

**BeautéPanda: Android Application for Beauty Enthusiasts**

**BIT304 FINAL YEAR PROJECT I**

**LITERATURE REVIEW**

(E1500352) Ayu Chrisniyanti

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1. **Introduction**

Nowadays, smartphone is one example of technology that is becoming popular, global, and be a part of every person life. People around the world have adopted this technology as one of the most important facility that is needed in their everyday life. A variety of smartphones applications is available to be used in a wider range of usage situation. No doubt a smartphone is a new gadget that have ability to change people lives (Fawareh & Shaidah, 2017).

In the past, mobile phones were used only to make call or sending messages, but today mobile phones are changed into smartphones where it provides numerous functionalities and smartphones are not only used for communication anymore. With the growth of internet technology and its applications, now people are using smartphone for internet use such as sending and receiving email, chatting, sharing photos, and many more (Fawareh & Shaidah, 2017).

At present there are many mobile Operating Systems that available in the market such as Windows by Windows Inc., Symbian by Nokia, iOS by Apple Inc., and many more. But now, Android by Google and iOS by Apple Inc. are being the major players in building and developing mobile Operating System in the global market. Both platforms have grown more enterprise-friendly since about one decade (Bala, Sharma, & Kaur, 2015).

Android OS is a new next generation of mobile operating system and it is one of the most widely used mobile Operating System by the people these days. In 2003, Android was founded by Andy Rubin with company named Android Inc. in California. Entering 2005, Google was purchased Android and it was unveiled in 2007 with formation of OHA (Open Handset Alliance) led by Google. This Operating System is based on the Linux Kernel and it is developed by Google (Narmatha & Krishnakumar, 2016). (Lazareska & Jakimoski, 2017)

The iOS platform is developed by Apple Inc., iOS is the second most popular mobile OS these days after Android, and it is the world’s most advanced mobile Operating System these days. This OS was first released in 2007 and it developed only for iPhone, but later it was developed for iPod as well as iPad (Bharati, Ramith, & Amala, 2015). iOS is developed and it works exclusively on Apple’s products and devices. In 2017, Apple announced that iOS had 710 million active devices and it has sold more than 1.2 billion iOS devices (Lazareska & Jakimoski, 2017).

Based on what I have discussed above, we decided to develop a mobile application as a platform for our application. The reason we choose mobile application because it is running on smartphone where it easy to use and accessible from anywhere and any place, unlike website or desktop application. Also, mobile application is a new development and rapidly growing sector in global.

In this Era, many people are using mobile application to contact friends, browse the internet, sharing documents, and many more. The user can get facility of mobile application from everywhere and people can do many things in daily life or business life. Beside daily life got impact from mobile application, it gives and plays an important role in business life. many business companies in the world are earning revenue by using mobile application (Islam, Islam, & Mazumder, 2010). This makes people on society are using mobile application and smartphone often for daily life than any other platforms.

1. **Why We Choose Android**

Operating System that are developing by Google and Apple Inc. are the most popular in society these days. Even though, Apple Inc. developed iOS and it success to surpass the performance of any other Operating Systems include Android, because its features and its exclusivity.

Nowadays, the fact in the market is Android Operating System is growing faster than iOS and many people on society are using Android Operating System (Sheikh, Ganai, Malik, & Dar, 2013). Beside that some application developers are prefer to develop a mobile application with Android-based, because Android OS is open source which mean it is freely available and editable for application developers and it market share is 48.8% which is wider than iOS where iOS only has 17.2% of market share. Also, Android has the highest market size than any other existing Operating Systems (Divya & KrishnaKumar, 2016).

Android OS is the most widely used on society in 2012 until present. This Operating System is based on Linux Kernel and it is developed by Google, but later on it developed by Open Handset Alliance (OHA). It applications are usually developed in the Java language using the Android Software Development Kit, but the other development tools are available for developers, such as Native Development Kit for those developers that developed an application or extensions in C or C++ (Sheikh, Ganai, Malik, & Dar, 2013).

Besides Android provide an open development platform, Android also offers all the developers with the ability to develop and build an innovative application. Take advantages of the device hardware, set alarms, and many more are free for developers. In 2011, Google announced that their Android apps had been about 100.000 installed around the world (Sheikh, Ganai, Malik, & Dar, 2013).

Based on the analysis above, we have chosen Android to develop our project named BeautéPanda. Because it is open source OS and it offers a lot of convenience and flexibility for developers while developing a mobile application. Besides, Android OS is commonly used on society and it is becoming popular around the world, so it will make easier for us to reach more users to use our application.

1. **Similar Application**

Before we are developing our application, we were in the phase of gathering ideas. While in this phase, we did a lot of research about other applications that have similarity with our application that we want to develop named BeautéPanda. There are some mobile applications that provide some features that are similar with our application. But, all of those applications still cannot fulfil the user needs between Makeup Artists or Salons and the customers while making the appointment. There are the lists of some Android applications that have similarity with our application:

* **GO GLAM by GO-JEK**

GO GLAM is service that powered by GO-JEK. It is a beauty services that provide customers with manicure pedicure, cream-bath to waxing and the service is come directly to your home (GOJEK, 2017). However, for now this application only provides two services such as hair treatment and nails. This application still gets many comments from the user because the price offered is more expensive than salons in general (iTunes, 2017).

* **SALON by Houzcall**

This application is a mobile application that provides beauty services for the customers from hairstyling, haircut, manicure pedicure, and waxing to the place and time determined by you. This application provides the customer with booking menu where the customer can book for more than one person. However, this application did not provide the customer for makeup and for now, SALON by Houzcall only serves areas of Jakarta. This application provide electronic voucher called Houzcall Credit where the customer can use this voucher instead of cash to make payments and transactions (Houzcall, 2018).

1. **Methodology and Technique**
   1. **Methodology**

We have chosen to use Agile software development method for developing our project. This methodology involves many stakeholders and constantly showing them with the demonstrations of the current state of the software. This methodology also focused in around short iterative software release cycle. With this project, the stakeholders are allowed to make recommendations and suggest changes in the application while the software is being develop; so with this methodology, the developers can track what the customers actually desire (Charles Edeki, 2015).

Besides, the reason we choose Agile software development for this project because it will help us to improve the expectations of when the software or project will be complete, provide the ability to check the overall project progress easily, and many more (Charles Edeki, 2015). Agile software development is suitable for our project, because we can know what customers need while the software is being develop by giving feedback.

* 1. **Technique**

Testing is very important thing in software development. The main purpose of software testing is to ensure that the software produced is in accordance with requirements that previously determined. When the requirements of a system have been compiled, there should be a planning test. In addition, a testing process requires a final goal that can be assessed so that the tester can stop doing a test when the objectives are achieved (Kumar & Singh, 2015).

In this project, we will use Grey-box testing. Grey-box testing is a technique to test our application with limited knowledge of the internal working of an application and it also have knowledge about the basic aspects from the system. With this technique, we can verify both of the output from the user interface and also its process that leads to the user interface output. This Grey-box testing can be applied to most testing phases; However, mostly used in the integration testing (Bansal, 2014).

1. **Tools & Software to Be Used**

* **IntelliJ IDEA**

In this project we decided to use IntelliJ IDEA, because in developing this project we use Java language as the programming language and it is an integrated development environment (IDE). There is no different between this software and Android Studio, the Android plugins for both software are built from the same code and also all features on Android Studio are also available on IntelliJ IDEA (JetBrains, 2013).

The difference between IntelliJ IDEA and Android Studio is only from the RAM specification where the developers need 8GB RAM with processors i3 – i7 and SSD 128 or 152GB while using Android Studio if they want to develop the Android application without problems such as the software is not responding while developing the mobile application (Dotid, 2017).

* **Gantt Project**

We use Gantt Project as our tools to make and manage the project schedule before developing our project as the requirements that need to fulfil. We choose Gantt Project because it easier to use and more flexible while making and managing the project schedule.

* **Microsoft Visio Pro**

We decided to use Microsoft Visio Pro to make our project diagram from use case diagram, sequence diagram, database diagram, and many more. We choose this software because it easy to use and it has many libraries that make us easy to navigate.

* **Adobe Photoshop**

Adobe Photoshop is a photo editing and photo manipulation software that lets users to create and edit an images. In developing this project, we choose Adobe Photoshop to design our user interface as a sketch before we develop the application. Also, this software will help us to make the logo for our application and other graphic content needs.

1. **Challenges to Be Overcome**

* **Lack of experience in developing an android application**

We have no experience to develop an Android application before, but we have experience and we have learned Java programming languages and developed Java desktop application. However, we must do many practice and learn by watching the tutorial videos to develop this project and to understand step by step while developing the application.

* **Lack of experience in using IntelliJ IDEA for developing this project**

We have no experience developing an Android application with IntelliJ IDEA and this is our first time using IntelliJ IDEA as a software to develop an android application. We must do many research and learn to understand in term of using IntelliJ IDEA to develop an android application and to solve the problem that we face while developing our project.

1. **Conclusion**

An Android application is commonly and widely use in global for this Era by many people. With the highest market demand in global make this platform become popular year by year. We choose Android as the platform because it is an open-source code where it offers us as the developer more flexibility while developing the application.

In this Era, many beauty enthusiasts are facing the problem such as the difficulty to find makeup artists or beauty salons in one application and they still find it manually. However, we decided to develop an Android application namely BeautéPanda. We hope by developing this an Android mobile application can solve problems that are exists in beauty world. With our application, it will help the customers to find and meet with makeup artists or beauty salons and also facilitate both makeup artists and the customers with many features.

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