

OOP Project Report

HOTEL MANAGEMENT SYSTEM

BSCS 9B

~SEECSIANS

MEMBERS: Abdullah Ramzan, Khayyam Ahmad, Anar gul Nazari

Instructor: Dr. Pakeeza Akram

ABSTRACT

This proposal is made to define the functional working as well as the programming concepts applied and used to build this project. The real motivation to develop such a project is to make something different from the class fellows, according to the current need of society and also to learn new skills of android development. This project also uses Firebase (RealTime Database + Storage + Authentication). The development process is carried out in android studio using Java language. The experience gain through this project development is very high as the project development process involves sharing the queries and difficulties with the programmers using social platforms such as StackOverFlow and Groups in Facebook. All these components are fully describe in this report as report follows the following points:

- Project Overview
- Difficulties and queries
- Experience gained
- Future Implementations

This is my Copyright Project no such UI design is available on internet for food app upto my knowledge.

Project Overview

The HMS Project is an on-demand Application consisting of two apps. One is for Manager/Admin use and other is for Customer Use. The beauty of this application is that this is not too big and also not too small. As it is designed in such a way while taking that the whole app consist of small number of Activities as the whole work or process is carried out through fragments and dialog fragments. The components of the Customer Application are as follows:

App-Icon

The Icon used for this application is designed in such a way that it contains three different colors which are pink, blue and grey black and white, these three colors are the only colors used inside the project for the development of two apps. As, the central theme of Manger app is blue and Customer App is Red.

Splash Screen:

The application starts from a splash screen holding an App-Icon in centre of the layout resource file and this file contains NoActionBar Theme. This screen pauses for 5000 milliseconds and then intent to next activity.

Intro-Slides

The splash screen after 5 seconds intent to Intro Activity. This activity contains the intro slides like a professional app to describe its usage to its first user and also once it got displayed then its values got saved using shared Preferences due to which it displayed to its first user only next time when the user opens the application it got Customer login Activity. The dependency and method to display such slides and make our app to look like pro app is given through the GitHub through such Link:

<https://github.com/AppIntro/AppIntro>

Customer Login Activity

This activity is also looks like a pro as the two additional layouts are used which are TextInputLayout, the use of such layouts give the feature of showing error to the customer if his/her email is in use or not also if he/she put the correct password or email. As every professional app or website has its own password utils that fulfill the password requirements in the similar way in this activity the password getting layout is designed in such a way that it uses regex (Regular Expression) this regex is especially made by me to ensure the password strength as the password must contain at least a capital letter, a small letter, a special character, or numbers otherwise TextInputLayout shows the error that the password does not meet the requirements. Also in case if the user does not put any password it also shows error that the above entities are empty filled them. There also exist a link in red color showing that: Do not have any account? Once the user clicked on this link if he/she does not contain any account a next activity is open named as Register Customer Activity.

Register Customer Activity

The Register customer activity contains the same three TextInputLayouts one is for Name other is email address and the third one is password (the regex is also applied) after that a circular image button is shown to put the customer's profile pic from his/her gallery. After that there is a button named as register. On clicking such buttons if all the entities are correctly filled a

loading bar opens showing that please wait while we are registering your data. Once the user got authenticated the loading bar dismiss and toast are shown to tell the user that you are registered successfully. As the loading bar dismisses the user automatically intent to Customer login page where after putting the requirements explained above user intent to Customer Lobby activity. The Circular Image used in the Register Activity is given from the GitHub through this link:

<https://github.com/hdodenhof/CircleImageView>

Customer Lobby Activity

This activity is the most difficult activity from the other ones as it contains a navigation drawer with toolbar containing the Hamburger icon which also animates as the drawer open or closes. This activity also contains three fragments and menus embedded with the navigation drawer. The two menus are Share and logout. On clicking share button a pop up got open to share the app link and on clicking logout button the customer got logged out and intent to Customer Login Activity. **The explanation of fragments are as follows:**

1. Menu Fragment:

This fragment contains the categories of the food menu putted by the manager. This fragment also contains FirebaseUI recyclerview which directly connected to the firebase and a model class is required to populate it (explained below). The design used for recyclerview is a **Staggered Card view Manger** with **horizontal layout view** as shown in the demo video. This recycler view contains the categories of food menu. Once any of the category is clicked it goes to another fragment named as **DisplayItem Fragment** this fragment contains all the items which the manager putted through the firebase. This fragment also contains recyclerview with a **Staggered Card view Manger** with **vertical layout view**. This fragment displays items with their prices on clicking any of the item a dialog fragment pop up containing two edit texts. One for Quantity and the other is for special Instructions. As Customer clicked on ok button the item automatically added to the cart.

2. Cart Fragment:

This fragment also contains a recycler view and a button. Here the recyclerview is same as above describe and connected to firebase through cart child node. On click any of the item of recyclerview the total current bill shows in the form of a toast and on long click a menu is open containing an item named as remove on clicking such item the item will remove from the fragment. And the total amount upgraded as well. There also exist a button in cart fragment, on clicking such button a delivery order fragment (dialog fragment) opens which also contain edit texts to obtain shipment (delivery) details. Our prime was to put an auto place fragment to get the latitude and longitude of the delivery place. But query happens here which is explained in the query section.

3. Profile Fragment:

This fragment contains the profile of the customer being used, customer's profile picture, its email id and also its name. This all data saved on the firebase on profile child node.

Now, **the components of the Manger Application are as follows:**

The HMS (ADMIN) contains starting components same as that of Customer Application (Splash Screen, Intro-Slides) after these two components the Manger will login to the Manager Login activity that contains three buttons each displays separate activities these are:

Add New Category

In this activity, the Manager is providing the facility of adding a new Category to preview in the Customer Menu. Here, the Manger has to add a pic for the new category and also to provide its Name. There is also a button on clicking of which a loading bar pops up. All such information is currently upgraded on the firebase database console and lively got upgraded on the Customer Menu. All these nodes and values are displayed in Firebase portion as follows:

hotelmanagmentapplicatio-64d85



1. Add New Item Activity

In this activity, The Manger has to provide the name price and the pic of the item to be uploaded in the menu and the firebase console got upgraded as shown below. The beauty of this activity lies on an item named as choose category the Manger has to choose the category from the spinner and item got placed as a sub category in the selected category. Also as the manger added a new category that category updated automatically into the spinner in the item

activity this was the most difficult work and magic of the firebase and my coding. Firebase node is as follows:



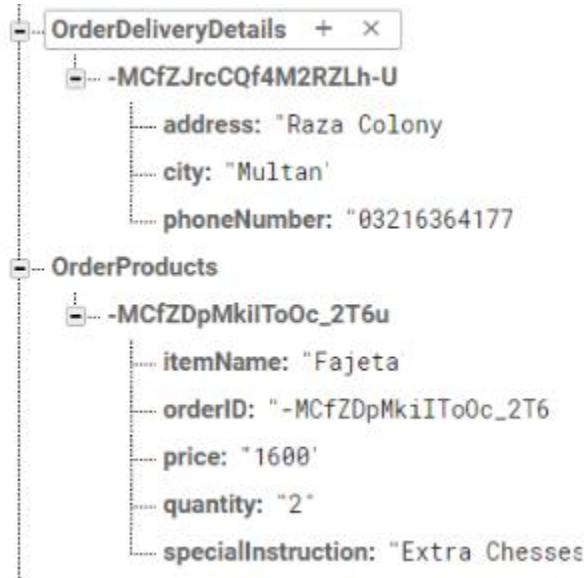
2. Order Activity:

This activity also contains the FirebaseUI recyclerview. On the very start, as the customer send the order the shipment details of that order are firstly preview on this Orders Activity with a button containing text Show Products. Once the Manger, clicked on such button it will intent to other activity named as Show Products Activity.

- **Show Products Activity:**

This activity contains the products relevant to that order and these items are also displayed in a recyclerview as it contains more than one item. The Firebase database node for this activity is

as follows:



Difficulties and Queries:

As, this is my first project on android studio. I met a lot of difficulties while working on this project these are as follows:

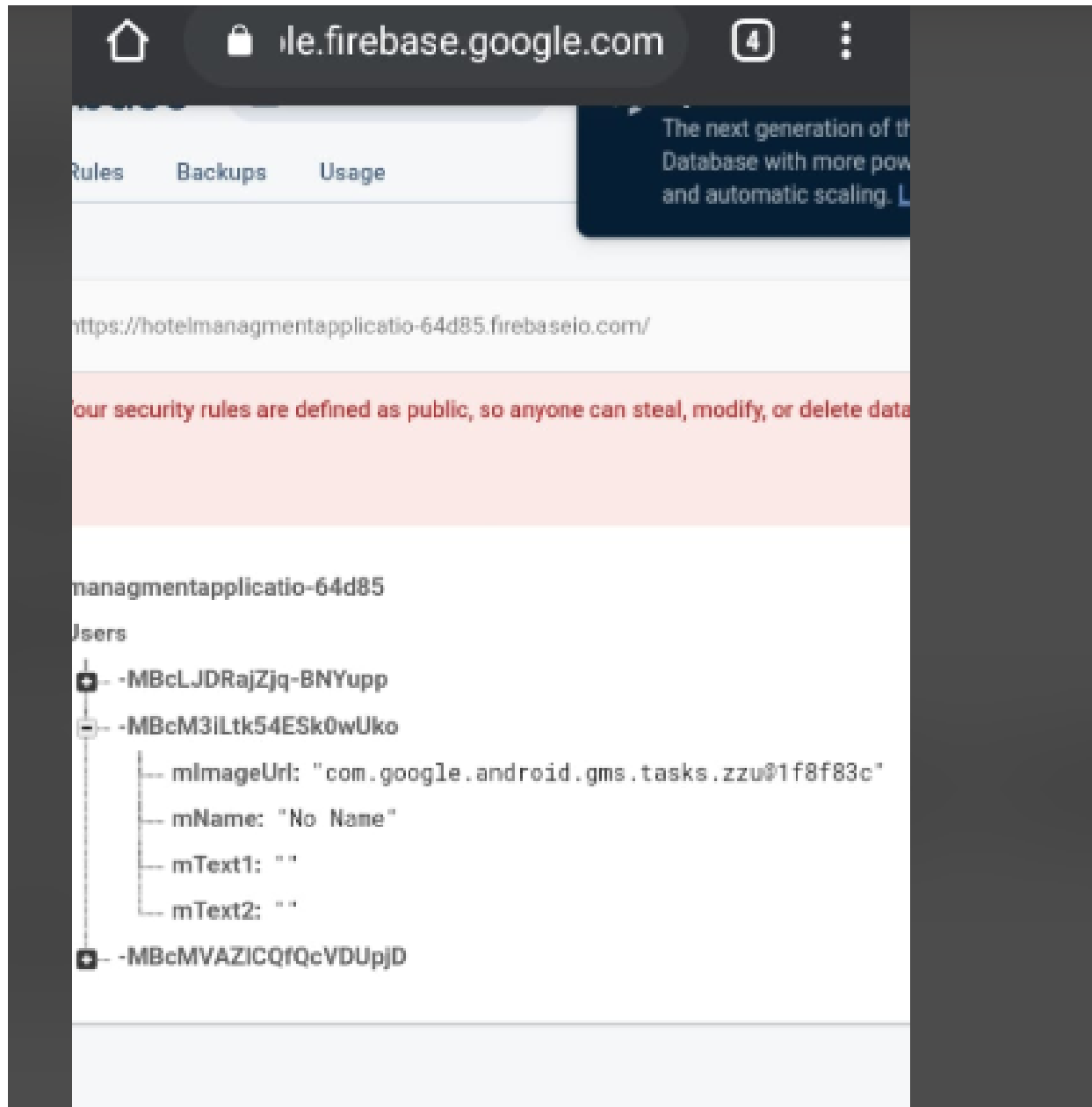
1. Working with Fragments:

As, working with fragments is not as same as that of working with Activities and Moreover, I not only to use buttons, textview or EditText I also need to use recyclernview in fragments like in menu and cart fragments. Therefore, I worked day and night to find the solution for this query and finally after two days I got the solution in the form of firebase UI.


2. Working with Firebase Storage:

Working with a firebase was my new experience when I wrote the proposal for the project I donot know what is Firebase Database, but I was fully determined to learn something and I worked day and night to make my dream a truth. And Finally I am with a project using firebase database. While working with firebase project I got stuck while using firebase database storage as the getdownloadUrl() got disabled in the new versions after 11.8.0 of firebase. And to overcome this difficult I also searched day and night to found the solution. During this effort a moment came when I have a thought to quit and make a simple app but I was not mentally satisfy to do so. So, I prayed to ALLAH and continue searching for the same query and met with the professionals via StackOverFlow and Facebook groups here is the images evidence of my efforts:

ERROR:




Help:


**Abdullah Ramzan**July 7 at 6:26 PM · 🌐...


Hello guys, I am getting this unusual image url while retriving an image from firebase.... Can any help me on such regards:


Edit

8 Comments

 Like


 Comment

 Share

**Himanshu Chaudhary**

Looks like a classic case of persisting an object instead of the desired string property.

Like · Reply · 1w


**Shuvendu Dhal**

Use this bro...to get the image download URL from the image reference.....then store it there, , , u can use the download link anywhere....

..


```
storageRef.child("users/me/profile.p  
ng") getDownloadUrl().addOnSucce
```

After getting the solution I also shared my solution with others as:

**Abdullah Ramzan**★ Rising Star · July 8 at 12:04 AM · 🌐...

Hello guys, Today I posted a problem regarding getting a download url of an image which was an unusual error.....And I search for the solution of this problem and finally I got the Solution and I want to share it with you for anyone who is facing the same issue; here is the link:

<https://stackoverflow.com/questions/52123204/when-ever-i-use-firebase-method-to-retrieve-download-url-from-firebase-storage>

 1

3. Working with FirebaseUI Recyclerview:

As, I have explained earlier that I found the solution to use firebase in fragments, but I also got many errors while working with it as I got stuck in a sense that as I shut off the screen and opens it again a new empty item updated in the recyclerview and on the use of more than one person the app got crashed and finally I got the solution after two days to use the recyclerview instead of onStart() method I have to use it in onCreateview() and I found this solution on my own.

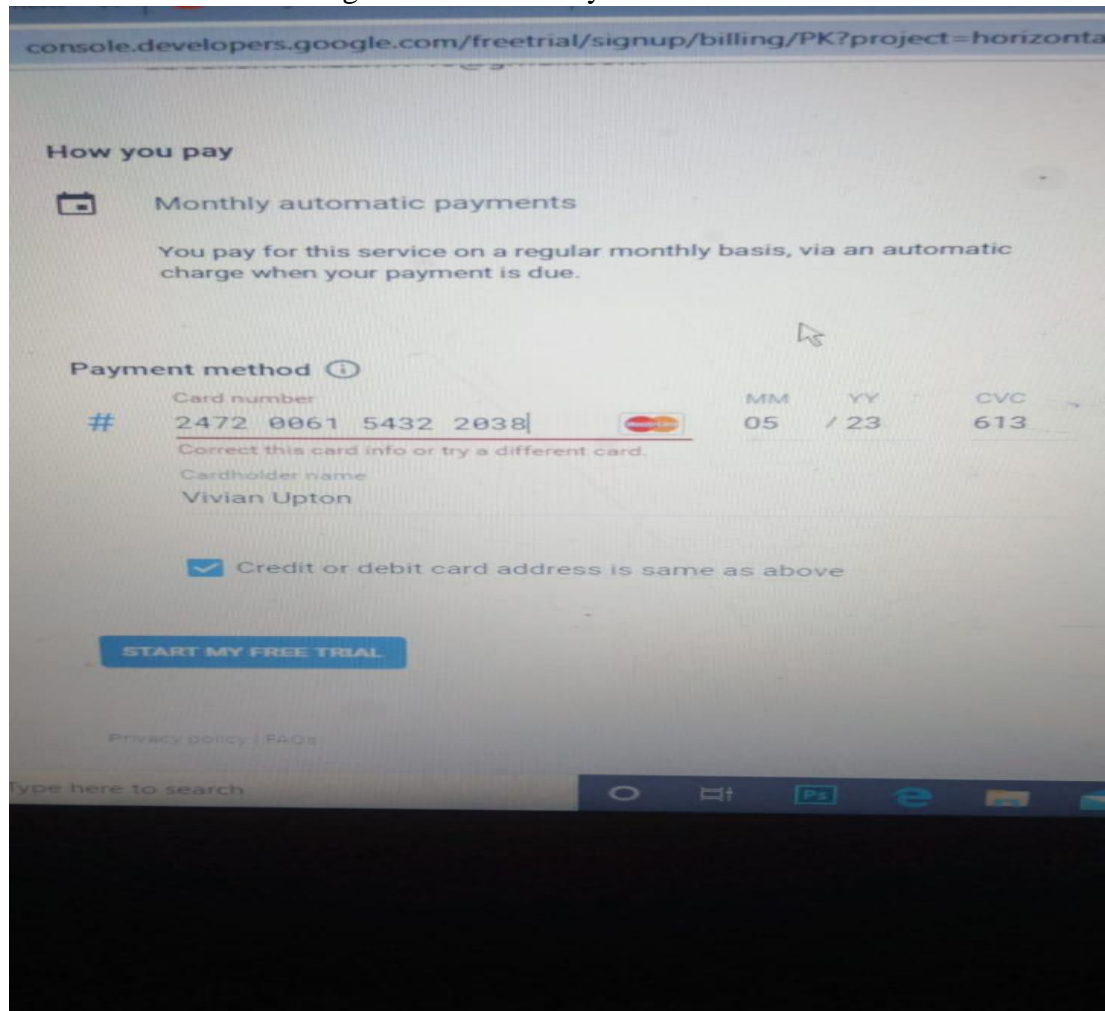
4. App got Crashed 3 times:

As mentioned in the heading, my application got crashed three times and I have to made the whole app from zero, but I learnt a lot as on the first time the error was of minSdk selection (I got the solution later) and on the next time the app crashed due to some error unknown to me and I have to made it from zero. For the 3rd time, while working for google map API key I deleted my firebase key accidently and I also have to make a new app to register my app for the firebase.

5. Google Map & Places API:

At start my idea was to make such an application that uses google map activity but I could not because I have to enable billing after which I was able to use the google Maps & Places features

I tried for it but could not get the results as my efforts are as below:



Because of this I have to add a delivery details dialog in my app.

Experience Gained

I gained a lot of experience while working on my project. As mentioned above I talked to many professionals and in the end I got the fruit. Moreover, I also get success in a way that I become successful in making the developers of Software house to impress and finally I got the permission of internship after my ESE exams. This was really a tough experience of life but my ALLAH blessed me with a great success.

Future Implementations:

As yet there are many short comes in my apps. So, our future implementations would be to make this app smoother and flexible to use for multiple users. Also we have a mind to implement our own website with our project to make it whole project professional.