during the 2003-2004 school year to improve communication with families. Parents were very appreciative of the efforts of teachers to learn the program and keep them in-formed about their children's academic progress. The program used by the school was not available after that first year, so a few staff members investigated online programs and discovered GradeBookWizard. It was unanimously adopted by the instructional council for the next school year. Hamilton reported that they felt the security features were more than adequate to ensure protection of the 'confidential information provided to parents and students and the features available would be welcomed by all of their teachers – from the most tech-savvy to the most reluctant user. He explained that the ability for teachers to use a wide variety of options in the program has also been a strength. While teachers are only required to post grades online once a week, many of their staff members take advantage of the opportunities to post announcements, lesson plans, and class notes.

Informed and Accountable Students

Publishing grades online have eliminated the need for regular progress reports to be mailed to students' homes. Many teachers previously sent weekly, or monthly progress reports to parents. Today Eisenhower Middle School saves the paper required to print those reports because parents can check their children's grades at any time from any computer. Most families have access to a computer at home or in the workplace, but printed reports are provided for those who do not. There are no surprises at the end of the quarter or semester. Their webmaster monitors the hits to the site and has calculated that parents, students, and teachers average 500 hits a day. In fact, using his classes for some data collection, he determined that there is a 400 percent greater chance of a student receiving a deficiency notice if he or she has not checked GradeBookWizard. Another plus to the student and parent monitoring of grades is that grading errors can be corrected immediately. The school communicates clearly with the parents that teachers are only required to post grades once each week, so scores from a test taken by students on Tuesday may not be displayed on the following Monday. The accountability for teachers and their grading practices is certainly higher, but Eisenhower teachers welcome the scrutiny given to student grades as a result.

Online Grading "Makes the grade."

According to Timothy Gildea, during the on-set, there was some reluctance to embrace this new approach to keeping grades. Some teachers did not trust the system, which led to a duplication of work by maintaining a paper grade book along with the online grading system. As they became more confident, they gave up their paper copies and used the system as their only record of grades. In Hollidaysburg, Pennsylvania, Gildea and his staff at Charles W. Longer Elementary School have published grades online for five years, the last four of those years with LetterGrade. It provides constant access for teachers, the students, and their parents. It updates in real time, and parents can view all of their children's grades with one login password. Our experiences with security so far have been very positive. According to Gildea, convenient access to grades has made students more accountable for their schoolwork and enhanced relations between home and school. Students and parents can not only look over scores but view due dates for upcoming assignments. Access to the grades of all students helps Gildea, as an administrator, and the school's guidance counselors to better identify and support struggling learners. They are using this system to explore different applications – such as posting class assignments and lesson plans – that will tie directly into our state standards and the district curriculum. With that information, teachers can see a record that will tell them if they have addressed all of the objectives in their curriculum and the standards. Like Eisenhower Middle School, Longer Elementary has found that some students and parents anticipate that grades will be posted immediately after a test is taken. As they become more aware of the procedure that teachers follow to submit grades, which occurs at least once per week, they learn to expect a specific amount of "turnaround time" and become more comfortable with the system. New teachers jump into the LetterGrade system with no difficulty, says Gildea. Several staff members are exploring other tools within the system that will help them design lesson plans and identify areas that require re-teaching.

Related Studies

Similar studies refer to studies, inquiries, or investigations already conducted to which the present proposed study is relevant or has some bearing or similarity. They are usually unpublished materials such as manuscripts, thesis, and dissertations. Here are studies related to the project.

DotLetran Student Portal

DotLetran is a full-featured Web-based application that allows easy management of student and administrative data online. DotLetran incorporate features such as: full student/course details, grades inquiry, subject offering, PDF printable application forms, school schedules and activities, short messaging system (SMS), PDF printable multiple custom re-report card options, multimedia course delivery/ management, custom searches, reports and statistics, student personal calendar, curriculum checklist, subjects taken, on-line grades, enrollment, adjustment, change of grade, subject withdrawal, account balance inquiry, and more. DotLetran provides simple access to relevant academic and administrative school information, which allows students to make knowledge-driven decisions. We invite students to learn more about DotLetran by exploring this portal. DotLetran is another in-house advanced web application of the Letran IT Center. It is our goal to empower the Letran community thru Information and Communications Technology (ICT).

ZipGrade

ZipGrade turns your phone or tablet into an optical grading machine similar to a Scantron. It reads free-to-download answer sheets in multiple sizes. Pro-vides instant feedback to students by grading exit tickets, quizzes, and formative assessments as soon as they finish. Free answer sheets available in several formats and sizes up to 100 questions. Organizes results for reporting and exporting via PDF and Excel-readable format uses student ID numbers or written name of student for saying. Use companion website (www.zipgrade.com) to manage your data and upload student lists and review results in dozens of reports and exports. ZipGrade LLC is a single-founder, bootstrapped company founded by John Viebach. John's wife was teaching a SAT prep class in the evenings in a borrowed classroom. Without access to an OMR machine, she was grading bubble-in answer sheets by hand at the end of every class. A few years previous, John had been experimenting with computer vision grading as part of his volunteer work with a state high school athlete contest. With smartphone capabilities improving and a very obvious need, John set to work to create a cost effective grading app for the smartphone. Unlike many ed-tech companies, we derive no revenue from advertising or marketing of data entrusted to us. We also do not take investments from venture capital firms. This frees us to focus on building a sustainable company for our right end users teachers. To make this possible, we charge a reasonable price that allows us to continue new development and maintain the systems required to support our existing users.

Thinkwave

ThinkWave is a cloud-based school management system that automates record keeping, communication, and reporting. Improves communication with students and families with a parent internet viewer. Individual password-protected accounts let students and relatives view classroom information. Detailed, day-to-day summary of student progress includes over-all results, graded assignments and upcoming assignments. Usage of Grades Online correlates with improved student achievement by improving organization and allowing for early intervention. ThinkWave displays information automatically, without any additional action by teachers or administrators.

RESEARCH METHODOLOGY

Research Environment

This study is conducted in the University of Cebu Lapu-Lapu and Mandaue (UCLM). The University was founded in the year 1995. April 1, 1964. A group of young men with vision and foresight, spurred by altruistic motives to help mold the moral and intellectual life of the youth, banded themselves together to form an educational institution - the Cebu College of Commerce. February 1972, Approval by Securities and Exchange Commission (SEC) on the change of name of the institution from Cebu College of Commerce to Cebu Central Colleges (CCC). May 8, 1992, Approval by the Securities and Exchange Commission (SEC) on the change of name from Cebu Central Colleges to University of Cebu (UC). June 1, 1992, Atty. Augusto Go was installed as the first President of UC by then DECS Secretary Isidro D. Cario. May 21, 1995, A satellite campus of UC was opened in the vicinity of Lapu-Lapu and Mandaue, hence, UCLM. April 1999, UCLM has been approved as an international center of the City and Guilds of London Institute to offer Pitman Qualifications and following International Programs: Food Preparation and Culinary Arts, Food and Beverage Services, Accommodation, Operations and Services. June 2001, UCLM became an accredited Networking Academy for CISCO courses from Module 1 to Module 4. December 7, 2001, Inauguration of the UCLM 7 - story annex building. June 2003, Inauguration of the UCLM grade school building. June 2006: Inauguration of the UCLM new building.

Software Engineering Methodology

A software development methodology or system development methodology in software engineering is a framework that is used to structure, plan, and control the process of developing an information system. "Rapid-development language" is a general term that refers to any programming language that offers speedier implementation. Rapid-Development Languages (RDLs) produce their savings by reducing the amount of construction needed to build a product. So we choose this as our System Development Methodology because we believe that by using this development mythology will help our system in a real process of development.

Rapid Application Development Model

The RAD (Rapid Application Development) model is based on prototyping and iterative development with no specific planning involved. The process of writing the software itself requires the planning needed for developing the product. Rapid Application development focuses on gathering customer requirements through workshops or focus groups, early testing of the prototypes by the client using iterative concept, reuse of the existing prototypes (components), continuous integration and rapid delivery. What is RAD? Rapid application development (RAD) is a software development methodology that uses minimal planning for rapid prototyping. A prototype is a working model that is functionally equivalent to a component of the product. In RAD model the functional modules are developed in parallel as prototypes and are integrated to make the complete product for faster product delivery. Since there is no detailed preplanning, it makes it easier to incorporate the changes into the development process. RAD projects follow iterative and incremental model and have small teams comprising of developers, domain experts, customer representatives and other IT resources working progressively on their component or prototype. The most important aspect of this model to be successful is to make sure that the prototypes developed are reusable.

RAD Model Design

RAD model distributes the analysis, design, build, and test phases into a series of short, iterative development cycles. Following are the aspects of RAD Model: Business Modeling: The business model for the product under development is designed regarding flow of information and the distribution of information between various business channels. A complete business analysis is performed to find the vital information for business, how it can be obtained, how and when is the information processed and what are the factors driving a strong flow of information.

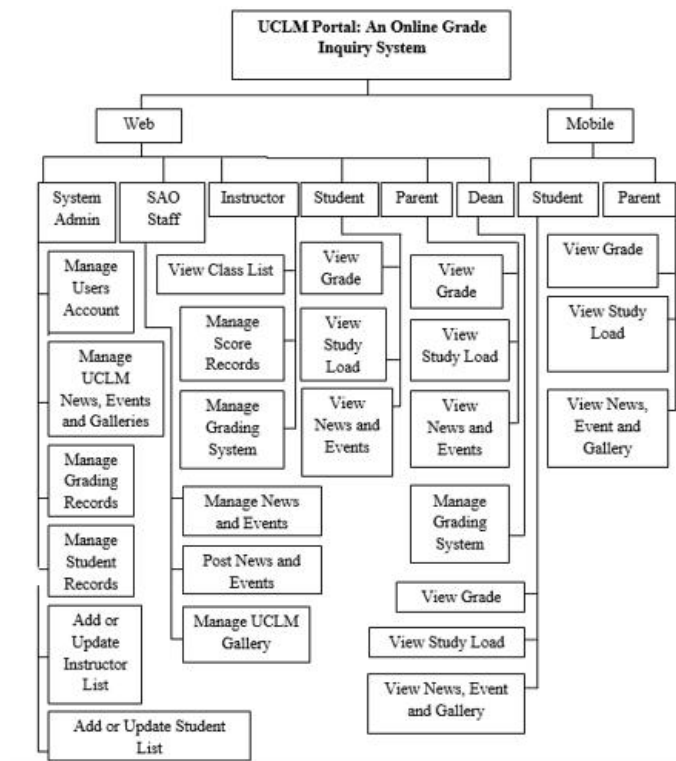
Data Modeling: The information gathered in the Business Modeling phase is reviewed and analyzed to form sets of data objects vital for the business. The attributes of all data sets are identified and defined. The relation between these data objects is established and described in detail in relevance to the business model.

Process Modeling: The data object sets identified in the Data Modeling phase are converted to determine the business information flow needed to achieve specific business objectives as per the business model. The process model for any changes or enhancements to the data object sets is defined in this phase. Process descriptions for adding, deleting, retrieving or modifying a data object are given. Application Generation: The actual system is built, and coding is done by using automation tools to convert process and data models into real prototypes.

Testing and Turnover: The overall testing time is reduced in RAD model as the prototypes are independently tested during every iteration. However, the data flow and the interfaces between all the components need to be thoroughly tested with complete test coverage. Since most of the programming components have already been tested, it reduces the risk of any major issues.

Functional Decomposition Diagram

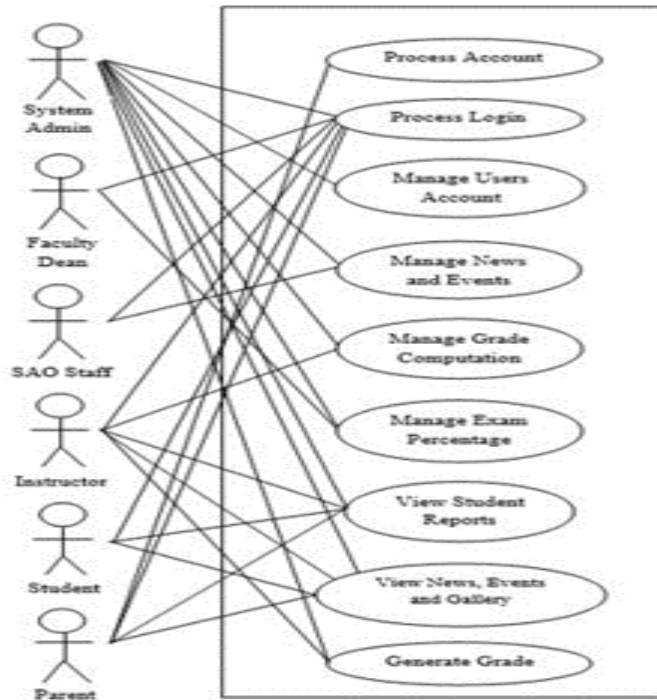
A method of business analysis that dissects a complex business process to show its individual elements. Functional decomposition is used to facilitate the understanding and management of large and complex processes and can be used to help solve problems. Functional decomposition is also used in computer engineering to help with software design.



FUNCTIONAL DECOMPOSITION DIAGRAM

Use Case Diagram

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a specific goal. The researchers of the UCLM Portal has designed the business use case diagram to help users understand the roles that they would portray in the project/system.



BUSINESS USE CASE DIAGRAM

Network Design

Network planning and design is an iterative process, encompassing topology design, network synthesis, and network-realization, and is aimed at ensuring that a new telecommunication network or services meet the needs of the subscriber and operator.



NETWORK MODEL DIAGRAM

CONCLUSION

The proponents made use of the descriptive method of research which identified the existing problems for instructors in grade managing and for students in grade inquiry taken from the respondents answers of the survey questionnaires and interviews conducted. Students and Instructors have become more sophisticated with research during the Grading system process. Majority of students and instructors in UCLM, has an issue when it comes to grading system. Instructors cannot well manage their grading record. Hassle and time consuming when creating a grading report. Students cannot easily inquire their grades, they need to line up for the Kiosk or wait for the releasing of grades. Therefore, the researcher concludes that the proposed system UCLMPortal: An Online Grade Management System can help the students and instructors. The system aims to help the students and instructors to make their grading process easier, stress free and not time consuming by accessing the application. Instead of accessing manually. But now, users can access all they need in just one application.

RECOMMENDATIONS

The following are the recommendations are offered to the future researchers for the improvement of the system:

1. Online Exam through UCLMPortal. This includes automatic computation of grades. Instructors will not be getting hassled when generating grades.
2. UCLM offered Course and Subject information inquiry.
3. UCLM student Assessments.

BIBLIOGRAPHY

- Almanza, B. J., Gozo, E. M., Lim, S. I., Maglasang, M. C., and Wagas, M. C. (2014). Online Informa-tion Management System of University of Cebu - Technical Education Training and Assessment Center (OIMS of UC-TETAC). Online Information Manage-ment System of University of Cebu - Technical Edu-cation Training and Assessment Center (OIMS of UC-TETAC).
- Bafile, C. (2009). Educational World: Online Grades Provide Access And Accountability. Retrieved March 18, 2017, from education world: <http://www.educationworld.com>
- Bayangan Poseidon, E. (2016). Student Information System for Kalinga State University Rizal Campus. Abstract, 330.
- Beal, V. (2017). What is Entity Relationship Dia-gram? Retrieved March 18, 2017, from Webopedia: [http://www.webopedia.com/TERM/E/entity relationship diagram.html](http://www.webopedia.com/TERM/E/entity%20relationship%20diagram.html)
- Breitmeyer, R. (2017). What are the seven advantages to a manual system? Retrieved March 18, 2017, from LinkedIn www.linkedin.com

Center, L. I. (2006). About dot. Retrieved March 18, 2017, from DotLetran Student Portal:
<http://dot.lettran.edu/aboutdot.asp>

Cuyler, R. (1998). Clearing House. Accountability as a Partnership: Professionals, Parents, and Pupils., 365-369.

Dacuycuy Pacio, R. (2013). Online Student Information System. Online Student Information System, 39.

Data Dictionary. (2017). Retrieved March 18, 2017, from Techopedia:
<https://www.techopedia.com/definition/27752/data-dictionary>

Engrade REVIEW. (2016, December 15). Retrieved March 18, 2017, from FinancesOnline:
<https://reviews.financesonline.com/p/engrade/>

Faucette, E. (2000). A Recipe for Increasing Achievement! Multimedia Schools, 56-61.

Gildea, T. (2009). Online Grading "Makes the grade." Retrieved from Educational World:
<http://www.educationworld.com>

WINDOWSHOPPING: AN ONLINE SHOPPING SYSTEM

Ibalez, Clyde M.
Project Manager
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Macan, Marc Ner M.
Systems Analyst
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Paquibot, Cleo P.
Network Designer
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Buagas, Nikko Gem
Software Engineer
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Olib, Kriss Lowell R.
Technical Writer
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Solayao, Marde A.
Network Designer
College of Computer Studies
University of Cebu Lapu-Lapu and Mandaue

Abstract - In day to day life, one will need to buy basic commodities and other products from a shop or department store like food, electronic, house hold and other items one uses in different walks of life. Nowadays because of busy schedules, it is really hard to spare some time to go out and personally do the shopping for the things needed. The researchers choose incremental development model because it generates working software quickly and early during the software cycle. It is flexible and less costly to change scope and requirements. And it is easier to test and debug during a smaller iteration. The purpose of this study is to have a venue for the SME (small-medium enterprise) an easy online shopping system that would enable them to sell their products and help buyers to buy products without spending too much time travelling to shops. Our proposed system also provides security to the buyers and sellers by making sure that all transactions are

authentic. The researchers conclude that WindowShopping: An Online Shopping System is indeed a very helpful website for busy individuals. The system will surely provide a worry-free, less hassle and faster transactions. It will not only benefit the website authors but the sellers and buyers as well for it will guarantee secured mode of payment for the website offers legitimate deals.

Keywords: windowshopping; online shopping; online shopping system; small medium enterprise; faster transactions

INTRODUCTION

In day to day life, one will need to buy basic commodities and other products from a shop or department store like food, electronic, house hold and other items one uses in different walks of life. Nowadays because of busy schedules, it is really hard to spare some time to go out and personally do the shopping for the things needed. In order to solve this, B2C (Business to Customer) E-Commerce websites have been started. Using these websites, one can buy goods or products online just by visiting the website and ordering the item online by making payments online or availing it using Cash On Delivery scheme. The manual system of buying goods has several disadvantages. It requires lots of time to travel to the particular shop to buy the goods. Also there are expenses for travelling from house to shop. More over the shop from where one would like to buy something may not be open 24/7*365. Hence one has to adjust time with the shopkeepers time or vendors time. In fast paced life of today when everyone is squeezed for time, the majority of people are finicky when it comes to doing physical shopping. In order to overcome these, we have e-commerce solution, i.e one place where we can get all required goods/products online. The proposed system helps in building a website to buy, sell products or goods online using internet connection. Purchasing of goods online, user can choose different products based on categories, online payments, delivery services and hence covering the disadvantages of the existing system and making the buying easier and helping the vendors to reach wider market. The customers of today are not only attracted because online shopping is very convenient, but also because they have broader selections, highly competitive prices, better information about the product and extremely simplified navigation for searching regarding the product.

OBJECTIVES OF THE STUDY

The main objective of the proposed system is to provide an online outlet that will showcase a wide range of selections to make shopping more convenient and less hassle to both the sellers and the customers.

Specific Objectives

The researchers aim to develop an Online-Shopping System that will cater the following features such as to:

- have a one-stop shop to choose a wide variety of products. save time of travelling to the vendor/sellers place.

- avail of promos and discounts to members and subscribers have alerts and real-time updates/feedbacks through Emails during deliveries (to both vendor as well as buyer).
- provide inventory and sales reports for the vendor/seller.

Scope and Limitation

Scope

The researches aim to develop WindowShopping: An online Shopping System to offer a convenient shopping experience for the customers. The said system will allow the customers to shop and purchase products online. The scopes of the system are as follows:

- It will allow the admin to manage the website. It will manage the buyers/sellers account.
- It will allow customers to create an account.
- It will allow the customers to view the products. It will allow the customers to place/cancel orders.
- It will allow the customer to edit their account.
- Ordering can be done by clicking the Add to Cart plus Checkout button.
- It will give a notification through Email to the customers. Both members and guests can browse the online store It will view the summary of the orders such as Product Name, quantity, price, shipping fee and the total cost.
- It will allow customers to purchase through credit card, paypal and payment center.
- It will allow the seller to create account.
- It will allow the seller to sell their item on the system.

Limitation

The system, however, is limited to the following:

- Only the members/subscribers can receive newsletter. Once the orders are placed, they cannot be cancelled.
- Returns can be made for reasons like damaged or defective item, but not to change of mind.
- Buyers can pay through PayPal credit cards and Payment Centers nationwide.
- The system will only accept local seller and buyers.
- Cash on delivery is not available to avoid bogus buyers.
- Tracking of orders can be done thru email only.
- Transactions using SMS notification are not included.
- Transactions between sellers and buyers are done on personal manner such as communicating thru emails or phones.

REVIEW OF RELATED LITERATURE AND STUDIES

Related Studies

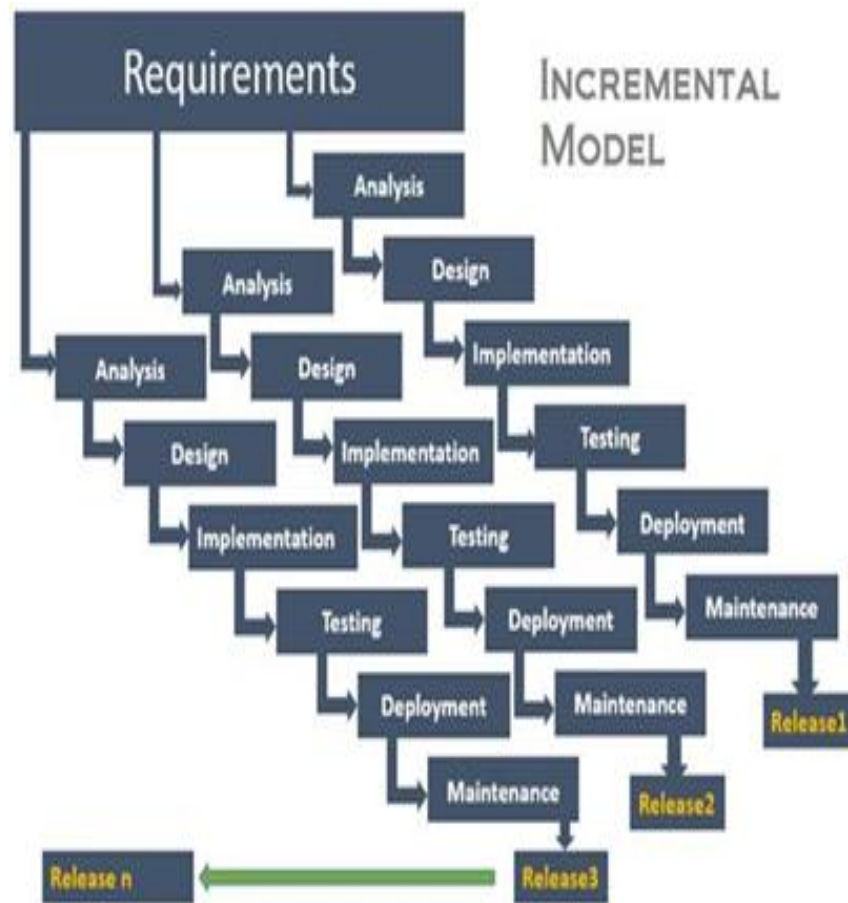
This chapter includes published researches, unpublished documents, related studies and methodologies from various authors and researchers. The Internet and its shopping applications continue to grow not only in terms of quantum but also in terms of their importance to people and their lives. The population of Internet users continues to experience rapid growth (Internet World Stats 2011c, 2011b, 2011a) but the use and adoption of online shopping by online consumers lags behind (Hendery 2006; Lee and Cheung 2004; Lee and Turban 2001). This suggests that there is hesitation by online consumers to purchase online, as well as an opportunity to grow the B2C e-commerce online shopping industry. In essence, there is a gap between the general use of the Internet for information and communication purposes versus the specific use for online shopping. (Lee and Turban 2001) In a vast and continuing growth of technology nowadays, we can say that it is now part of our day to day lives. But there is still a very big difference by means of adaptation between the manual processes of shopping and online shopping. Therefore, the immediate discipline of this study is to provide both the seller and the customer vision upon inquiring in terms of faster transaction when using an online shopping system. Recently, the interaction between e-shopping and in-store shopping has received considerable attention (Couclelis, 2004; Mokhtarian, 2004, for example). The adoption of online shopping has also been studied extensively (see Chang et al., 2005 for an overview). These studies include variables of various types, falling into three major categories: (i) perceived characteristics of the Internet as a sales channel; (ii) website and products characteristics; (iii) consumer characteristics (Chang et al., 2005). Many studies have also investigated the role of attitudes in the adoption of online shopping. (Chang et al., 2005). Their findings indicate that attitudes are important in predicting e-shopping intentions or behavior. Online shopping is becoming increasingly popular. Online retail sales are estimated to grow from 172 billion in 2005 to 329 billion in 2010 [Johnson 2005]. There are 32 countries worldwide with the Internet penetration rate higher than 50. Research is required on the influence of e-services on all customer responses, such as perceived service quality, customer satisfaction and purchase intentions (Parasuraman and Grewal, 2000; Jeong et al., 2003). Understanding the determinants of service quality, customer satisfaction and purchase intentions for online shopping is important for both marketing researchers and online stores managers. Moreover, previous studies have revealed that service quality in online environments is an important determinant of the effectiveness of e-commerce (Yang, 2001; Janda et al., 2002). However, few studies have examined the relation among different dimensions of e-service quality in predicting overall service quality, customer satisfaction, and purchase intentions for online shopping. Online shopping is a complex process that can be divided into various sub-processes such as navigation, searching for information, online transactions, or IJRDM 33,2 162 customer interactions. Customers are unlikely to evaluate each sub-process in detail during a single visit to an online store, but rather will perceive the service as an overall process and outcome (van Riel et al., 2001). Furthermore, for online customers, high standard e-service quality is the means by which the potential benefits of the internet can be realized (Yang, 2001). Because it is much easier to compare product technical features and prices online than through traditional channels, e-service quality becomes a key factor for customers

(Santos, 2003). Online customers thus expect equal or higher levels of service quality than traditional channels customers. In recent years, researchers have begun to examine the nature of the online shopping experience. In comparison to the traditional shopping experience, online shopping is anonymous, more impersonal, and lacks face-to-face interaction, human warmth, and sociability [Cyr et al., 2007]. Buyers and sellers have no direct contact and there are few social cues available to enhance the shopping experience. As a result of this automation, encouraging consumer loyalty in online environments is a complex process. Journal of Technology Research The influence of identity characteristics, Page 4 Previous research suggests that many consumers enjoy their shopping experience because of their proximity to other shoppers and often seek to visit stores to engage in social interaction and obtain social support from other shoppers [Tauber, 1972; Westbrook and Black, 1985]. It is also believed that physical shoppers obtain pleasure from the sights, sounds, and/or smells of the traditional retail environment [Cox, Cox, and Anderson, 2005]. Ambient cues that impact the five senses have been found to be important for shoppers in the traditional shopping experience and as the intangibility of a product increases, the influence of the ambient cues on consumer evaluations grows stronger [Bitner, 1992]. Some researchers have premised that the ambient cues that impact shoppers in traditional retail environments may also be relevant in the online shopping context. Menon and Kahn [2002] found that the level of pleasure that consumers experience during online shopping episodes influence their resulting shopping behavior. In their research, Eroglu, Machleit, and Davis [2001] proposed a research model and found that the atmospheric cues of an online store, such as content and aesthetic design elements, impact the outcomes of online shopping with affective and cognitive states serving as intervening variables. Eroglu et al. [2001] also posit that the atmospherics that are inherent in an online shopping experience are likely to impact the adoption and use of a particular website in terms of satisfaction, repeat purchases and visits, and time spent in the virtual store, similar to the impact of the physical environment in a traditional retail store on various psychological and behavioral shopping outcomes.

RESEARCH METHODOLOGY

Software Engineering Methodology

Software Engineering Methodology is a design process that will help system developers in identifying requirements for the system as well as how the system will be developed. There are a lot of software engineering methodologies. However, the researchers will be considering an integration of a plan-driven development and agile method. Incremental development generates working software quickly and early during the software cycle. It is flexible and less costly to change scope and requirements. And it is easier to test and debug during a smaller iteration.

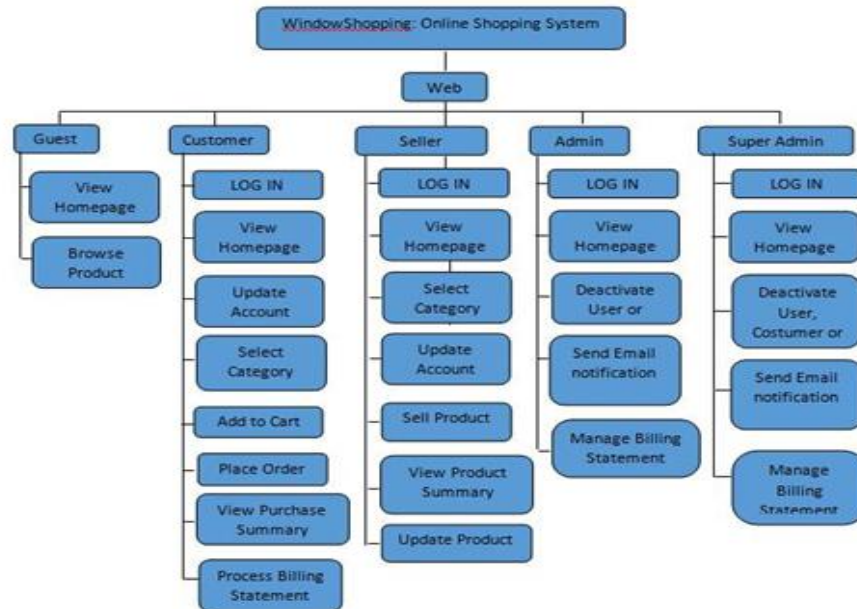


INCREMENTAL MODEL DESIGN

In incremental model development method the whole requirement is divided into various builds. Multiple development cycles take place here, making the life cycle a multi-waterfall cycle. Cycles are divided up into smaller, more easily managed modules. Each module passes through the requirements, design, implementation and testing phases. A working version of software is produced during the first module, so we have working software early on during the software life cycle. Each subsequent release of the module adds function to the previous release. The process continues till the complete system is achieved.

Functional Decomposition

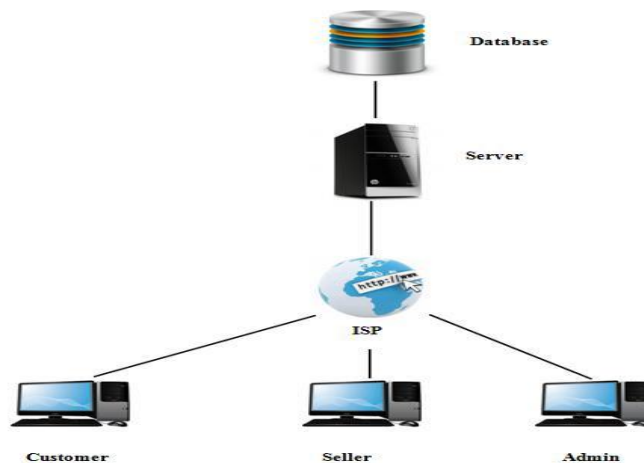
This figure below shows us how the guest, customer, seller, admin and super admin access on web and also how the customer, seller and the admin have their own functionalities in accessing the WindowShopping: Online Shopping System.



FUNCTIONAL DECOMPOSITION DIAGRAM

Network Model

The network model is a data base model conceived as a flexible way of representing objects and their relationships. Its distinguishing feature is that the schema, viewed as a graph in which object types are nodes and relationship types are arcs, is no restricted to being a hierarchy or lattice.



NETWORK MODEL DIAGRAM

CONCLUSION

After conducting the study and development of the system, the researchers conclude that WindowShopping: An Online Shopping System is indeed a very helpful website for busy individuals. The system will surely provide a worry-free, less hassle and faster transactions. It will not only benefit the website authors but the sellers and buyers as well for it will guarantee secured mode of payment for the website offers legitimate deals. WindowShopping: An Online Shopping System definitely offers a one-stop shop for people always on the go with no personal meet ups and payments.

RECOMMENDATIONS

Even if the output of the said study is quite satisfactory, the researchers would like to recommend the following features to further enhance WindowShopping: An Online Shopping System:

- Integrate SMS transactions
- Include online tracking of orders
- Enhance product details with images
- Integrate Mobile App (Android and IOS) Include reviews on the product
- Include a forum section

BIBLIOGRAPHY

Abatayo, Welcie Therese L. ONLINE ORDERING OF CUSTOMIZED BAGS.

Lucaylucay, Sherlyn; Alesna, Judy Anne; Duaban, Marifel Online ordering for customized shoes

Lee, Lin Customer perceptions of e-service quality in online shopping

Coverdale, Morgan The influence of identity characteristics on E-Shopping enjoyment and E-Loyalty among women online shoppers

(Gupta, ONLINE SHOPPING CART APPLICATION, 2013). Retrieved from <http://library.ndsu.edu/repository/handle/10365/23054>

Dijst, M.J.; Farag, S.; Schwanen, T. (2005) Duurzame Mobiliteit: Hot or Not?, pp. 2031 - 2050. Retrieved from <http://dspace.library.uu.nl/handle/1874/11328>