A Techinical project Report on

GROCERY ANDROID APP USING KOTLIN IN ANDROID STUDIO

SUBMITTED BY

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UNDER

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ABSTRACTION

There has been an extraordinary growth all around the world regarding android applications. People from every age group are using an android application for some reason or the other. Internet and applications have become a huge thing now. Companies have realized its potential and that it can reach the concerned consumers of any business. One of the primary reasons of people turning towards technology is that it makes their lives easier. One of the areas of real potential is online grocery shopping. When we talk about shopping, people usually find it tedious to stand in a queue for hours or find their products around a supermarket. In Addition to that the whole world has been affected by the Covid-19 Pandemic which has made it really tough to venture out and get groceries. So, we have come up with an android application for grocery shopping that can n solve all your problems in the current climate. The main objective of this application is to make it interactive and its ease of use. It would make searching, viewing and selection of a product easier. The app has a search feature from where the user can easily search for any item, he/she wants to shop for with ease. The main emphasis lies in providing a user-friendly interface and making sure people stay at home and don't venture out to get their groceries during the pandemic situation.

Key Words: Android Studio, Shopping cart, Android Application, Google IDE

INTRODUCTION

The Internet provides consumers with a new medium of obtaining useful information and for purchasing goods, information and services. The main purpose of online grocery is to create and develop new models, and to optimize the relationships between a grocery company and its customers. Changing from shopping at the supermarket to

online grocery shopping can improve an online grocery retailer's productivity by shortening supply chains, reducing overhead costs, and enabling "just in time" service. Most grocery store chains offer online shopping options with free in-store pickup; a few even offer home delivery for a small fee.

In this study, the developers develop an online grocery system that will minimize all the effort and time of the customer and to minimize roaming around as well. Therefore, it allows administrator to track the order of the customer so that they can prepare for it and deliver if needed. Furthermore, in this study, the developer shall create the system that is fully computerized, user-friendly, time effective and wellorganized.

The researchers gather data on Savemore, the manager told us that their problem is regarding on the ordering of their product. Because when their customer made a transaction to order a product's the customer must wait their orders, wherein it takes a lot of time and effort. This online grocery shopping system made in order for the consumer of Savemore, to lessen their workloads and to make their grocery shopping easier compare to going to physical grocery store.

Current State Of The Technology

People want to go grocery shopping because it's a stress reliever for them. But sometimes, it'sa hassle to go shopping and to roam around at the supermarket and look for the product that they will purchase. So with the use of this technology, it will open the doors to improved customer services through Customer Relationship Management, by offering customers products that is line on their needs, discounts and recommended products based on their purchasing patterns. The technology and availability of the Internet resulted in a new generation of opportunities for e-business ideas.

Online grocery shopping is one example of an e-business idea. Online grocery shopping is not only about technology and making sales, nor is it of interest only to industries and businesses, but it is also about transforming the economy, within and across geographic areas, and changing old markets and creating new ones.

Objectives

The objective of this study is to help the consumer of Savemore to make their ordering more convenient and easier. For the customer,it can minimize the workload and effort of

roaming around the grocery store. They can search the grocery items that they're looking for.

Generel Objectives

The objective of this system is to save time and effort for the consumer. Save time and effort in terms of driving a car or commuting on a jeepney. In online grocery shopping you can just sit down relax and search for the product while in physical market you have to stand in line at the checkout counter and wait to load all your groceries packed. The proponents proposed an online grocery shopping system to lessen difficulty to the customer.

Specific Objectives

1. To develop an Grocery android application.
2. To make the transaction easier and faster.
3. The branch manager can see all the orders to be process
4. To display all the updated information
5. Customers will choose their products and the corresponding grocery items will automatically load into their shopping cart.

Scope

1. The system can automatically locate or provide the nearest branch of Savemore through the customer's address.
2. The customer can pay through credit card and Cash on Delivery.
3. Customer can also choose pick-up or delivery
4. The customer can easily search for the products and can add immediately to her/his shopping cart.
5. The system can print the receipt of the customer's order
6. The system has email validation through gmail.
7. Customer can see the order details and the actions done to her/his orders.

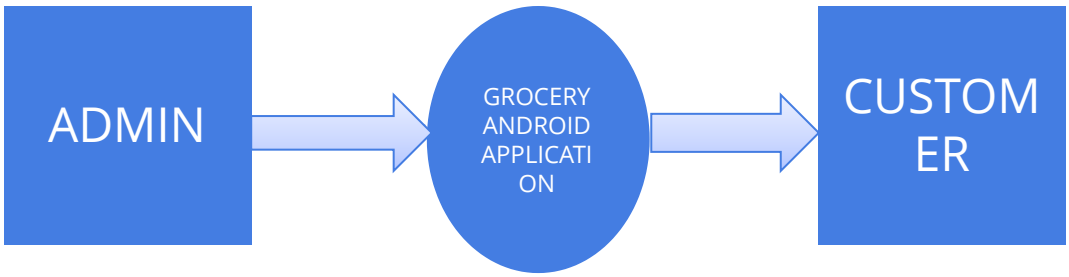
8. System has its inventory report and sales report.
9. The customer can prin her/his own receipt.

Limitations

1. It can't accept shopping transaction below 500.00
2. System can only cater within Negros Occidental
3. The system will be the one to locate the nearest branch.
4. The customer can't choose her desire branch
5. The system can't locate the radius of the address on how far the delivery transaction.

SYSTEM ARCHITECTURE

The Data Flow Diagram of the application has been shown in figure 1. Basically, a connection is estabilised between the user and the shopping cart.



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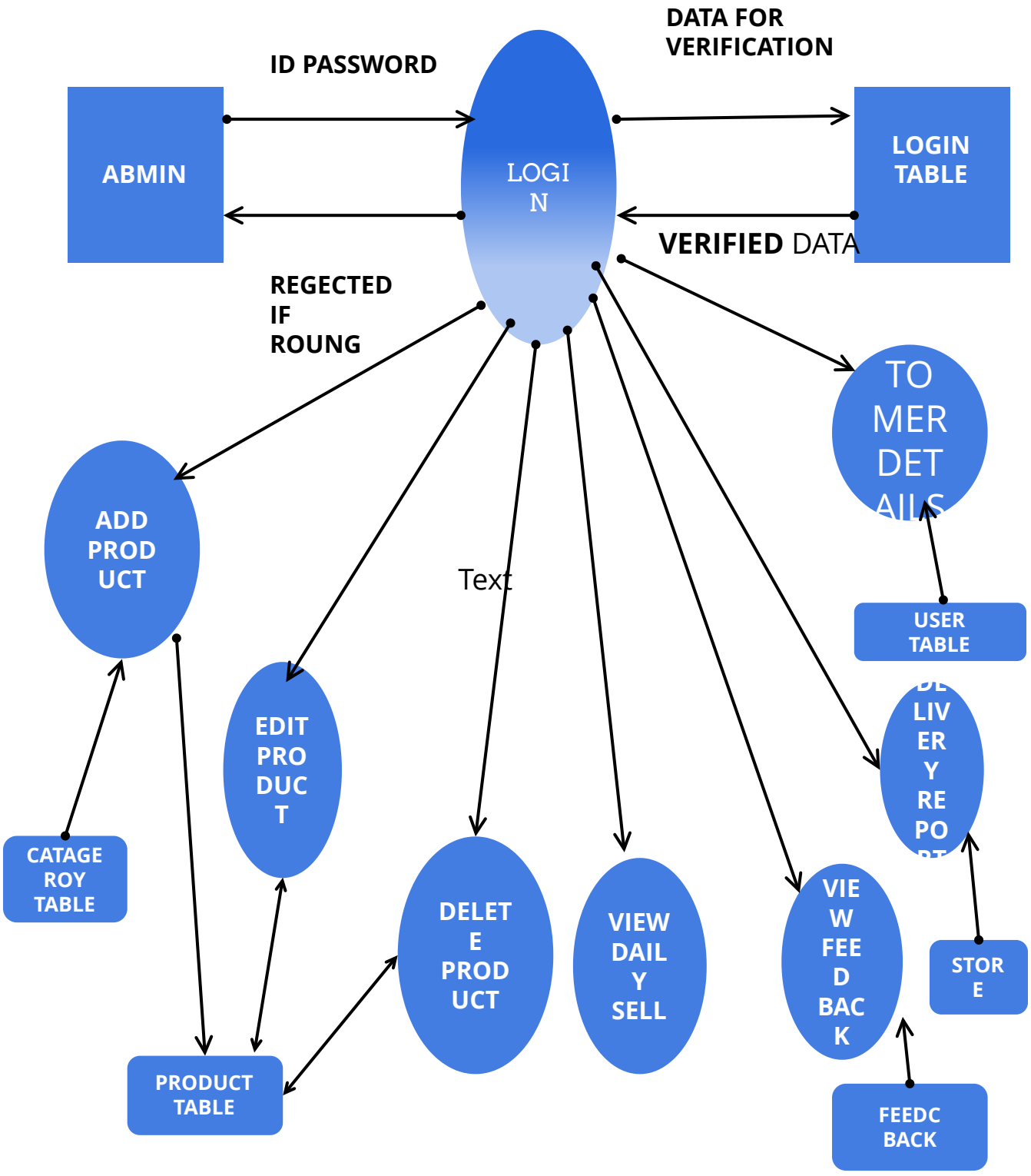

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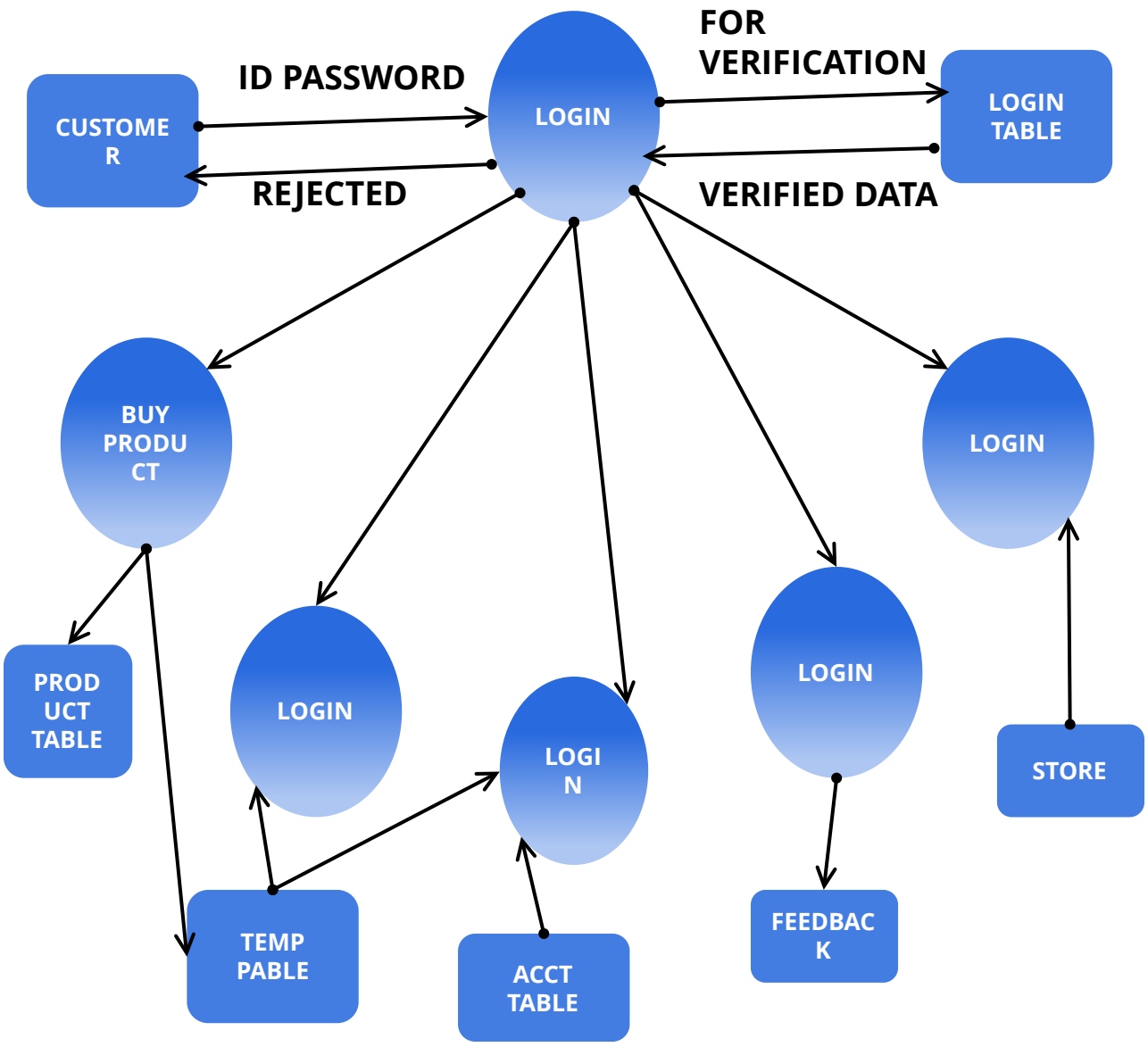
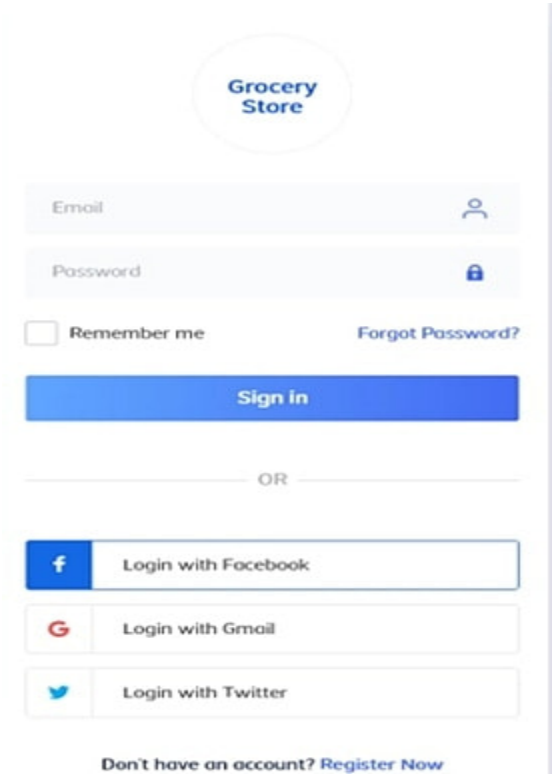


DFD LEVEL 1 CUSTOMER

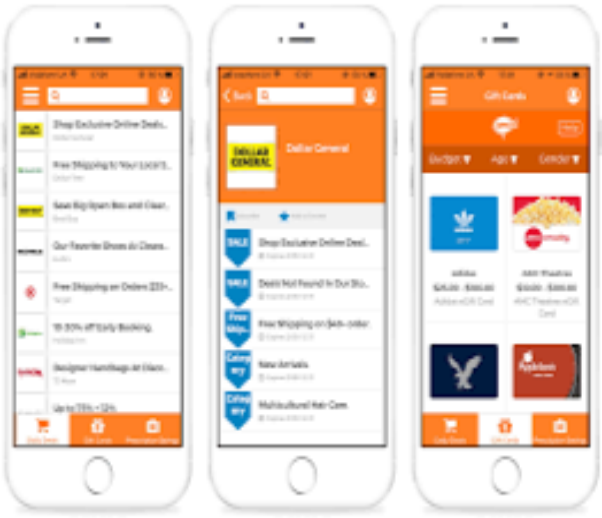
DESIGN

The design of the application is discussed below. The application is coded in Java and will run on all android devices. The app has different features each having a specific purpose.

The first image that you shall see is the home page of the application in figure. It is also the login page for the app. In order to use it the user first has to login with a valid phone number and password. For a new user they first need to sign up. Only after signing up can, they be able to login to the app and use it.



Sign up/login In page



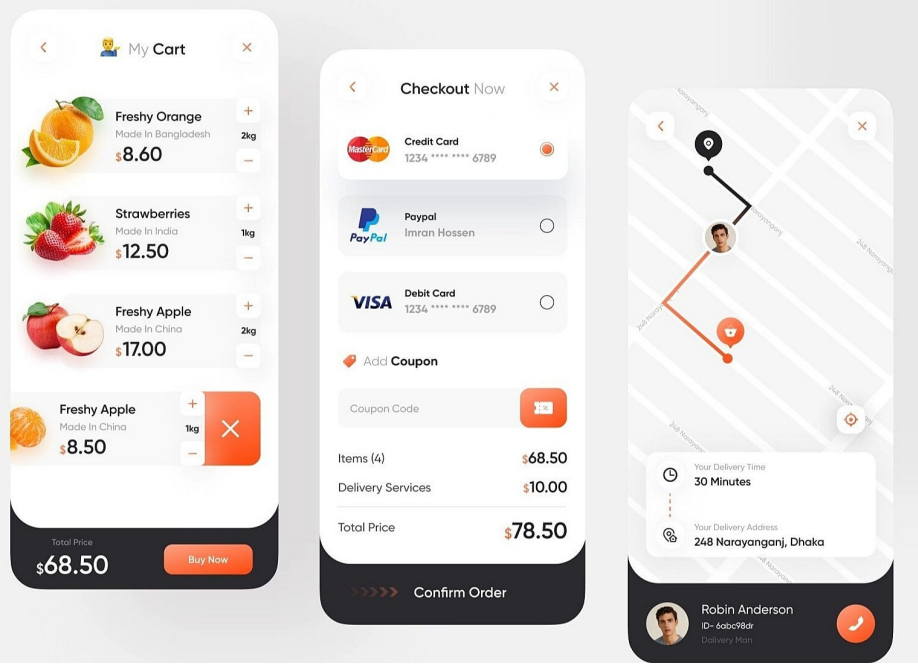
Browsing area

In the above Figure we can see the page after we login or signup. Right from the Home tab to My Cart we have all the features. The last option saying LogOut logs you out from the app if you wish to. The next time you use the app you will have to login again. After this the user is free to browse through all the products and choose the one needed. This application has a host of products ranging from fruits to vegetables. One more exciting thing the user can find here is the category of Offers. In this category all the products having offers and discounts are displayed. So, in this way the customer can save a bit of money too. The next figure shows us the layout of the first page of the application. This helps the user to locate items easily from the menu. As you go down you can see the Category. In this section all the grocery products have been categorized. For example fruits, vegetables, dairy products etc. This makes the user easier to search for items than manually searching them. After that the next tab is New Products. In this section all the new products that have been introduced in the market are displayed. With new brands and products emerging every other day it is important for us to keep them in this section and not with the regular brands and products. Now followed by that is Popular Products. This sections basically has items which have been bought the most or the ones which are in demand. These also are those which might get sold out the quickest. The android app consists of a text View onto which the tag number is loaded; a button which is used to add the items to the list and a List View which contains the items that the user purchased.

CART

IMPLEMENTATION

The application consists of various activities aiding in Navigation and product scanning. Each activity can be understood as a single page in the app. These activities are Java classes. The layout of a screen is described in the activity called XML file. The JAVA file contains the main code that is written for the working of the app. It contains the UUID (Universally Unique Identifier) that is used to connect the smart cart with the app and the UID (Unique Identification Number) of the items that are scanned. Text View is used to display texts. In order to access the map, an image View is first placed into the layout and the url is referenced through the Picasso extension available for android studio.



RESULTS

The application was tested on emulator and smartphones. In both cases, the app performed efficiently with no errors. The application did not crash at any point in time. The app was able to control the smart shopping cart without any delays. Based on the commands received from the smartphone, the shopping cart was able to move in the preferred directions. While examining the working of the app, it was found that there is 100% success rate in each direction of the motion control.

SORTWARE

The Software Package is Developed Using Kotlin and Android Studio basic Sql commands used to store the Database.
operating System:Windows 11
Software:Kotlin and Java
Emulator:Pixel 4(Api 30)

HARDWARE

RAM:8GB RAM
ROM:20GB

CONCLUSION

As they say it is imperative that we move along with time, move along with the trend and try to make the world a better and efficient place to live in. As the years go by there will be many more grocery applications and the real grocery stores might eventually shut down. If you look at it these applications save a lot of time, they save a lot of energy and they do even save some money. This is the future of Online Shopping. Through this research we have been able to address a few issues of shopping grocery. The most important of them all is staying home and safe instead of risking your lives by going out to buy your groceries in this pandemic. Our dear Government has appealed to us to stay home and this is the least we can do to save our lives as well as others. Our aim was to develop an user friendly application to order groceries and we have been successful in it.

FUTURE WORK

The following features could be implemented in our future works for this application. We intend to make the User interface even simpler for the elder generation to use. We will try to promote this application as it could reach more and more people. We also intend on taking personalized orders etc for certain users

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