IMITATION JEWELRY APPLICATION USING ANDROID*

BY

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ABSTRACT

The advent of mobile start-ups has opened doors for companies to find customers through downloadable mobile apps. These applications extend the help of advanced telecommunications and enable consumers to perform a variety of tasks easily. These programs have also generated great interest due to the involvement of top clients. Applications are made using many software platforms. But the Android studio is one of the most popular ways to make an android application. Everything starts with developing an Android application project for mobiles and tablets which goes with app's development modules. When a developer wants to create a new Android project that complies with Android Studio itself, Android Studio allows choosing one of the best SDK versions of the program. The only thing a user needs to is build the app and open it on the device after creating the application project. If a user has a device attached to a developer with a compatible version of the Android SDK, they can create a visual Android device launch app. Basic required blocks are available for Android apps and Android Studio capabilities.

KEYWORDS

Software Development Kit (SDK), Android, Manifest file, Android Studio, Extensible Markup Language (XML).

I.Introduction

Android Studio can be said as the official Integrated Development Environment (IDE) for Android app development. In addition to the coding, editing and developing tools, Android Studio also offers many features that enhance the product when building android apps. It is a flexible program based on the Gradle. Gradle is a build system which is an open source which is used to automate building, testing, deployment etc. which is a fast and featured emulator. Using the integrated environment called IDE, one can upgrade all android devices, can do changes to push code and can also change the application based on each operating system without

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restarting the application. Code templates and GitHub integration can be useful in creating common application features and can also import specimen code. Overall testing tools and frameworks are available. Lint tools are available and are used for snaping functionality, usability and any other issues. Each project in Android Studio consists of one or more modules with source code files and resource files. The modules which are present in android studio are Android app modules, Library modules and Google App Engine Modules.

In simple words android studio is the platform where an individual can easily develop any android application. Android studio provides various types of different modules, platforms where everyone can design/develop their own app without any complications. It also provides additional functionality that is open source software where one can create applications free of cost. Android studio supports languages such as JAVA and KOTLIN from which one can develop an application. Emulators are also built in the android studios where people can test their own application. There are many types of emulators available on android studio. Right from android devices like mobiles, Tv etc. emulators are installed in the android studio which helps the user to test their application.

II.Literature Review

A literature review is a survey of scholarly sources on a specific topic. This is a way it involves finding relevant publications (such as books and journal articles), analysing them, and explaining what has been found. Hana in [1] discuss that Microsoft iWndow 8/7/Vista/2003(32 or 64 bits,400 hard disk space 3-GB RAM (4 GB),At least 1 GB for AndroidSDK, EmulatorSystem, images and catches, Java Development Kit(JDK 7) is required for the android studio to work upon. In this paper the author has shown the steps how to download the basic android tools to android studio in a simple way. If there is no internet connection these steps could not work and these tools may also not work. In the future the author will show the steps of everything related to android studio. Clifton and Adam in [2] say that Internet connection plays a vital role in performing the steps, processors, and the machine matters the most in android studio. All basic steps right from installation to working of the software everything has been given in detail in this book. The authors will be writing another book on this topic and software.

Akshaya and Sakshi in [3] describe how to develop android applications on android studio using PHP. PHP not many people are familiar with this language so this is one of the important drawbacks. The authors will be making another research paper but this time using Java/Kotlin Language. Jerome in

[4] mentioned the required specifications for the android studio to work upon the machine. In this paper the author has given tutorials on how to use android studio. The databases need the internet to work.

Neha and Sarita in [5] describe how to develop native apps on android studio. Native applications are not very difficult to develop on android studio. The author has developed an native application presented in the paper, but the UIs of the app were not that good compared to the regular apps. So the authors plan on to make such native applications in near future. Abhinav and Anu in [6] expressed application Development they have mentioned the required specs for the android studio. In the paper, the authors have described the challenges that the developer faces while developing applications on android studio. Only the challenges were described in paper. Some challenges developers face while developing an app are errors, UIs and many sorts of problems. In this paper the authors have pointed out the mistakes that one makes while developing an application. The author wants to develop an exam application in the future. These are their plans for the future.

III.Proposed System

Imitation jewelry is an application where vendors can show the user what type, kind, shape and other categories of jewelry were available in the shop. The vendor uses imitation jewelry pictures to attract the users so that the user can choose jewelry from his/her device. Once he/she has selected the item, the user can add the item to the cart. Once the item is added, the buyer can visit the shop directly and can do the payment for the selected items. This proposed method helps to save time and there is no need of buyers to stand in the queue for purchasing their item. The application is developed using android studio.

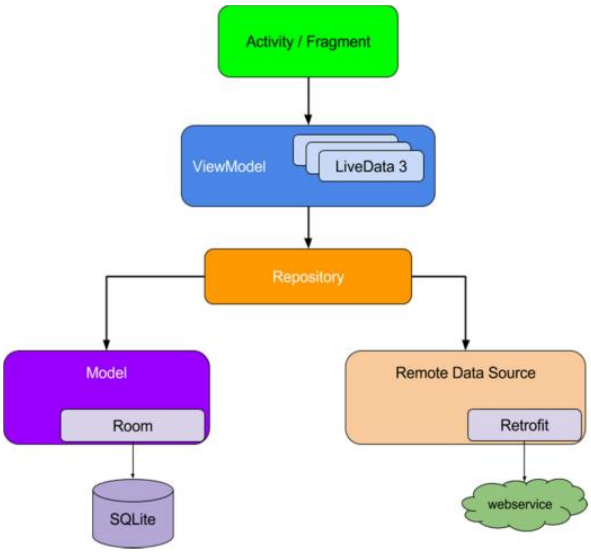

Figure 3.1: Working of the proposed model

Figure 3.1 shows the architecture of android studio. The figure gives brief information about how android studio actually works. The proposed model starts with two main phases: activity and fragment. Then activity and fragment have view models in it. After the view model there is the repository. Then this repository is divided into two parts: model and remote data source. hWere models consist of room and remote data source consist of retrofit. Models data is stored in sqlite and remote data source data is on web services. Some important features are explained from this figure. An activity can show single screen with user friendly interface similar to window software or frame of Java language.

Android activity can be said as a subclass of (CTW) Context Theme rWapper class. Fragments are the part of activity that can be also said as sub-activity. Fragments can also multiple screens inside one particular activity. So basically in simple words if an activity gets affected, the fragment too gets affected because fragments are part of activity.

The ViewModel section is designed to store and manage UI-related data in a healthy way. The ViewModel section agrees to save configuration changes the same as screen changes. The Gradle build scheme in Android Studio makes it easy to find other library modules to build as a dependency. Dependence can be seen on a machine, and any other dependencies the built advertise are automatically added in it as well. Models and under the model package forms a model class called "Item". This Item creates a model section to store object data like name or other details in it. A model usually becomes a set of classes that handle the data and business concepts in it. So basically DataSource requests to upload content pages to the PagedList in a list format. PagedList can grow as it loads more data in it, but uploaded data cannot be updated. When a basic data set is changed, another PagedList or DataSource pager must be created to represent the new data.

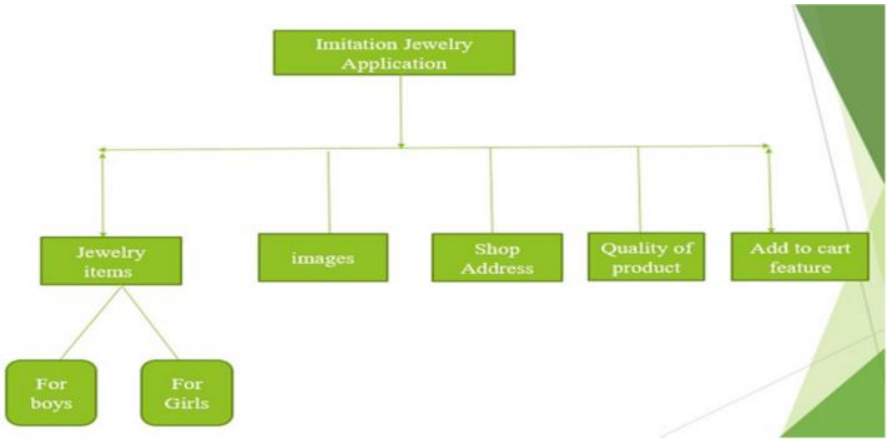

Figure 3.2: ULMDiagram

Figure 3.2 shows the UML diagram. The above diagram has been implemented in the proposed work. The Application consists of Jewelry items, images of items, shop address, quality of product and a feature of add to cart. Figure shows the main layout of the proposed application. Figure 3.3 shows the flow of the proposed application. Splash screen is the first screen which appears after the opening of the application. Then it goes with the registration screen. After that the login screen will appear. The next screen is a dashboard where all the images and information about the Jewelry will be shown. The Android project layout on disk differs from this flat representation of it. To view project file formats, select Project drop down, and then it becomes customizable. Project file views to focus on specific aspects of the application development. For example, selecting problem views for the project shows links to source files that may contain any encoding and errors, such as the XML object close tag in a layout file.

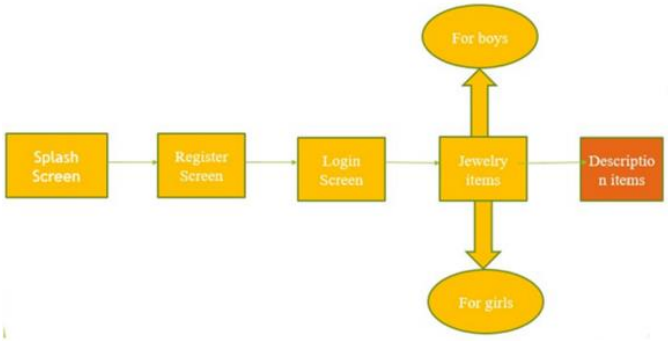

Figure 3.3: Flow Diagram

The Toolbar lets you perform a variety of actions, including using the apps and launching Android tools. Navigation bar helps the person to navigate the project and open editing files as well; this bar provides a more united view of the structure that can be seen in the Project window. The editor window is a window where a user can create and also modify code differences. For example, when seeing a layout file, the editor window displays the Layout and Toolbar window that can be run outside the IDE window which contains buttons that allows the user to expand each tool in that window. The windows tool provides access to main important functions such as project management, search, version control, and more. A user can easily expand and fold them according to the user's wish. The status bar shows the status of the project, as well as it also shows any alerts or messages that keep appearing.

IV.Outcome of the proposed work

A Jewelry application has been created and with the help of the proposed application, the existing drawbacks have overcome. Proposed application has some outcomes that are presented through screen shots. Figure 4.1 shows the screenshot of Main UI & the proposed

application. Register Screen this is the second screen where you can register yourself as a user of this application. This is the important process as the user details are required for the authorization.

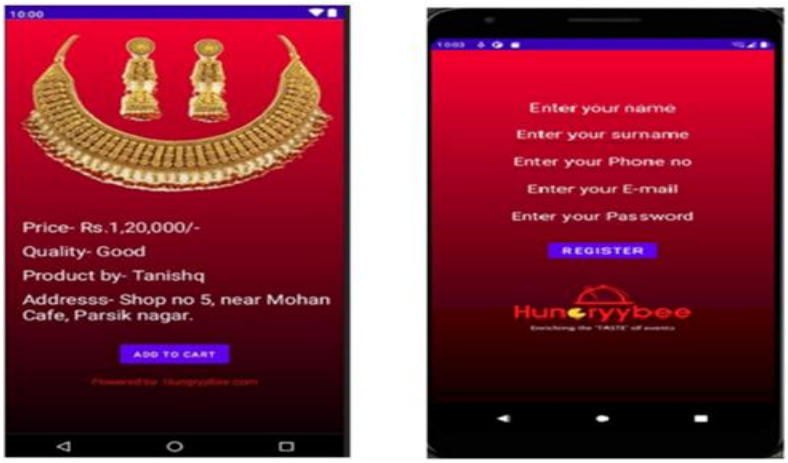

Figure 4.1: Screenshots of main UI

Figure 4.2 shows the screenshot of the application “My Profile”. This is one of the screens where the user can make this/her profile. This screen is basically for the vendor as his information will be included in this.

Figure 4.2: Profile Screenshot

V.Survey

A survey has been taken on android studio. Few questions were asked to people about android studio. The questions which were asked are as follows:

1.Have you heard about android studio?

2.Have you heard about flutter by Google?

3.Do you like using applications?

4.Do you know on which software applications are developed?

5.hWich apps do you use the most?

The response was quite positive. Many people around are aware about this technology. Most of the people are quite familiar with Android studio. So people are more into technology. They love using smartphones and applications. Also people are interested in knowing how the applications are developed and designed. Below are the results of the questions:

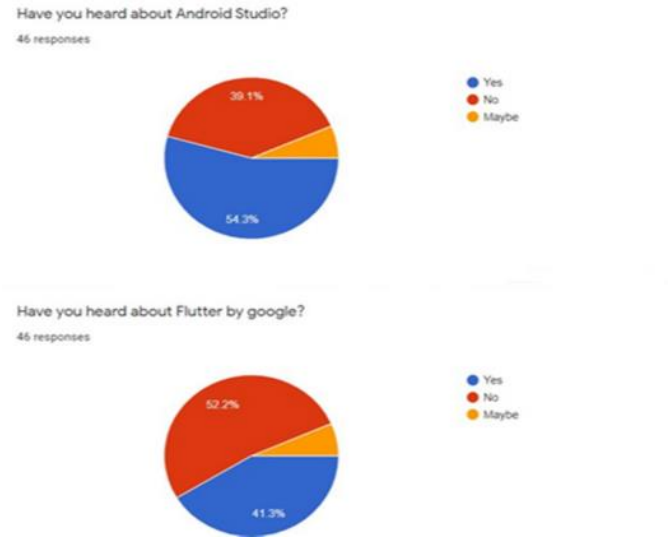

Figure 5.1: Responses received for the first two questions

Around 54.3% of people are aware about the android studio and around 41.3% of people know about flutter, which is quite good news for the developers that people are really interested in this sort of thing.

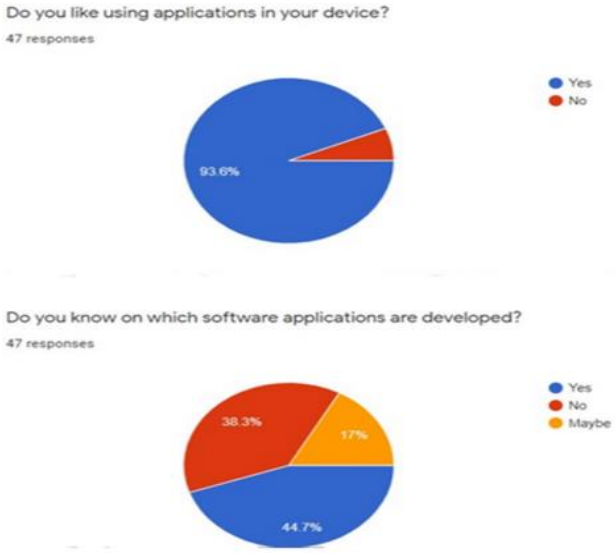

Figure 5.2 Survey result for next set of questions

People like to use applications from their android devices. And around 44.7% of people know where these applications are developed. Everybody likes using applications in their devices.

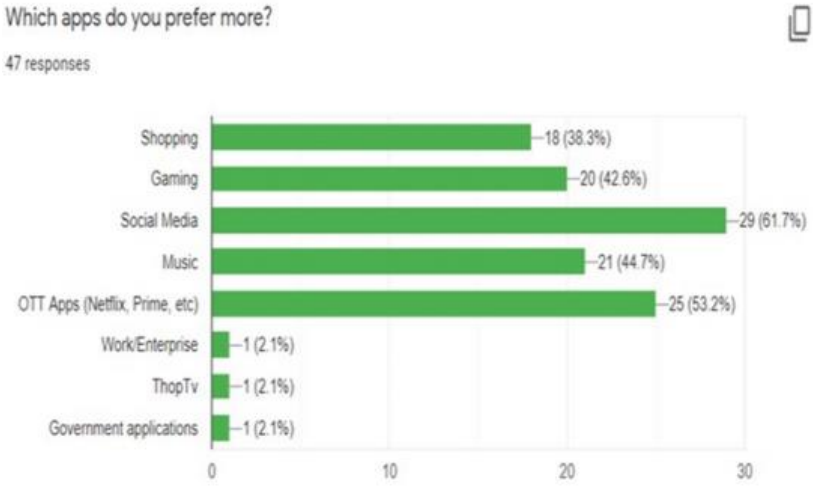

Figure 5.3 Apps preferred by people.

According to the survey people likely use social media applications the most in their daily lives. And around 53.2% of people use OTT apps in their daily life. Gaming, shopping and music are also important applications used by the people. This graph shows the importance of the applications. A developer should always keep in mind what a user needs. As people are interested in OTT platforms the most, the developers should keep this in mind and develop such apps instead.

VI.Result

The survey which was conducted has the following outcome from which the result has been noted. Around 54.2% of people are aware about android studio and they know on what platform applications are developed. Also, around 41.2% of people are aware about flutter. People are aware that flutter is used to make the best UIs for applications. But most of the people are not aware of these softwares. Around 95% of people love using applications on their mobile devices. As it was mentioned earlier in the paper people are very fond of the applications they use daily. As in the responses people mostly use their phone for using applications like social media. People also choose OTT platforms over other apps.

VI Conclusion

Android studio is a platform where one can develop Apps. Android Studio helps the user to choose the best SDK version for the application. The user needs to build the application and then launch it on a device or emulator after creation of the application project. If a user already has a device attached to the development machine with a compatible Android SDK

version, he/she can create a virtual Android device to run the application. The main components of Android applications are activities, services, broadcast receivers, content providers, XML files, the Android Manifest file, and modules. It is very useful software where people around the world can develop applications from their home. This is the technology on which people are working on. And it gives an amazing experience.

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