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DESIGNING A DOMESTIC MOBILE APPS: SAVIOR

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Abstract:

The paper attempts to describe about designing and developing an android-based mobile application for home services. The application focuses on clients and service providers. The clients who are the target audiences while the service providers are the workers that can give the services locally. The main objective of this development is to create a mobile application called Savior. The first part of the tasks concerned on the analysis and design phases which include interface design, navigation plan, information architecture, storyboard and contents. The second part discussed the challenge in producing the application as intended and outlined several future development approaches. This application attracts users who are looking for service providers and for those looking for a platform to offer their skills, knowledge or any related services. Through this application, users are connected to credible and professional local service providers. Users are also accessed to the best and vocational services like cleaning, plumbing, event catering, interior painting and many more easily. After that, service providers are getting paid to do the work they like or good at using their exceptional skills. In the long term, this application may yield a win-win situation among the users. For example, users can get help when they need any assistance while service providers can earn flexibly on this application. In this project, the developers have learnt how to optimise the application to be more interesting to attract people.

Keywords:

Mobile Application; Android; Development; Design

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Introduction

ICT, or information and communications technology is growing exponentially and rapidly nowadays. With this situation, the existence of applications and systems have played an important role in human's life. By manipulating applications or system methods, it can save a lot of time to perform various tasks and improve work efficiency within minutes.

The inclusion of service businesses concept in the application has been emerging, since most people require services, and it has become a necessity in their life. Clients can pick someone and hire the right service provider who meets their requirements faster and easier. Nowadays, this business is needed for service providers because of the economic crisis in the world. Many service providers are looking for ways to conduct their services for clients because this could bring many advantages for them. For example, they can earn extra money for a living, turn their hobby or talents into money and they are free to do the job they like or are good at.

With the help of a service job application, people can get a job and flexible services anytime. However, only a few platforms are available for local people to use and not all types of service jobs are listed. Therefore, we planned to develop an application named "Savior" which is a service job platform to help the connection between service providers and service users. The meaning of "Savior" is someone who can get someone or something a helping hand from danger or difficulty. This application can save or help people from the difficulty to get a service and service job. This is a mobile application-based service job market platform that gives the opportunity to clients and service providers to interact with each other in the most efficient way and maximise the good result for both parties (Thorpe, 2016).

Background of The Study

Based on the research, designing a good application depends on many ways. One of the ways is a requirement. The developers understood the requirements that have been given by clients and service providers to make sure that developing an application is helpful and solving client's problems. The root causes of this hesitation are: Customers do not know these services well, even the explicit service category and description are provided; Customers do not know their demands well. Most of the time, customers only have a general or fuzzy goal but have no sense of the requirements in detail (Tu et al., 2017). In this case, the developers and designers created and distributed a survey for the client and services providers. It is because the first step of the Software Development Life Cycle (SDLC) method is planning. The requirements will be the main source of the project.

In this fast-moving technological era, calling the home services is very easy, just one-click or one-touch on applications or websites. "Domestic Android Application for Home Services", is a Corporate based mobile application for android users that brings together the client and service providers and connects them using the GPS (Global Positioning System) (Bandekar & Avril, 2016). They provided home services such as a plumber, cleaner and home cleaner. "Domestic Android Application for Home Services" has a great start idea depending on another similar application. It is because another similar application does not implement GPS to help and connect with each other (clients and service providers). In this case, the developers and designers added some features such as the category of services, communication between client and service provider and schedule. It made the application more suitable and usable for clients and service providers.

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According to recent research, there were some problems found in the project. First, the location of the clients and service provider. This type of application can be found in Malaysia, China, American and India. If the distance between the client and service provider is long, the cost of services will become higher. Besides, hiring workers in the city requires a high degree of education, making it difficult to find a job between town and city. So, building and creating an application that can provide services in the local area and find a job with professional skills to earn money is a necessity. It offers different solving methods to local clients for different services and businesses (Haq et al., 2018). Third, requirement. The different types of clients have different types of requirements. If any customer wants to use this type of service, then they can go through a personal meeting or mobile call. Then, it is also difficult for customers to find any service in an emergency at any time and place. (All Answers Ltd., 2019).

Development

In order to design and develop a successful application, System Development Life Cycle, SDLC model has been applied. There are six phases has been applied for the tasks which are planning, analysis, design, implementation, testing and maintenance as shown in Figure 1 (Luenendonk, 2020).

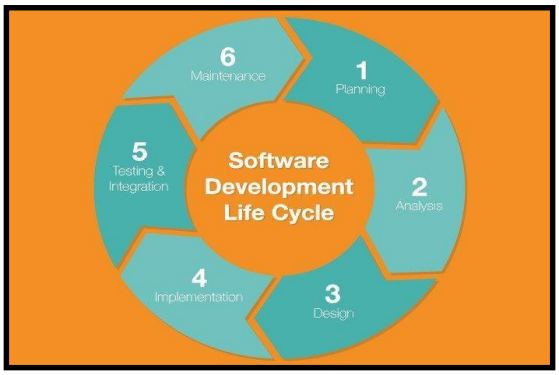

Figure 1: The Phases of Software Development Life Cycle (SDLC)

These step-by-step methods really assisted the whole process in creating this application. Beginning with pondering about what people need to do to learn till the point where someone actually measures, whether or not people learn what they need to learn? It really helps designers to build the application structure accordingly. Moreover, it was used to design application so that it is able to portray the overall view of the whole learning process.

Planning

In the first phase, we have started by having a discussion among team members about the theme to choose and the project that will be done later. After the theme has been chosen, we start discussing on the importance of choosing the theme and brainstorming about the requirement, problem statement, project objective and the target audience for this project.

Then, we proceed to do research about the existing applications and related articles in order to do literature reviews. We also start to pick a title for the project. For instance, “Savior” has been chosen as the name of the application in this phase.

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Analysis

In the second phase, we gathered some information and do a proper analysis of the specification of the application. Requirement analysis called feasibility study is about how the application development team reaches their customer and conducts research on their application or system.

We analysed the need of users that should be included in the application to facilitate users to use them. For example, we analysed who will be using the application and how they will be using it to make it become user-friendly. The main goal of doing this analysis is to ensure that the application looks and feels relevant to the target audience that will use the application.

Primary data gathering was used to collect the requirements of the target audience in order to meet these requirements in the future and improve customer satisfaction. The information, as well as proper analysis, was done and collected through the survey. The data and information about the experience of service providers and end-users, the difficulties they faced before and their suggestions on the design of the application were gathered from them.

The result showed that most of them think that service job application is needed for communities in the local area, Android is the best operating system for the application, rating and reviews as well as chat service are the most important functions that must be added to the application, blue is the most suitable colour for the application, service providers' information should be included in the service job application, and personalisation or the high performance of the application is their reason for wanting to use a service job application.

The result indicated that most of the end-users called the service before, and high cost is the main problem when they get the service. Service providers mostly provide retail and customer services, work part-time, and use WhatsApp to find customers. Besides, understanding the customers, missing a formal strategy, and increasing customer engagement are the problems service providers face when getting the customer.

Secondary data gathering was conducted to compare the existing and the data collected from service job applications in the market. Going through the mobile application store and analysing all these already existing service mobile applications, it is clear that these platforms still need a lot of improvement.

Design

In the third phase, we sketched the first draft of how the application will look like by using the storyboard as a prototype. Through the storyboard, they had an idea or concept to design the final application. They then decided on the idea of the interface, theme, how the interaction should flow, buttons and other elements to create an identity to the application. Figures 2 and 3, shows the example storyboard of the "Savior" application.

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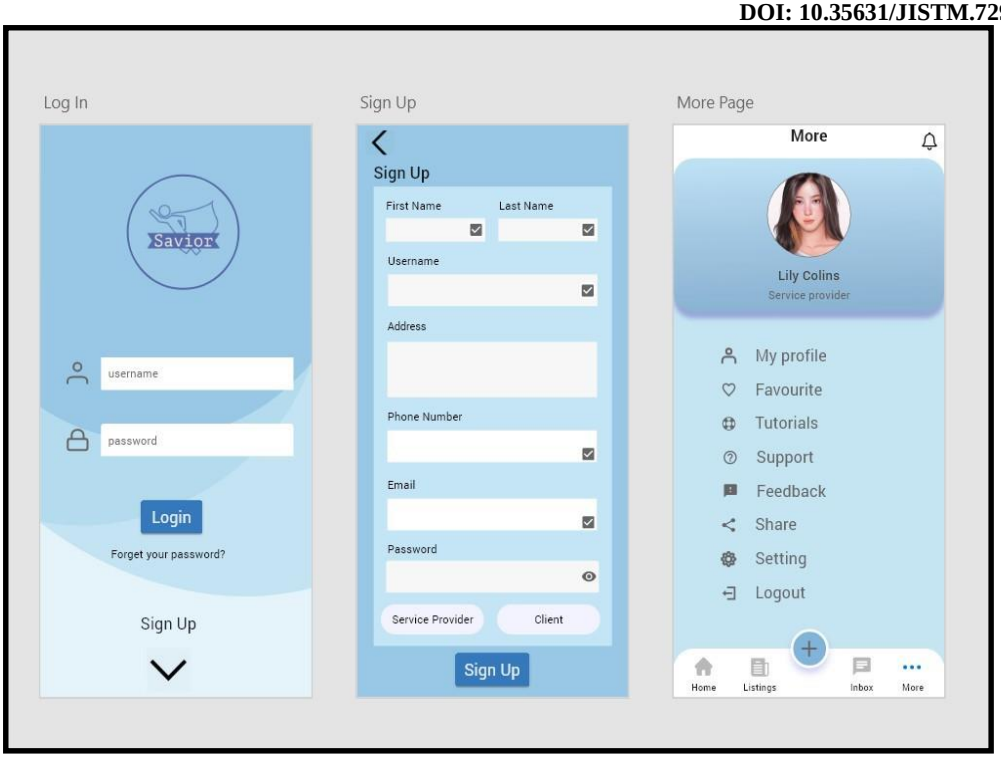

Figure 2: Storyboard Of "Savior" Application

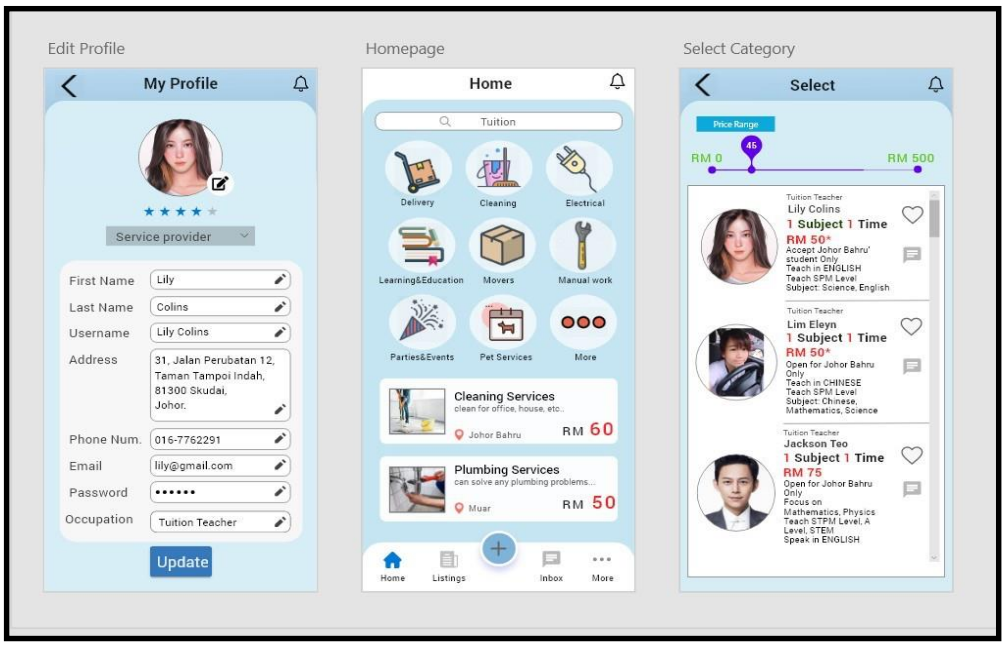

Figure 3: Storyboard Of "Savior" Application

Implementation

In the fourth phase, the product gets created and developed. We implemented the design that we had sketched earlier into the application creator called Adalo. Adalo is an application development platform that makes the process for developers quick, easy, and cost-effective. Users may also utilise the programme to develop their own designs because it gives them total control over it. We divided the works into units and worked together. It is important that the

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teams thoroughly understand the application's overall goals as well as the individual features they are working on.

In the beginning part, the application was not tested although the fundamental functionality was there. The application was quite unstable, and non-core functionality was now unavailable. Much of the intended functionality was included in the second stage. The application had preferably through light testing and error fixes, but some errors may still exist. Figure 4 shows the pages of the final product of Savior.

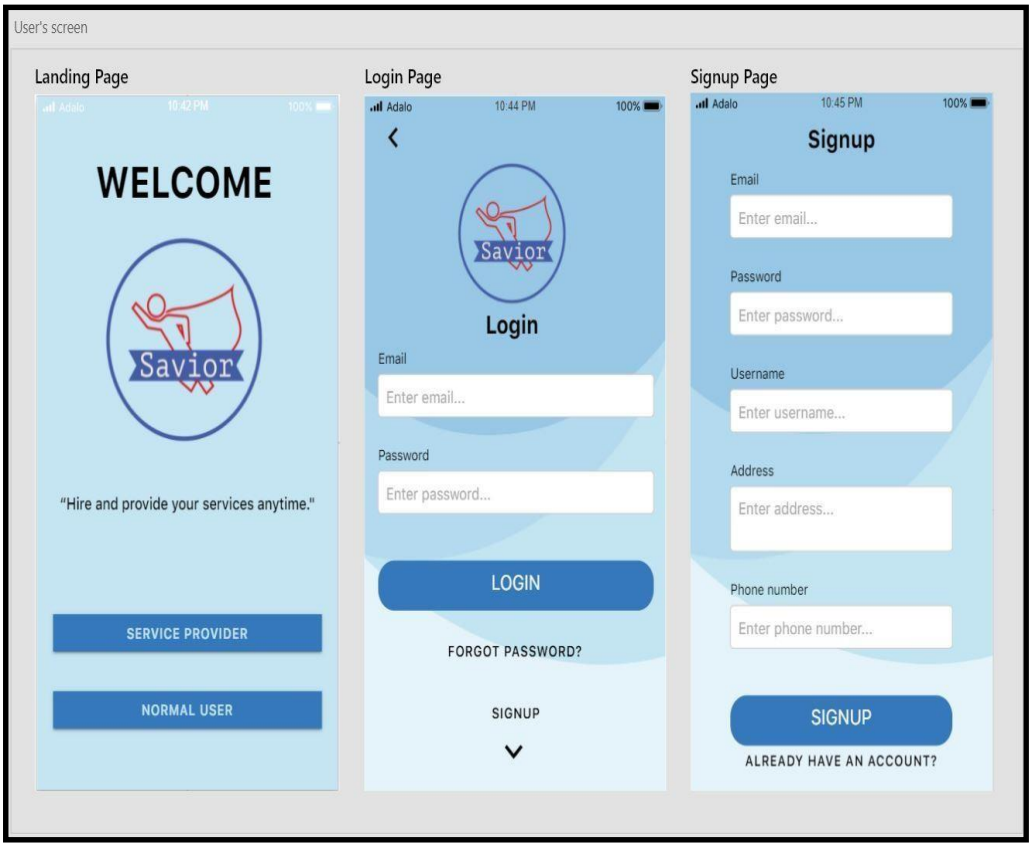

Figure 4: Final Product Of "Savior" App (User Screen)

Testing and Integration

In the fifth phase, the application was made available to a select set of external users for further testing. The usability, compatibility, interface, and performance of the application should all be tested with the development of a formative evaluation and summative evaluation. In addition, the application was tested to make sure it is running smoothly and to avoid any errors occurring in the future. The application was also tested to make sure the feature is user-friendly before it delivers to the end-user by detecting and eliminating user experience problems. User acceptability in the testing had determined whether this mobile application is usable by the target audience. The testing presented by non-developers, experts, and the target audience. The feedback received from the experts and target audience assisted the developers in determining if the application's functionalities work properly in a real-world situation.

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Maintenance

In the final phase, the collected data was analysed to fix the errors and improve the system, contents, interfaces or features of the application. This phase aims to meet the user's requirements and prevent mistakes from recurring as well as to make the application ready to be used by the target audience (Lozhko, 2017). After the errors were resolved and the application was improved, the application was ready for release as an APK file. Regularly updating and maintaining the application is crucial to ensure that the application runs at full capacity, and it also helps to improve customer satisfaction.

Conclusion

"Savior" application is likely to benefit from the increasing demand for independent workers globally. Therefore, the next thing for us to do is to improve the application. We can add some special features and functions to the application to assist users to keep up with the times while making money and solving their tasks. For example, creating more service categories for outsourcing, coding, and programming jobs. We may generate an information page to provide training and information to the service providers by increasing their knowledge and understanding about the new norm that will create new jobs. This is due to the fact that Industrial Revolution 4.0 will result in the development of new jobs for the public.

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