International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE)

| e-ISSN: 2278 – 8875, p-ISSN: 2320 – 3765| www.ijareeie.com | Impact Factor: 7.122|

|| Volume 9, Issue 5, May 2020 ||

An Efficient and Secured Android Mobile Banking With Hashcode Technique

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ABSTRACT: Mobile banking is a service that is provided by a bank or other financial institution that allows its customers to conduct financial transactions afar using a mobile device such as a smart-phone or tablet. User can look over their bank statement, user details and transfer money through the website and android apps. Mobile banking is a system that permits customers of a financial institution to conduct mobile phone or tablet. It helps customers keep all finances under control so they are able to monitor their balances, get account alerts, transfer money straight away, check deposits, and do much more. Also in this project we developed an android application for the ease of people.

KEYWORDS: Banking System , Transaction , Android , Mobile Devices , Communicating Software.

I. INTRODUCTION

Mobile banking is a system that permits customers of a financial institution to conduct a number of financial transactions through a mobile device such as a mobile phone or tablet. Mobile banking offers many advantages, easy access and copious applications for smart phones, provide a righteous security. The biggest benefit is that you have more control over your money. Whether you are starting a business, starting a new strategy in your business or simply trying to keep your business viable, you need to do market research .Proper market research is their key between the success and failure of any business, but it can be quite tedious. How do you you get users and customers to give feedback on your business ideas and strategies? In their past, market research companies would mail page long surveys to customer's homes to be filled out and mailed back. Some companies also ask users to fill out forms so that their in-store, and nowadays, many use emails and online surveys to collect data.

Many of these companies have raffle-like incentive however the chances of users actually gaining The idea of this project is to leverage the increasing popularity of the Smart-phone and create a mobile application that collect market research from users right on their phone. Most of the banks that recognize a mobile device when accessing their website on a smart phone, around a third of those in the study, will automatically redirect a visitor to their mobile optimized site[1].

User very well surveyed based on location and topic interests, questions appear directly to the user .This mobile app will benefit market of researchers by providing an easy way to distribute surveys, while also being able to collect trends in market data as well as provide information on what motivates consumers to answer surveys. In modern times, the use of mobile is widely spread as it not only makes money to the country but it also entertain the individual . Thus, this application is also made for the benefit of the person time and work load by providing the bank into their hands. And so, many software are present in the world to do so.

1.1 ANDROID APPLICATION

Android is an open source operation system for mobile devices such as smart-phones and tablet computers. Android offer a unified approach to application development for mobile devices which means developers need to develop only for android and their applications should be capable to run on different devices powered by android.
Android is continually developed by Google and the Open Handset Alliance (OHA), and it has seen several updates to its base operating system since the initial release[2]. It provide us with manipulate on screen object with a virtual Keyboard for text input. We will start our Android application development on any of the following operating system that is

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Microsoft Window XP or later version, Mac OS X 10.5.8 ,later version with Intel chip Linux including GNU Library with Intel chip.
Android app is a combination of various source code in a single place whose action can be performed just by a single touch . The Android 1.1 system image delivered in the SDK is the development underpart to the Android 1.1 production system image, deploy-able to Android-powered handsets starting in February 2009[3].It makes work much easier and this are much user friendly which is known as Android programming that is based on java programming language, if we have basic understanding on Java programming then it will be a fun to study Android app development.

An android app uses a android application that run on android platform . Android is an interesting platform for a number of reasons, one of which is it's openness to developer and debugging tools, and the fact that it runs a modified form of Linux as an operating system[4]. They are generally developed in the java language using the Android SDK applications that can be packaged easily and sold out either through a store such as Google play. This apps are compatible with almost every platform but few are also available for the specific platform.

II.SYSTEM REQUIREMENT

To build up an application for mobile we need to fulfill both software requirement as well as the hardware requirement.
a) SoftwareInterference.b) Hardware Interference.

2.1 Software Interference

The Software Interference comprises of the software platform where the codes will run and system that should be capable of handling the type of codes . Thus the platform should be like, where we can run and test our code so that we know whether the codes are good for the mobile upload or not, so for this project we have to install Android Studio software into our laptop or personal PC where we can code. For Windows PC/ Laptop requirements

- Microsoft Windows 7/8/10 (32-bit or 64-bit).
- 4 GB RAM minimum, 8 GB RAM recommended (included 1 GB for the Android Emulator).
- 2 GB of available disk space minimum, 4 GB to be recommend(500 MB for IDE plus 1.5 GB for Android SDK and emulator system image).
- 1280 x 800 minimum screen resolution.
- For codes to run, we need IDE - Android Studio Platform In the System.

2.2 Hardware Interference

The Hardware Interference means that to check what is the actual configuration of the device is. The main reason to examine configuration of the device is to know on what configuration the codes are going to run. On the basis of which you can adjust the codes accordingly to the device. Also the codes will run only on the devices which has Android as there Operating System and the version of the device should be above 7.0 . It is just that the codes written isn't that comparable all version of Android device operating system. Thus ,to see it is much important and the required device should have configuration these are following ,

- 2 GB RAM Minimum,4GB to be recommend.
- 2 GB available internal storage , to store user data (if needed).
- Android version 7.0.1 minimum Device to be used should have Android Operating System.

III. WORKING STRATEGY

Working of Android based mobile banking application is mainly done with proper management of different things at a proper time. At first, you have to install Android Studio Software ,where the Codes would be written in Android language and the user data is well maintained by using database language MySQL.Then after checking and testing all the codes in the system we would install this code into the mobile phone using data cable.And the user can easily run the application on their mobile phones with proper login registration featured .The application and the operation of the userwill be connected through mobile data which the user has to maintain[5] switch on' while using the application and also the data is well maintained in the system using MySQL database management system.

Mobile banking application involves some phases to get the final application the user could use .Thus these phases are :

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- Initial Phase.
- Development Phase.
- Testing Phase.
- Maintenance Phase.

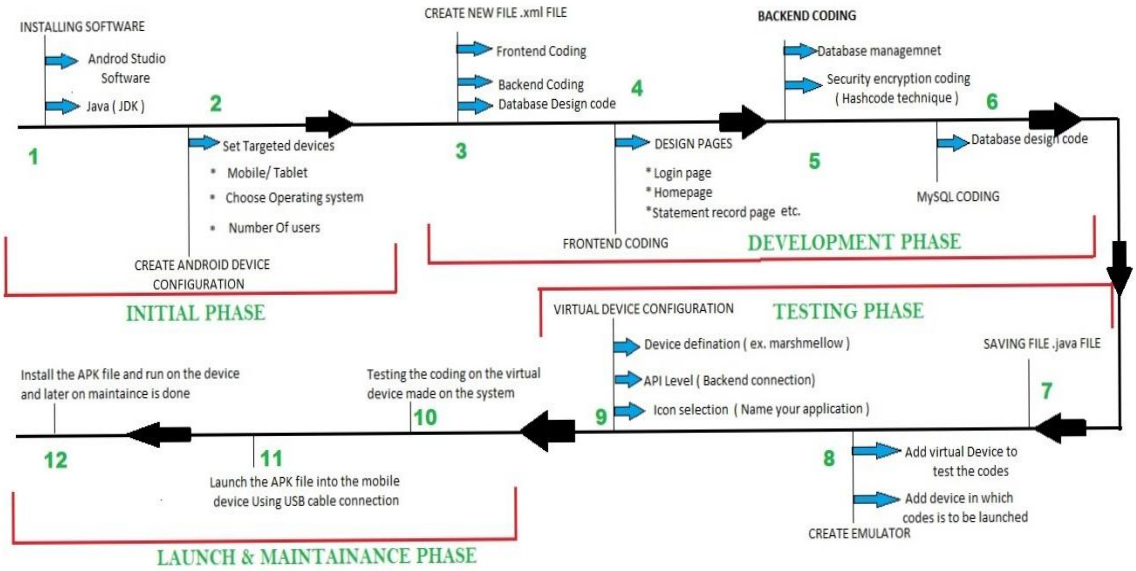

Figure 1 : Project development cycle planning

FLOW CHART

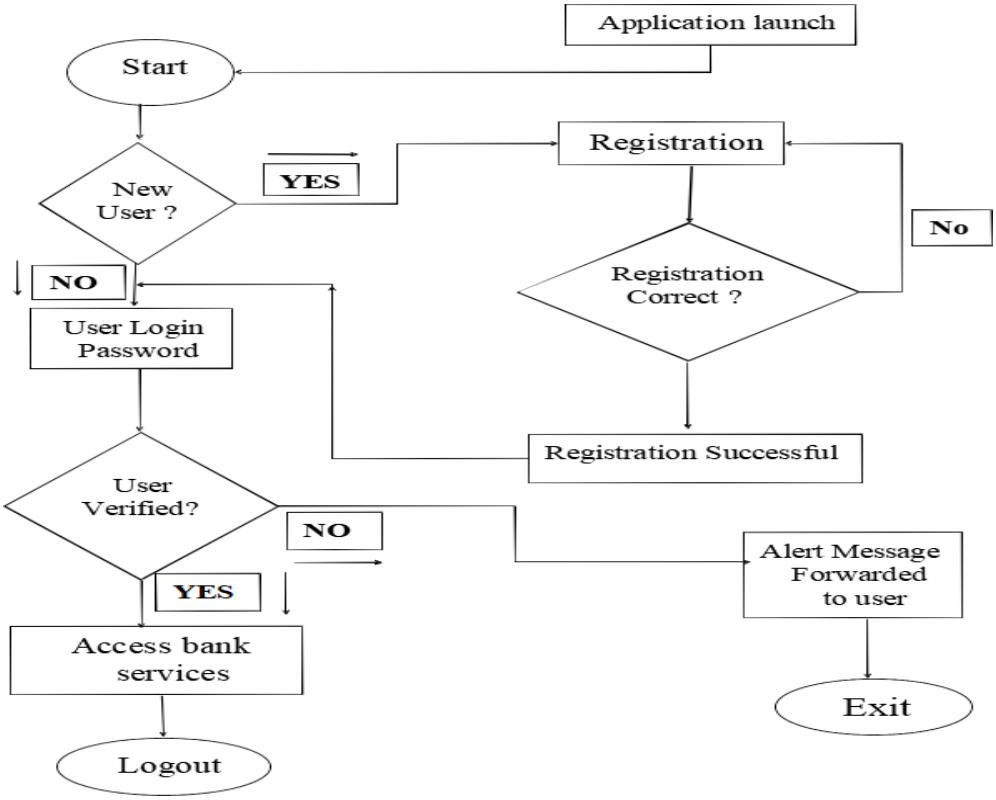

Figure 2 : Flow Chart of Application Working

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Here given is the flow chart diagram of the given project. And so with the help of which anyone can understand how the whole working of the process is taking place.

3.1 Features

Thus, some of the features of the Banking application are listed here :

- Registration Page
- Login
- Homepage
- Money Transaction

3.1.1 Registration Page

The first page of the application will be registration page where they need to fill up all the necessary information asked such as Account holder name, mobile number, account number, branch , address etc. .

Figure 3: Registration Page

3.1.2 Login Page

After the filling the registration form, the user will get unique ID through which the user can login onto the application to do so. Also the user will have to set their own password, So that the couldn't login to their personal things.

Figure 4: Login Page

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3.1.3 Homepage

Homepage is the final for-front page where the client could see all its legal information related too their bank account such as Account detail, statement record, money transaction summary etc. . Thus, this page is home-front to see all the information.

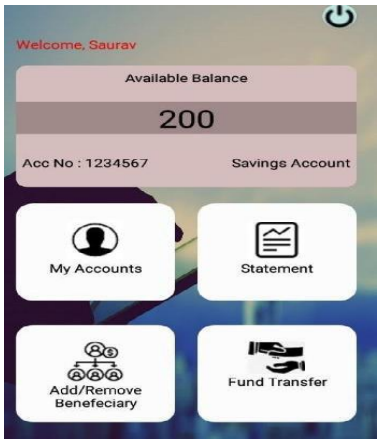

Figure 5 : Account Homepage

3.1.4 Money Transaction Page

This page is design to transfer their money through all means the bank provide NEFT, RTGS, IMPS etc. That is, through all this means you can easily transfer their money by entering the essential information the technique wants.

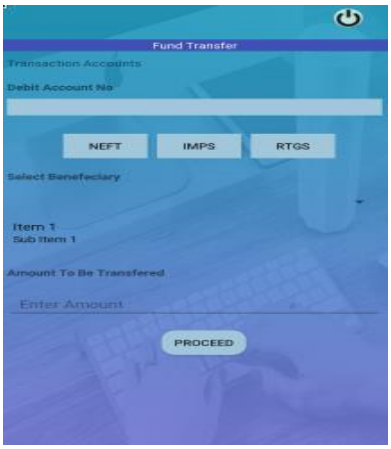

Figure 6 : Transaction Page

IV. SECURITY

Customers want to be sure that their data, and most of all money,is safe and sound when using mobile applications. For banks,the issues of mobile security are equally important. Even if data leakage or money loss is caused by our customer's own fault, the reputation of a bank can be irreparably damaged. Then, how to protect the data as well as money of the customer ? In the project we have taken necessary step or idea to save our customers money and data such as OTP features, email validation and Hashcode Encryption technique. These three features is enough for this project as the data is stored on the system only i.e it is not on the server.

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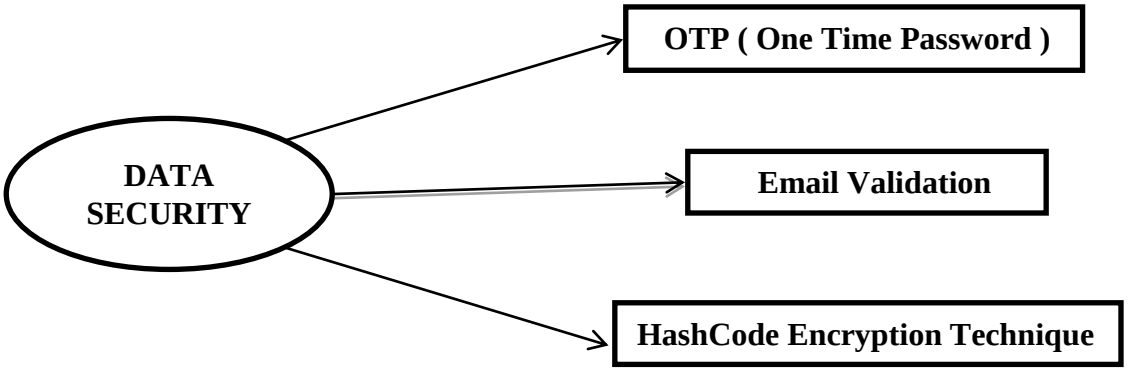

V.CONCLUSION

This project will turn out to be a valuable experience for the person working over Android App development. The theory of how the development should be carried out and the things that can go wrong in the development process were well experienced. And for the user, the project is very good as the full management of banking system is shown in the project from its features to its user's data management and later they can move onto theserver.

In the project, banking application is dealt with security as the data is very well managed and unauthorized access won't be possible. And talking about the bank, the world is now moving towards digitalization phase and every bank wants to reach as maximum as they can to people and it can be done by placing their service in the form application in the hands of people through hardware devices or through online websites. By doing this, they can increase their customer, which will result them in economical growth of their company and would give their customers a good relaxation to do their things from where theyare.

VI.FUTURE SCOPE

The project would provide different ideas to the individual working on it and using it. As new technology are emerging day by day in the world such as retina scan or fingerprint scan, can be further used for the security purposes to login in to their profile account in the project or any other features if needed. And with such types of technology in hand, the bank may not face much problem for security of their customers money. Atthe same time the user will also be in belief of having it on their own as it saves their man-power as well astime.

The use of object-oriented programming in the project, makes us to have changes in the application whenever we want. OOPs concept is used as it is user friendly, and the coder can do whatever in the future for the benefits of their user and on the basis of the recommendation coming from them.

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