UCSI University | ICSDI
INSTITUTE OF COMPUTER SCIENCE
AND DIGITAL INNOVATION

Designing and Implementing Final Year Project
- with Success

Degree FYP Research Report May 2022

Vol 2. No 7

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Welcome to the Institute of Computer Science and Digital Innovation (ICSDI), UCSI University.

The Final Year Project (FYP) is compulsory for the diploma and undergraduate programmes at ICSDI. This Final Year Project Handbook is designed to provide students with a comprehensive guide for planning, implementing, and documenting project work in accordance with the requirements of the relevant academic programme accreditation bodies.

The goal of FYP is to provide students with the opportunity and exposure to apply and integrate the theoretical knowledge and principles taught in the programme, as well as to solve problems creatively in their final year project.

To maintain the high quality of education at UCSI, we have continuously provided our students with advanced skills, cutting-edge software systems, and industry-relevant teachings by ICT professionals. FYP allows students to demonstrate independence and originality while also planning and organising a project over a set period of time.

I wish to congratulate Assistant Professor Ts. Dr. Kasthuri Subaramaniam, FYP coordinator, and all ICSDI supervisors for their effort, dedication, and hard work in supervising the students and producing high quality projects. I hope that this FYP handbook will be set as an example and standard for many more FYP handbooks to be produced and will contribute towards producing quality research work by the students and excellent supervisory skills by the academic staff of the Institute.

Private Social Media App for Private Universities in Malaysia

Nicholas Lim Wei Keat, Reanu Kolandaisamy, Shayla Islam

Introduction

Announcements as we know it is very important in our daily lives. It notifies us on the current trends of the world. It also can notify us about important upcoming events in our lives such as birthdays of people, holidays so that working class people can look forward to and even notify us about important deadlines to meet. Such can be said for university students as well. Some scenarios where announcements can be important to university students is when there are assignment deadlines to be met. Announcements regarding events in the university can be important. However, the aim of this project with regards to the announcements made by the administration team of the university.

Objectives

1. To study about the current social media applications.

2. To design a new private social media network and mobile app

3. To evaluate existing and benchmark system with current system/model

Methods

The main research problem that is to be solved in this project is to allow university announcements and other club announcements to be publicly noticed by the students more efficiently. Hence, an app with the background of social media was developed. The reason why a social media model is used is because through observation, social media is being used by people including university students daily, therefore, in order to allow announcements to reach out to a bigger audience, social media model is used. Development of the app will follow a modified waterfall methodology. This is to allow more flexibility in developing the app. Post – development of the app include creating a UAT (User Acceptance Test).

Results

Results from the UAT has shown that in terms of the application developed in this project, the problems that the testers were not satisfied with was on the UI design of the app. Some response included that it could be improved on with the usage of blocks as well as usage of a more vibrant colour and not the same colour

for every page and every post. The reason why the UI design is important as it is one of the major factors in determining whether an app will succeed or not. An app having a bad design could be detrimental to the success of the app as people might not be inclined to use it. However, on the side of the concept of the app. All the testers agree that this app could be used for in a university environment by the university students. The app itself for now is still in its infant stages where its functions are minimal and other important functions could be implemented in the future updates of the app. Given that this app is used in a university environment, some suggestions on functions to implement in the app were bus shuttle services, timetable, calendar / reminder etc. Other improvement stated in the response of the UAT were towards the overall structure of the app such as adding a member list to the page function, adding a page where the user can see who has the user sent a friend request to as well as adding a notification function in the app.

Conclusion

In conclusion, the conceptual idea and design of the app is highly praised by the testers based on the UAT results. Like all apps, it will have some improvement needed to be implemented such as change of the UI design of the app. Therefore, the conclusion that university students will be more aware of announcements

from university and clubs is valid. However, as the app is made for university usage, the app could be upgraded to further improve the user experience of the app and the overall experience of the user. The app itself can be a major improvement in terms of the student's accessibility of the university's feature if planned properly and correctly with the university's function implemented in it.

Mobile-Application GetNow- Location Based E-commerce and Instant Delivering App

Lim Ze Ying, Raenu Kolandaisamy, Ghassan Saleh Hussein Al-Dharhani

Introduction

Since the introduction of smartphones, mobile application has become more and more useful and provide a lot of convenience to our life, especially e-commerce platforms allow us to get products easily. This project is going to develop a mobile application that allows users to find product and get it instantly on nearby store or get it deliver instantly by delivery service built in. By providing this platform, sellers that have physical shops around are able to showcase their products in the application, consumer will be able to pre-order and get to the store themselves. More-so, the application allow seller to boost their product sales by ads. The project is purposed to make ease for users that are urgent finding a product and boosting sales of physical stores. This project is carried out in Kuala Lumpur, around UCSI University.

Objectives

1. To Develop an e-commerce application that let user search their desire product's availability at their location.

2. To develop a mobile application that can let user get products instantly by instant delivery service.

3. To save consumer's time from searching the product physically, the application shows which store has the product.

4. To increase the sales of local stores by creating awareness of their product availability.

Methods

This project will be using quantitative methodology to collect data. Methods including using google form to ask questions on preferred shopping behaviors and analyze the results. The target audience of the data collection will be from UCSI university, estimated 100 participants on the survey. Besides, journal's statistics will be use as data resource too. The SDLC spiral model will be used for this project. Determined objectives, identification, and risk analysis, development and design, and system assessment are the four phases of the spiral model.

Results

Mobile application is an upward trends locally as well as worldwide. The application that can act as an platform, connecting users and local merchants. According to the survey, users that wanted to get their essentials items quickly are more likely to use this application. Most respondents believe that using this application can bring convenience by getting their desire item faster and cheaper. For example in conventional e-commerce application took fastest 3 days to ship their items to user's home, while this project allows user to get their item by instant delivery or self-pickup at nearby stores. Another benefits was, merchants that are not popular locally can increase their exposure in the application, creating more economical value in the local area.

Conclusion

In this era, the smartphone have evolved a lot from the beginning, smartphones are now capable of faster connection with 5G technology, and also more processing power. Therefor, handling Mobile-commerce application that require real-time data like GPS locations and inventory updates of merchants is a norm. In the future, mobile commerce and location-based services are the trend, because it is customize to suit every user in each part of the country, with location based mobile commerce, local merchants are also benefited, creating a booming local

economic environment. In future developments, the app should add an user friendly monitoring panel for admins, as of now it is still accessible IT developer only, this is to ensure service quality to the consumers as there will be tracking of orders and delivery rider tracking. More so, currently the delivery rider still depends on manual accepting order, in the future there will be an dedicated rider application that assigns order for drivers. Although this development phase objectives have mostly achieved, the service quality for the end consumer needs to be maintain by upgrading the system.

Development of a Smart Port Management System in Malaysia

S M Topazal, Raenu Kolandaisamy, Ghassan Saleh Hussein Al-Dharhani

Introduction

In today's world, ports are considered a significant contributor to increasing the economy of a country. As it is also a cheap and convenient means of transportation of goods from one country to another country. According to the past study, more than 80% of the economy of the country depends on the seaports. Seaports are the hubs of many industries and research industries, necessitating an interconnected jungle of information systems. Because of the rapid growth of ports in transportation, the port managers and other operating staff of seaports are facing many problems regarding a vehicle or container in a serious condition. The seaports need a digital intelligent system to manage and for better functioning and performance of the ports and to secure and save the ports from environmental disasters or flooding in the sea. This research aims to establish such a system that will help the seaport managers make the necessary decisions in any unfavourable event or situation. The proposed model will help to identify the weaknesses and strengths of the seaport. Moreover, it also has three key components, which are: User Interface (UI), Model Base Management System

(MBMS), and Database Management System (DBMS). The proposed system's major features are its ease of use, high efficiency, quick response in critical situations, and the ability to generate dynamic queries and reports.

Objectives

1. To study the existing port management system so that can identify the strengths and weakness of the current systems.

2. To design and develop a smart port management system to support/provide the working environment to enhance the performance, increase the productivity and efficiency.

3. To evaluate the performance of the developed PMS application by conducting survey on the user experiences after it is completed and compare it with the existing application.

Methods

The methodology for developing a port management system (DPMS) involves a mixture of quantitative and qualitative methods. The Rapid Application Development (RAD) methodology will be used to build the final system for the "Development of a Smart Port Management System in Malaysia (DSPMSM)",

which provides flexibility, speed, and responsiveness. Besides that, it helps quickly achieve high-quality software. A survey is crucial for any research, and a survey questionnaire is the best way to get feedback and opinions on research in the shortest possible time. The survey results enabled the researcher to understand better what the audience felt about the study and have also helped the user develop the program. The total of 32 questions with 4 sections were randomly asked to 110 participants, and the research also contains data that comes from a primary data source in which USCI University, Google, Facebook, Course Network (CN), Twitter pools, and the political attitudes of citizens are identified.

$$\frac{\dfrac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\dfrac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Using the above formula, a population size of 125, a confidence level of 95%, and a margin of error of 1.96% yielded a sample size of 110 people. Where N is the population size – 125, z is confidence level – 95, e is error – 1.96, p is sample size – 110. The survey questionnaires were mass distributed online following estimation of the sample size above. The data are collected, and the responses are provided with graphs, pie charts, bar charts, and histograms once respondents answer the survey.

Results

In recent years, the port has become more and more popular with younger people, especially sole proprietors and people who just started their own business. Using the proposed system, the user can transfer goods quickly and with the minimum charge from one country to another. Even while using the system, a user can place an order or request within 10 minutes for their particular services like "Agent, Port, Berth, Equipment, Store, Vessel, Travel, and Query & Report" from anywhere and at any time. However, due to its heavy weight and the volume of goods ordered in, this port system is more significant for corporate businesses (export and import). Therefore, there is no more doubt about this port system's how much convenience or support it provides to the users. The port system has already evaluated user acceptance through questionnaires distributed to some potential users. The researcher will be monitoring the testing process to ensure that this application is thoroughly examined before implementing the system. It makes sure that the web application doesn't have any bugs and that it meets the user's needs. Furthermore, users (clients) are unconcerned about their data being licked or lost by third parties because the proposed system ensures the integrity of all data with 100 percent security.

Conclusion

The port system is one of the best ways to increase the economy of a country. The port is used as a transfer point for transporting different objects, goods, and materials from one country to another. Due to advancements in technology, various business sectors have adopted modern technology in their businesses to work more precisely and accurately, which provides them with more income. The port sector needs to develop a system that will provide information about port locations and work to increase the economy of the country by providing information about the arrival and departure of vessels, containers, and ports from the port sector. For businesspeople, the port is considered a way of transporting their products to other countries. The development of a port management system, according to the survey, is strongly recommended by the respondents due to its working interface. Moreover, the system provides information about the departure and arrival of different ports. It provides information to users on what products can be delivered on what date. The system is user-friendly, and its features are easy to use by everyone.

Developing A Mobile Application for Comparative Shopping: "SHOP n WIN"

Shamekh Methaq Mohammed Hageb, Abdul Samad Bin Shibghatullah, Kasthuri Subaramaniam

Introduction

In today's age of e-commerce and digital technology, the online marketplace is on the verge of surpassing transactions made in physical stores. This is immensely supported by the rapid growth in online platforms, particularly mobile-based applications that are accessible to all from any corner of the globe. Each of the apps displays updated price information of the products along with the status of inventory; customers can simply browse through their mobile screens and get the products delivered at their doorstep by placing orders online. Buying products or services directly from a vendor online in real-time without the need of a middleman service is known as online shopping. It is a type of online trade. It is an effort to give clients of physical stores the benefits of internet shopping. It facilitates purchasing goods from a store wherever you are using an electronic device and the internet. People are price sensitive when making purchases of things. Because of this, there aren't many mobile applications on the market that run price comparisons and promotions.

Objectives

1. To create and launch a mobile application that allows customers to compare products easily Find the most suitable pricing.

2. To administer a smooth platform for all the e-commerce platforms in FMCG business

3. To provide a comparative scenario for each product in terms of price and pertinent features along with different promotional campaigns

4. To secure optimum level of customer satisfaction while providing maximum possible flexibility and comfort.

Methods

Data assisted in learning the details and supporting data regarding users' buying preferences and their alterations in behavior from the viewpoint of internal participants. The survey will be distributed as an online questionnaire for data collection because it has a low return rate and people are more likely to answer to surveys. Single response questions and multiple-choice questions are the two types of survey questions that will be included in this questionnaire. A mechanism that will be utilized to disseminate questionnaires to responders is the Google form platform. All types of people who have used online shopping platforms and who live in city or uptown areas will receive the survey at random

as part of this study. This survey is being disseminated at random on websites like CN, social media, WhatsApp, Facebook, and others. This questionnaire survey attempts to gather the replies of 50+ participants.

Results

Smartphones are currently at the forefront of Internet technology. Because it is the quickest and most direct means to deliver notifications to users, mobile applications are crucial in the corporate world. All of the projects features work as intended, and the application as a whole is simple to use. To sum up, the developed application had effectively been modified to fulfil and satisfy the entire experience of the user. However, a number of user comments have been made, such as how some of the application's functions are a little bit slow. In spite of the absence of a user interface, it may be acceptable to add additional life and interest to the user experience.

Conclusion

This project would develop a new platform assisting consumers in their purchasing decisions. Let's sum up this project by saying that it was designed to

create the Shop n Win mobile platform. The primary goal of building this program was to assist users in saving money through price comparison.

Mobile-Application Convenient Ordering- Scan Code Ordering System

Wu Tienan, Abdul Samad Bin Shibghatullah, Kurunathan Ratnavelu

Introduction

In today's world, technology has become one of the basic needs of everyone. Mobile applications have changed people's lives in a positive way. According to Statista's survey report, from 1993 to 2021, the number of global mobile network users has been increasing, and the number of global mobile Internet active users has reached 4.32 billion. About two-thirds of the world's users own a mobile device, and from 2017 to 2022, the number of people who own a smartphone worldwide has increased by nearly 50%. As can be seen from these figures, the popularity of mobile devices is high and continues to grow. For this reason, there are more and more mobile applications being developed, they can make people's life more convenient and easier. The scanning code ordering method overcomes the shortcomings of traditional ordering methods. Electronic menus can provide more detailed information than paper menus, saving the labor cost of service personnel and improving service efficiency. When the virus is raging, it can also reduce the spread of the virus and provide customers with a safe dining environment.

Objectives

1. Design a scan code ordering system to replace traditional paper menus.

2. To identify the strengths and weaknesses of the current mobile app

3. Develop a simple and easy-to-use system for customers.

4. Determine the system features and existing advantages of scan code ordering.

Methods

The main research problem that developers solve by collecting user data is to identify potential users, which features in the system they are more likely to use, and to seek reviews and suggestions, which are critical to the system. The questionnaire was chosen because it allows for faster collection of data from larger datasets. Therefore, this can be used to help developers study the needs and desires of users. Questionnaires will be randomly sent to students of different backgrounds at UCS to collect objective data on application development. Graphs will be used to evaluate quantitative data.

Results

The convenience of online ordering will be welcomed by more and more people. Online ordering by scanning the QR code can improve the efficiency of ordering and dining. Respondents have a high degree of recognition for ordering by scanning the QR code. Most of them said, It is very convenient to order food by scanning the QR code. The network environment also allows customers to use the online ordering system. Scanning the code to order food will not put pressure on customers, and the operation is not difficult. More than 70% of the respondents said that scanning the code to order food can effectively reduce face-to-face communication and prevent the spread of the virus. At a time when viruses such as covid-19 are still threatening us, scan code ordering services are particularly important.

Conclusion

Finally, it can be said that the system runs through multiple development stages of the project, thereby effectively establishing and achieving the main goals of the project. The main purpose is to study the mobile phone applications currently used for ordering food in Malaysia, and then develop a similar mobile application. Develop mobile applications after understanding user needs through questionnaires. The prototype mobile app works well on mobile devices. By

using the online ordering mobile app, users can use the system, customers do not need to wait for the waiter when they are busy, they can submit their orders themselves, saving time. During the epidemic, reduce opportunities for face-to-face communication with restaurant staff and provide a safer dining environment. On the management side, the administrator can modify the functions of the system, such as editing menu categories, modifying menu information, etc., and can complete all tasks in the application program, which can save a lot of time. Restaurants do not need to recruit more waiters to provide high-quality service, and electronic ordering replaces paper ordering, saving costs.

Facial Recognition Attendance System

Ong Xiao Qing, Javid Iqbal Thirupattur, Kasthuri Subaramaniam

Introduction

In the modern era, keeping track of attendance is crucial. In most universities, attendance is factored into a student's grade. Typically, attendance is recorded on a piece of paper that include the student's details. After that, the pupils will sign to show that they are attend on the specific day. Nevertheless, there are problems in this universal technology. Some of these problems include students forging the signatures of their close friends. Attendance processes are time-consuming. In order to solve the problems, an automatic attendance system needs to be made. In this study, facial recognition attendance system will be introduced to solve these problems. It is an automatic system that saves students' attendance to the database automatically.

Objectives

1. To identify the facial recognition attendance system's strengths and weaknesses and study the existing facial recognition attendance system.

2. To develop a prototype facial recognition attendance system.

3. To implement an automated attendance system.

Methods

To determine the prototype's level of user acceptability, a questionnaire on user acceptance testing was administered. To conduct the user acceptance test, prospective users were chosen. The prototype was shown to them before they conducted the test, and they were free to use it. The user acceptance test must then be completed via Google Form. The UAT questionnaire was given between 1st of July to 14th of July 2022. There were 15 potential users overall.

Results

The UAT form filled out by the participants indicates that both participants had a favourable experience utilising the proposed system. They are happy with the system because it lived up to user expectations. Each feature works as intended and the system is eased to use. To sum up, the system had successfully been enhanced to meet and satisfy user expectations. The user interface, however, can be improved by changing the typeface or font size to help the user concentrate on the vital material of the interface, according to several participant comments.

Additionally, system performance can be enhanced to enable seamless operation. Furthermore, an exquisite user interface is what participants expected.

Conclusion

In conclusion, the methodological strategy assigned to carry out the entire process of resolving the difficulties detected in the current system clearly outlines the objectives of the study project. The purpose of the project is to establish an intuitive, straightforward, and effective attendance system that will enable instructors to concentrate more on their lectures and lead to a paperless campus. To ascertain the current issues and conduct analysis, systematic reviews, research, and questionnaires of the existing systems were carried out. The facial recognition attendance system was created and put into use to achieve all goals and solve all issues.

Developing Different E-Wallet Conversion Currency System for People Living Abroad

Liu Xinglong, Raenu Kolandaisamy, Ghassan Saleh Hussein Al-Dharhani

Introduction

The use of electronic wallets has now become a worldwide trend, and with the advancement of transportation, traveling abroad is gradually becoming a pastime. But every time you travel abroad you will always face the inevitable problem of exchanging currency. Currency exchange has caused a lot of problems when traveling abroad.E-wallet exchange system, is an innovation in e-wallet technology. It creates convenience for people living abroad or traveling abroad who do not have to worry about unfair exchange rates and high processing fees. E-wallet exchange system, an innovation in e-wallet technology. It creates convenience for people living abroad or traveling abroad who do not have to worry about unfair exchange rates and high processing fees. The system allows users to bind their e-wallets, and then the system provides international real-time exchange rates for users to exchange.

Objectives

1. To study the method of currency conversion according to international exchange rate.

2. country's e-wallet to another country's e-wallet, and let consumers consume it directly.

3. To survey and collect the most common payment methods used by people.

4. To develop a system to provide the freedom of currency exchange of different e-wallets. The system will provide users with currency exchange of e-wallets.

Methods

This project will collect data by means of investigation and data collection, ask more people to give their opinions and ideas by putting forward questionnaires, and then analyze and deal with these methods and opinions. So as to obtain a more preferred way for people to develop the system. According to the research results, this will help the system development become more targeted.The system development methodology is Rapid Application Development(RAD).Rapid application development (RAD) is a development model, which gives priority to rapid prototyping and rapid feedback, rather than a long development and testing cycle. Through rapid application development, developers can quickly iterate and

update the software many times, without having to make a development plan from scratch every time.

Results

E-wallet exchange currency system is destined to become the mainstream of future consumption and is loved by people all over the world. Convenient payment methods, secure currency conversion, and money exchange with no loss of property will be the reasons why people will steadfastly choose to use the e-wallet currency conversion system. By binding the e-wallet account, so as to convert the currency between different countries, it will bring great convenience to the society and also protect people's property rights when exchanging currency, so that people who go abroad will not suffer from unfair exchange rates and high fees, and more people will travel abroad to promote the development of international trade by driving the international consumption level.

Conclusion

The requirements of the system were successfully identified and defined by examining existing research and conducting an extensive literature review. The prototype was evaluated personally and externally, and the results were studied

in detail. The prototype attempts to reduce the user's property loss and provide a more convenient lifestyle by tying the user's e-wallet account to a currency conversion based on international exchange rates. This system not only brings convenience to users' lives by providing them with a fair way to exchange currencies, but also reduces the business burden for banks. Through this system e-wallets will be more popular among people, and it is always believed that e-wallets will become a mainstream payment method in the world.

Developing A Prototype Dining Choices Mobile Application

Lim Yee How, Kasthuri Subaramaniam, Shayla Islam

Introduction

In today's world technologies has become one of the basic needs for everyone. Mobile app has transformed people's life in a positive way. Based on the data from the internet, they mention that in 2020, there are over 3.6 billion people were using social media worldwide. This data shows that nowadays people would like to use social media to make communicate with their friends or followers. Due to this reason, there are more and more mobile apps were developing so that they could let people's lives become more convenient and easier. In our surroundings, we can find out that nowadays people have to work in their company every day, and it is tiring for them to look for places to have lunch and dinner. Some of them might ask for delivery but most of them would like to have lunch with their colleague during their lunchtime or having dinner with their family. Dining choices mobile app would show them some restaurants around them on a map and they could reach there easily but not waste time discussing what to eat.

Objectives

1. To study the existing dining choices mobile app

2. To collect data or requirements from the users

3. To design a dining choice mobile app

4. To develop a dining choice mobile app

Methods

The major research problem that developers aim to solve by collecting data from users is to identify potential users who are more likely to use which features in the system to turn on, and to seek comments and suggestions, which can be crucial for the system. The questionnaire was chosen because it allows faster collection of data from larger data sets. Hence, this can be used to help developers study user needs and wants. The survey questionnaire form will be sent to random people from various background in order to collect objective data for application development. Charts will be used to assess quantitative data.

Results

Dining choices mobile apps is becoming increasingly popular, especially workman, due to its ease. Making reservation and select nearest restaurant is more suitable for those workmen who work until late time. There are several personal reasons makes them could not cook at home after works so having their meal in restaurant is the best choices for them. The mobile apps could easily help them to search the nearest restaurant in their current surrounding and they could make booking through the apps too.

Conclusion

Finally, it can be said that the system has been carried throughout the project's many stages of development, resulting in its effective establishment and achievement of the project's primary objectives. The main objective was to study current dining choices mobile app in Malaysia and then to develop a similar mobile app. The mobile app was developed after getting to know the users need through survey questionnaire. The prototype mobile app was successful built runs perfectly fine on mobile device. By using the dining choices mobile application, the user could easily find a great dining places to enjoy their meal. The users could also use the Global Positioning System to get the location to the dining

places. This might help the user to make sure they will not go to the wrong location.

Development of a Web-Based Smart Store Management System for Retail Store

Yu Yue, Shayla Islam, Thong Chee Ling

Introduction

Today, our lives are becoming more and more inseparable from stores, which have become a part of our lives. It is a traditional retail business organization, which not only has the convenience of supply in the alley and retail stores on the street, but also has the way of open-shelf sales and chain operation, and it is developing very rapidly all over the world. With the continuous development of computer technology and network technology, the individual stores belonging to the chain are gradually adopting information management, mainly responsible for the management of the store's merchandise, inventory and sales, and, as more and more people change their shopping habits, from the original offline shopping to online shopping, thus making this form of consumer-centric, and the use of data and information technology for retail is gradually becoming popular and becoming a derivative of the new era. Therefore, many retail companies have started to realize synchronized online and offline marketing by laying out this new retail model, building a complete business platform and formulating

marketing strategies that can maximize the effect, so as to achieve the improvement of corporate brand image and the expansion of product sales.

Objectives

1. To study the current existing store management systems and identify the strengths and weaknesses of the existing systems.

2. To develop a web-based intelligent store management system application that allows store managers to manage their stores more easily and efficiently

3. To analyse the main challenges currently faced by retail companies in store marketing by creating a combination of both online and offline sales channels to address the issue of the limited number of customers that can be reached by traditional offline retail stores.

4. To evaluate the performance of the developed web-based smart store management system.

Methods

The development methodology used in this study is SDLC (Software Development Life Cycle) Waterfall Methodology. The SDLC Waterfall Model

was chosen because SDLC allows developers to analyse requirements and helps developers to produce the highest quality software products in the shortest time and at the lowest cost. In addition, a random questionnaire was also used in this study, and the sample consisted of 110 retail store managers or store owners from different countries and regions. By collecting a large amount of information to help developers study the needs and desires of users and to determine the status of the application to be developed, which is essential for the development of the system.

Results

Based on this survey, it can be concluded that most retail business managers or store owners would like to have a better tool to help them achieve effective management of their stores, thus improving store management efficiency and performance and reducing the retail operation cost of their stores. In addition, most participants also want their stores to be able to sell their products through online channels.

Conclusion

Finally, it can be said that the system has been carried throughout the project's many stages of development, first we studied existing store management systems and literature in order to analyse the problems and limitations in the current existing systems, then we conducted a questionnaire survey on this to understand the needs of store managers or store owners and analysed the results to summarize them. These methods enabled the effective development of the project and achieved the main objective of this research, which is to develop a web-based intelligent store management system application that enables store managers to achieve effective management of their stores. For the proposed application has been implemented on a web-based platform and is compatible with leading browser applications such as Chrome, Microsoft Edge and others.

Mobile Library – Mobile Library Management System

Jiang Yuhang, Thong Chee Ling, Shayla Islam

Introduction

As technology develops, people are increasingly looking for convenience to make their lives easier. The development of mobile technology originated from communication. The development of technology has changed the way we live and work, and with the increasing popularity of mobile devices among young people, motivating students to learn and use mobile devices is crucial. The base of mobile users is also growing, and the popularity of mobile devices has laid a hardware foundation for mobile libraries. Due to the positive impact of the expansion of mobile devices, users are shifting from an offline-based library model to a mobile library model. Mobile library not only has the characteristics of portability, it can meet the needs of users to search book information in a portable way. It will slowly replace the traditional library management system model. This upward trend will continue due to the continuous update and addition of mobile devices. The mobile library management system has become the desired goal. Therefore, many traditional libraries have begun to build a complete mobile library management platform and formulate the most efficient library management mode through the layout of this new library management mode, so

as to achieve the improvement of library management efficiency and the improvement of user satisfaction.

Objectives

1. To identify the strengths and differences of mobile library management system functionality.
2. To discuss and gather user requirements for mobile library management systems.
3. To design a mobile library management system to replace the traditional management method (only supports computers).
4. To evaluate the performance of the book review program in the UCSI mobile library management system.

Methods

The development method used in this study is the SDLC (Software Development Life Cycle) method. It can develop the highest quality products in the shortest time and the lowest cost. In addition, this study also used random questionnaire demand collection and quantitative survey. Use the UTAUT (Unified Theory of Acceptance and Use of Technology) model to generate survey questions to avoid

bias issues. It is used to evaluate user acceptance tests. A random questionnaire sent a needs questionnaire to 120 individuals from different countries and regions in an objective manner.

Results

Based on this research survey, it can be concluded that most people would like better tools to help them use and manage their library. This will improve the management efficiency of the library and reduce its operating costs. The most advantageous feature of the system is to quickly carry out operations such as borrowing and returning books and reporting loss with the lowest time cost. The use of the book review program also increases the interactivity of the system. The mobile library realizes the interactive management between librarians and users through book reviews, announcements and other functions, which will promote the relationship between the two and create a virtuous circle for the library.

Conclusion

Librarians can effectively manage the library, and enable users to browse library information anytime, anywhere, and perform operations such as borrowing, returning books, and reporting lost. The interactive management between

administrators and users through the book review program will promote a good cycle of library management. According to user acceptance testing, it has achieved all goals and has a relatively good user experience. Since the needs of users may change at any time, the application will be further optimized to meet user needs in the future.

Developing Interface Designs with Personality Types Self-Management Application – Luvlife

Tan Yun Rou, Kasthuri Subaramaniam, Raenu Kolandaisamy

Introduction

In this age of information technology, people are becoming increasingly connected to the world around them. The adoption of technology in our daily activities increased the time that people spend in front of the screen. The mobile phone has changed the way people communicate and work. Time and timing issues have become more and more important to all of us. In these last two decades, people have had a faster pace of life. It shows that people have a limited way to deal with time at work - poor time management. There are several methods of time management like tips and techniques to determine which goals to pursue in the short term, how to translate these goals into immediate tasks, how to plan and prioritize tasks daily, and how to focus on completing tasks without any interruptions. A good time management can lead to an increase in perceived control of time and a decrease in perceived stress. Hence, there is plenty of time management, task management, and productivity applications launched to help people manage their time and task well.

Objectives

1. To survey the relationship between user interface designs and personality type based on MBTI.

2. To design and develop a self-management mobile application with users' preference user interface design.

3. To evaluate the existing self-management application.

Methods

For qualitative method, This method is used to understand the concepts of the study by undergoing case studies and literature reviews. Some relevant case-study and literature-review will be mentioned in the research to prove the concept or theory. For quantitative method, a survey will be conducted for collecting data. The purpose is to understand end users' requirements so that the product will meet their needs. Some related questions will be prepared and distributed to the public. The survey will be shared with colleagues, and friends and will be posted on social media platforms. The respondent will answer all the questions through the google form.

Results

Based on the overall results and findings from the survey, the highest number of respondents are come from ENFP, ESFJ, ISFJ, and INFJ. Thus, these 4 personality types will be chosen for the development of application. Each user interface will be designed based on their preferences which are font type, font size, theme color, layout, and features. During the user acceptance test (UAT), four different types of MBTI users has been chosen. There are 25 features listed for users to test in the application. The results show that all users able run all the features in the application. They are satisfied with the user interface, loading time, and easy to use. There are some suggestions from the users which will be considered in the further improvements of the application to develop a more user-satisfying application.

Conclusion

In conclusion, this project managed to determine the relationship between user interface design and personality type based on MBTI, to design and develop a self-management mobile application with users' preference user interface design, and to evaluate the existing application. The aim of this project is to develop a self-management application based on MBTI users' preferences and user interface. Literature reviews and studies of existing applications have been

conducted to determine their issues. A survey has been conducted to determine and analyze the user interface preferences of MBTI users. The proposed application – Luvlife is implemented using the Android Studio platform and it is suitable for Android-based mobile devices. It has managed to achieve all objectives in this project and managed to solve all the existing application problems. The app is free to use, has a personality-based user interface, and a user-friendly user interface.

Developing a Prototype Student Attendance Website

Gordon Yong Zhan Hao, Thong Chee Ling, Ghassan Saleh Hussein Al-Dharhani

Introduction

Educational institutions are expected to record and monitor the attendance of their students. However, educational institutions are still using the traditional way of recording student attendance, that is by calling the name of each individual student in a class regardless of the size of the class or passing around a sheet of paper for the students to sign on. These methods of recording student attendance are considered to be time-consuming, prone to human error when recording, and is susceptible to proxying. The advancements of technology in the world have allowed for the development of solutions to these problems in recording student attendance. With the use of websites and QR codes that would lead users to said website would be able to speed up the process of recording student attendance and reduce possibility of human error in recording student attendance.

Objectives

1. To investigate the current problems faced by lecturers in private institutions of higher education in taking student attendance.

2. To analyse the relevant existing systems, identifying their strengths and limitations.

3. To design and develop a prototype student attendance recording website.

4. To evaluate the possible usefulness of the system through the prototype.

Methods

The methodology used to develop the system is the Iterative Waterfall Method as allows for simplicity in tracking the progress of the project as outputs of the phases flow linearly to the next and allows for feedback paths from every phase to the preceding phases, allowing for any changes to requirements and any modifications to be made if necessary. A survey questionnaire form was sent to lecturers to investigate the problems that they faced in taking student attendance and another survey questionnaire was used to determine if the developed website can be accepted or not. Charts were used to assess the quantitative data.

Results

Based on the survey questionnaire that have been distributed to lecturers teaching in institutions of higher education, it can be concluded that the respondents find the current method of recording student attendance has problems related to it

being a very time-consuming task and that attendance records can be manipulated by students. This project will be of great help to lecturers as according to survey results, the respondents find that the student attendance website is easy to use and is of use to them.

Conclusion

It is concluded that the objectives of this project have been met by investigating the problems faced by lecturers in private institutions of higher education in taking student attendance, analysing the relevant existing systems identifying their strengths and limitations, developing a prototype student attendance recording website, and evaluating the usefulness of the system through the prototype. The contribution of this project allows lecturers to record student attendance with the automation of the process of recording student attendance through the website. This will allow lecturers to not worry about taking up too much time recording attendance and spend more time on teaching the class.

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