# AMBA DIGITAL COMPANY PROJECT REPORT

## TOPIC: COMPREHENSIVE PROJECT DOCUMENTATION

## 

## Project Documentation by:

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## Date: 9/2/22

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# CRASHES THAT ARE IN THE HS APPLICATION

## A crash Occurred at on click of a Dialogue builder

There is a crush on click of the initial dialogue builder that is displayed whenever the user has a balance of less than 500 in his or her account. This error is caused by the java.lang.IndexOutOfBounce exception. The error occurred in the BasicDeposit.java file that is located in the Fragments folder inside the UI folder in the HS Application.

### The following is the Error Message thrown by the compiler:

E/AndroidRuntime: FATAL EXCEPTION: main

Process: com.microfinance.hsmicrofinance, PID: 6496

java.lang.IndexOutOfBoundsException: Index: 1, Size: 1

at java.util.ArrayList.get(ArrayList.java:437)

at com.microfinance.hsmicrofinance.UI.Fragments.BasicDeposit.EDeposit.BasicEDeposit.lambda$onViewCreated$1$com-microfinance-hsmicrofinance-UI-Fragments-BasicDeposit-EDeposit-BasicEDeposit(BasicEDeposit.java:65)

at com.microfinance.hsmicrofinance.UI.Fragments.BasicDeposit.EDeposit.BasicEDeposit$$ExternalSyntheticLambda1.onChanged(Unknown Source:4)

at androidx.lifecycle.LiveData.considerNotify(LiveData.java:133)

at androidx.lifecycle.LiveData.dispatchingValue(LiveData.java:151)

at androidx.lifecycle.LiveData.setValue(LiveData.java:309)

at androidx.lifecycle.MutableLiveData.setValue(MutableLiveData.java:50)

at androidx.lifecycle.LiveData$1.run(LiveData.java:93)

at android.os.Handler.handleCallback(Handler.java:873)

at android.os.Handler.dispatchMessage(Handler.java:99)

at android.os.Looper.loop(Looper.java:193)

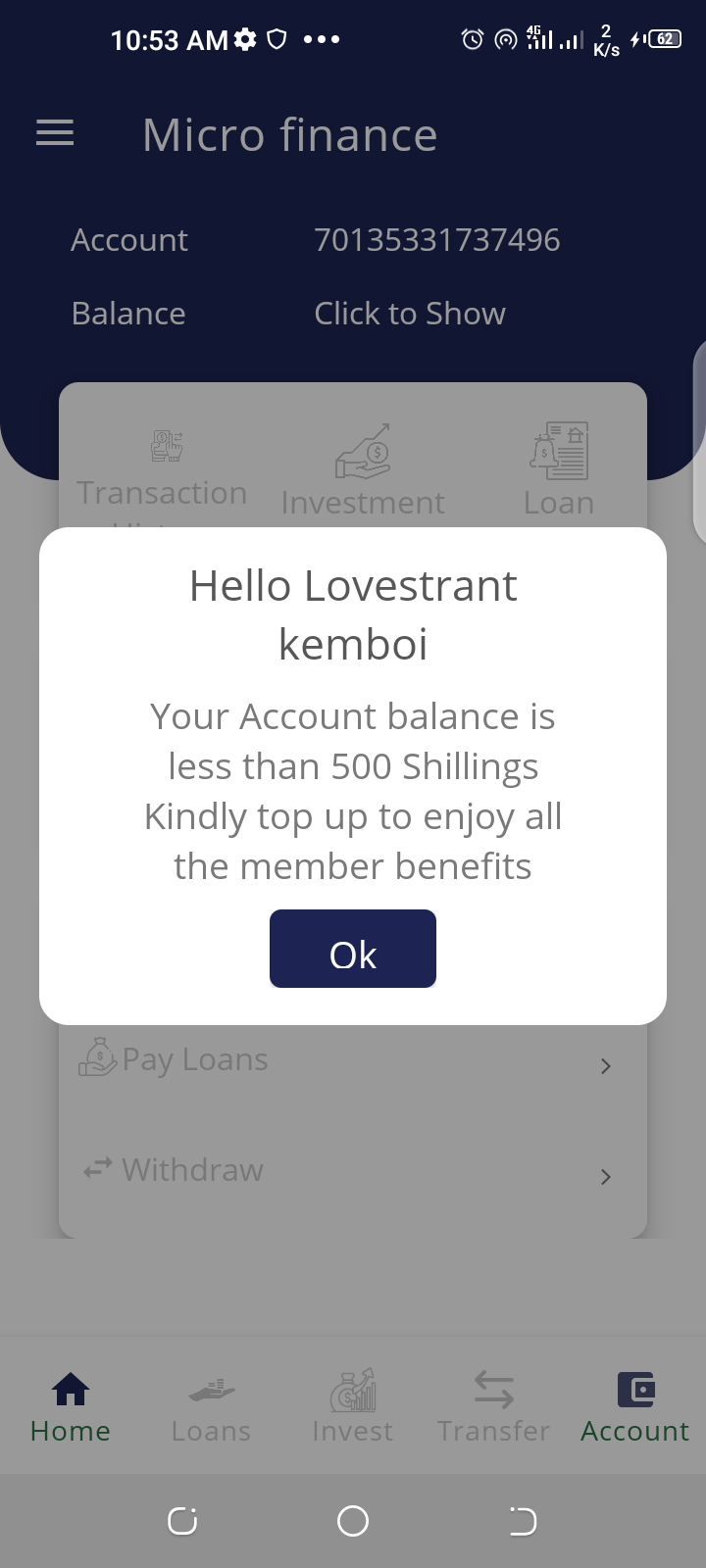
at android.app.ActivityThread.main(ActivityThread.java:6819)

at java.lang.reflect.Method.invoke(Native Method)

at com.android.internal.os.RuntimeInit$MethodAndArgsCaller.run(RuntimeInit.java:497)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:912)

### A screenshot of the same for better understanding:



## A crash on click of the E-Deposit tab:

This crash occurs in the E-deposit tab caused by java.lang.IndexOut of bounds exception. This error occurred in the BasicDeposit.java file line 65 that is located in the Fragments folder in the UI Folder inside the Hs Application project files.

### The following is the error message thrown by the compiler.

E/AndroidRuntime: FATAL EXCEPTION: main

Process: com.microfinance.hsmicrofinance, PID: 6987

java.lang.IndexOutOfBoundsException: Index: 1, Size: 1

at java.util.ArrayList.get(ArrayList.java:437)

at com.microfinance.hsmicrofinance.UI.Fragments.BasicDeposit.EDeposit.BasicEDeposit.lambda$onViewCreated$1$com-microfinance-hsmicrofinance-UI-Fragments-BasicDeposit-EDeposit-BasicEDeposit(BasicEDeposit.java:65)

at com.microfinance.hsmicrofinance.UI.Fragments.BasicDeposit.EDeposit.BasicEDeposit$$ExternalSyntheticLambda1.onChanged(Unknown Source:4)

at androidx.lifecycle.LiveData.considerNotify(LiveData.java:133)

at androidx.lifecycle.LiveData.dispatchingValue(LiveData.java:151)

at androidx.lifecycle.LiveData.setValue(LiveData.java:309)

at androidx.lifecycle.MutableLiveData.setValue(MutableLiveData.java:50)

at androidx.lifecycle.LiveData$1.run(LiveData.java:93)

at android.os.Handler.handleCallback(Handler.java:873)

at android.os.Handler.dispatchMessage(Handler.java:99)

at android.os.Looper.loop(Looper.java:193)

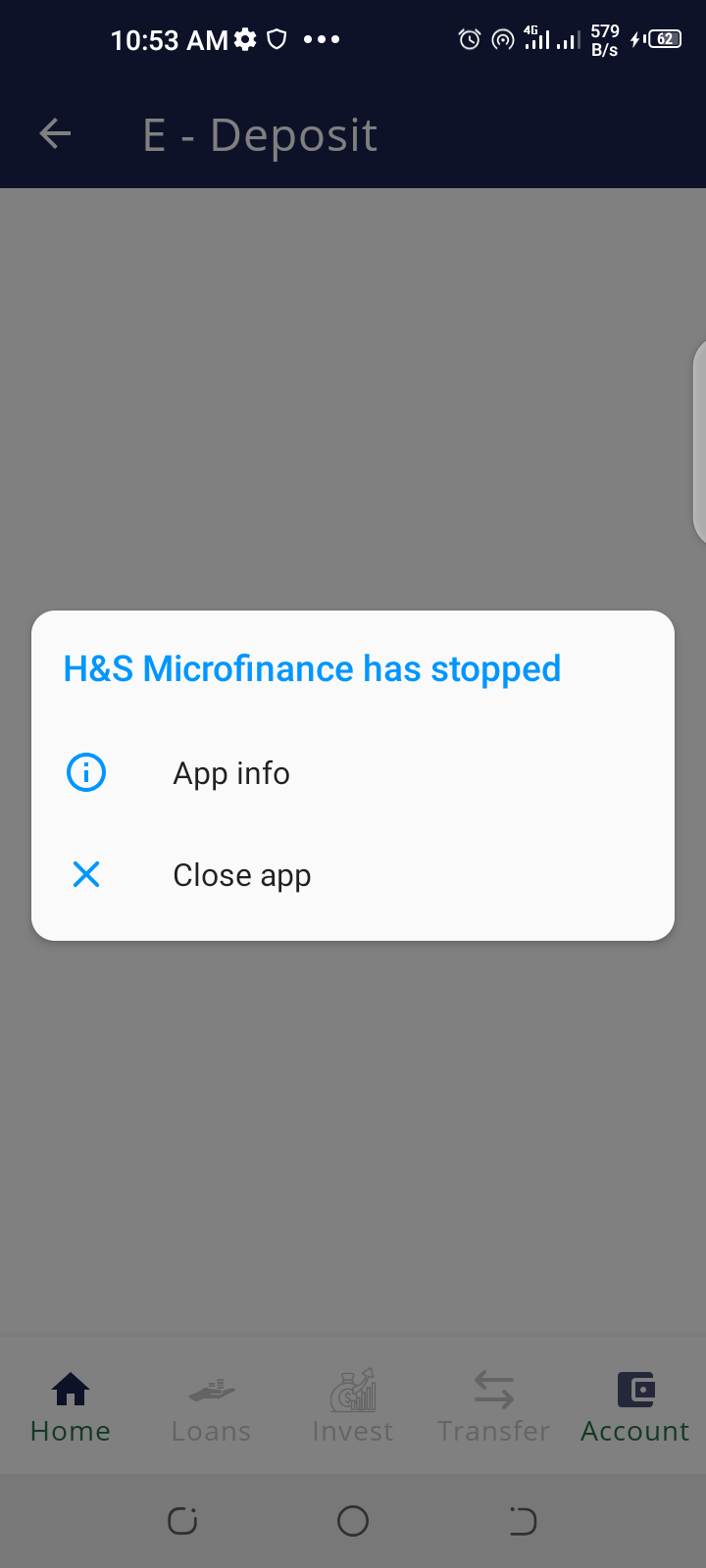
at android.app.ActivityThread.main(ActivityThread.java:6819)

at java.lang.reflect.Method.invoke(Native Method)

at com.android.internal.os.RuntimeInit$MethodAndArgsCaller.run(RuntimeInit.java:497)

at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:912)

### A screenshot of the E-deposit tab after crash has occurred:



## An Error Thrown in the location tab when trying to access google Maps:

The compiler threw this error on click of the location tab in the main menu In the Hs Application. This is due to the Authorization failure of the user. The Application should prompt the user to allow for permission of the location feature access to avoid this error.

#### The following is an error message that was thrown by the compiler:

E/Google Maps Android API: Authorization failure. Please see https://developers.google.com/maps/documentation/android-api/start for how to correctly set up the map.

E/Google Maps Android API: In the Google Developer Console (https://console.developers.google.com)

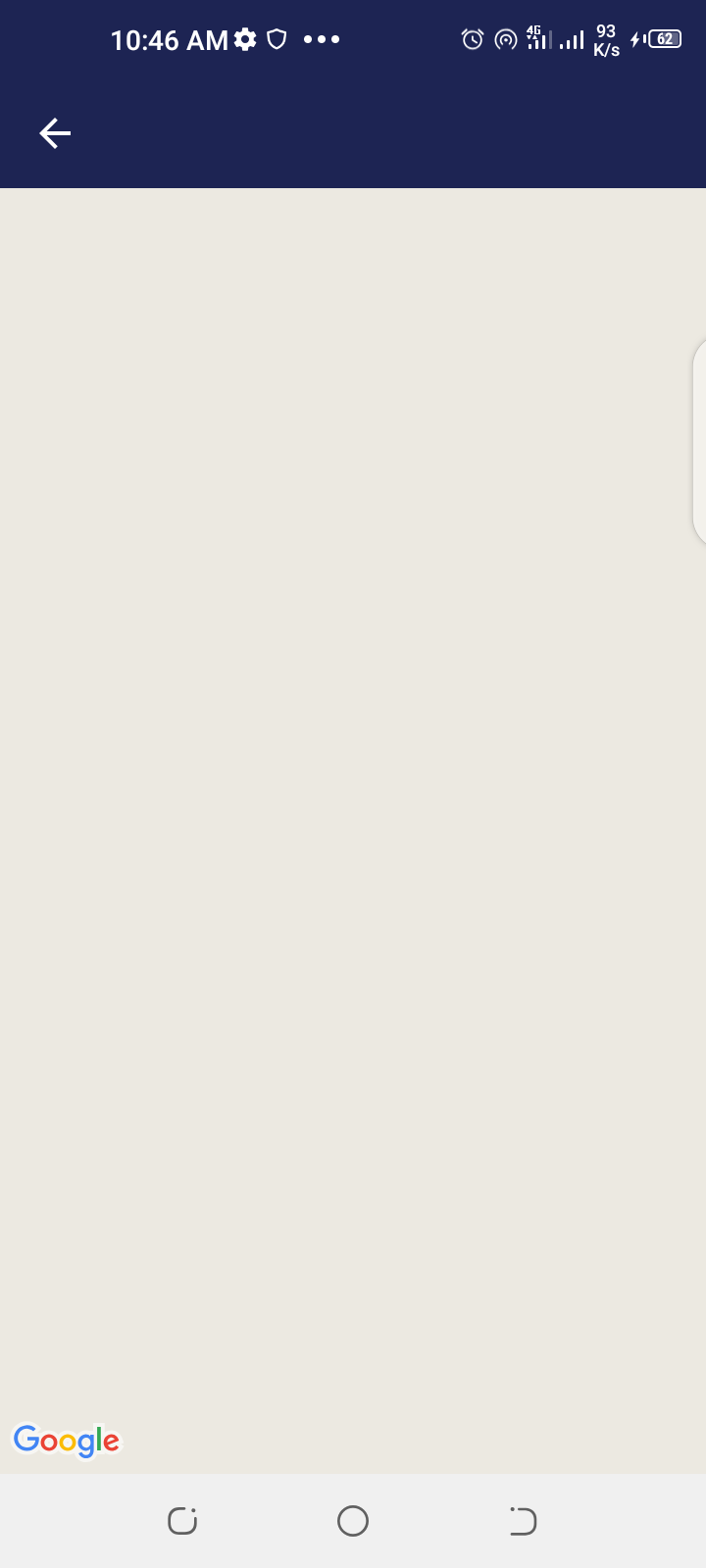
Ensure that the "Google Maps Android API v2" is enabled.

Ensure that the following Android Key exists:

API Key: AIzaSyCWbSo2BenkqymKkL8wmi9M\_qmKrz36iXI

Android Application (<cert\_fingerprint>;<package\_name>): B6:45:9B:3D:43:3F:B9:A9:08:7A:89:3C:65:02:05:21:5B:AB:9B:B4;com.microfinance.hsmicrofinance

#### A screenshot of the maps activity that is not showing the user location.

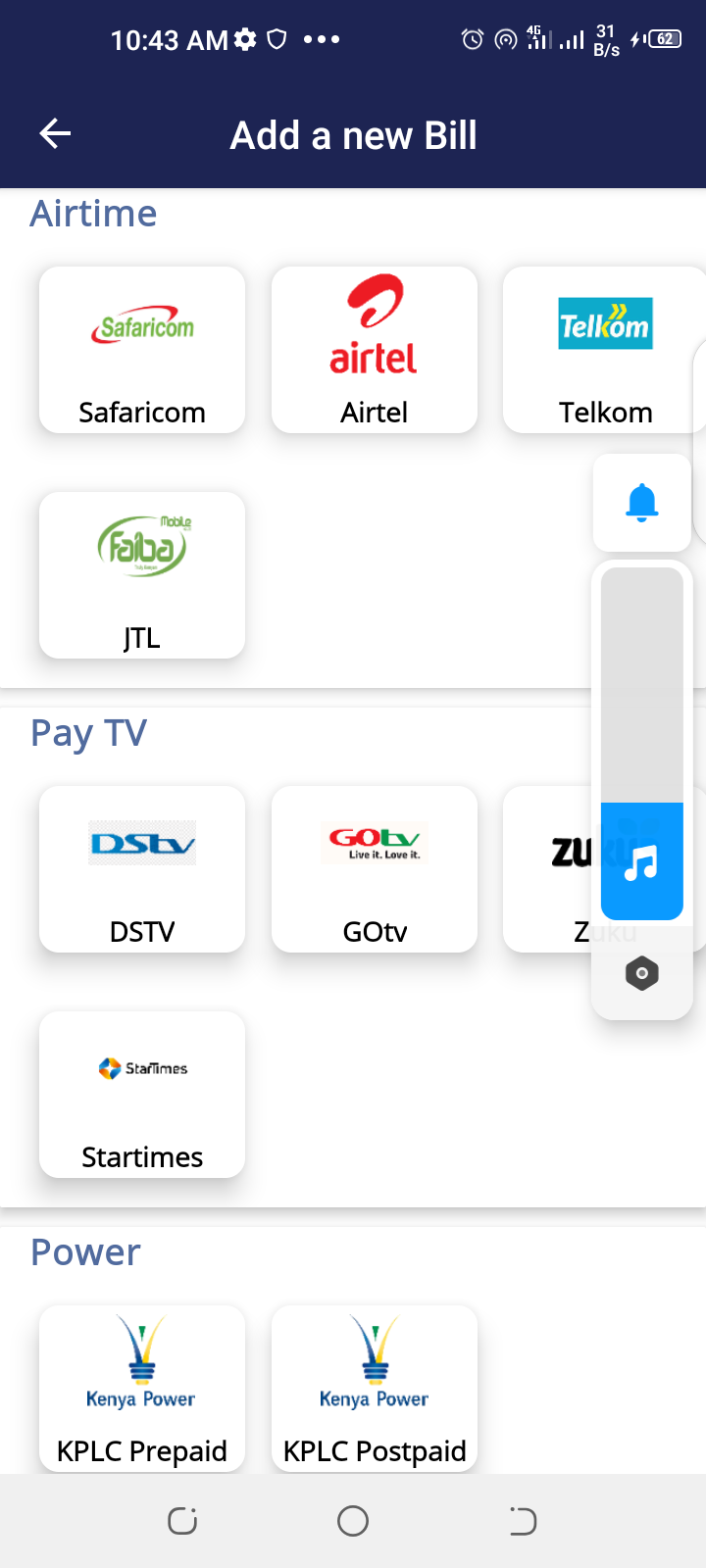


# WHAT IS NOT YET IMPLEMENTED IN THE HS APPLICATION (CORE FEATURES)

## The utility bills are not yet implemented, this includes the following:

* The purchase of airtime to various networks such as Safaricom, Airtel, Telkom, and JTL is not yet implemented.
* The pay Tv functionality is not implemented. Dstv, GoTv, Zuku and StarTime are the functionalities that are yet to be implemented.
* Power payment to KLPC is not yet implemented. This includes the KPLC prepaid and KPLC postpaid.
* Water payment is not yet implemented, Nairobi water for this case to be specific.

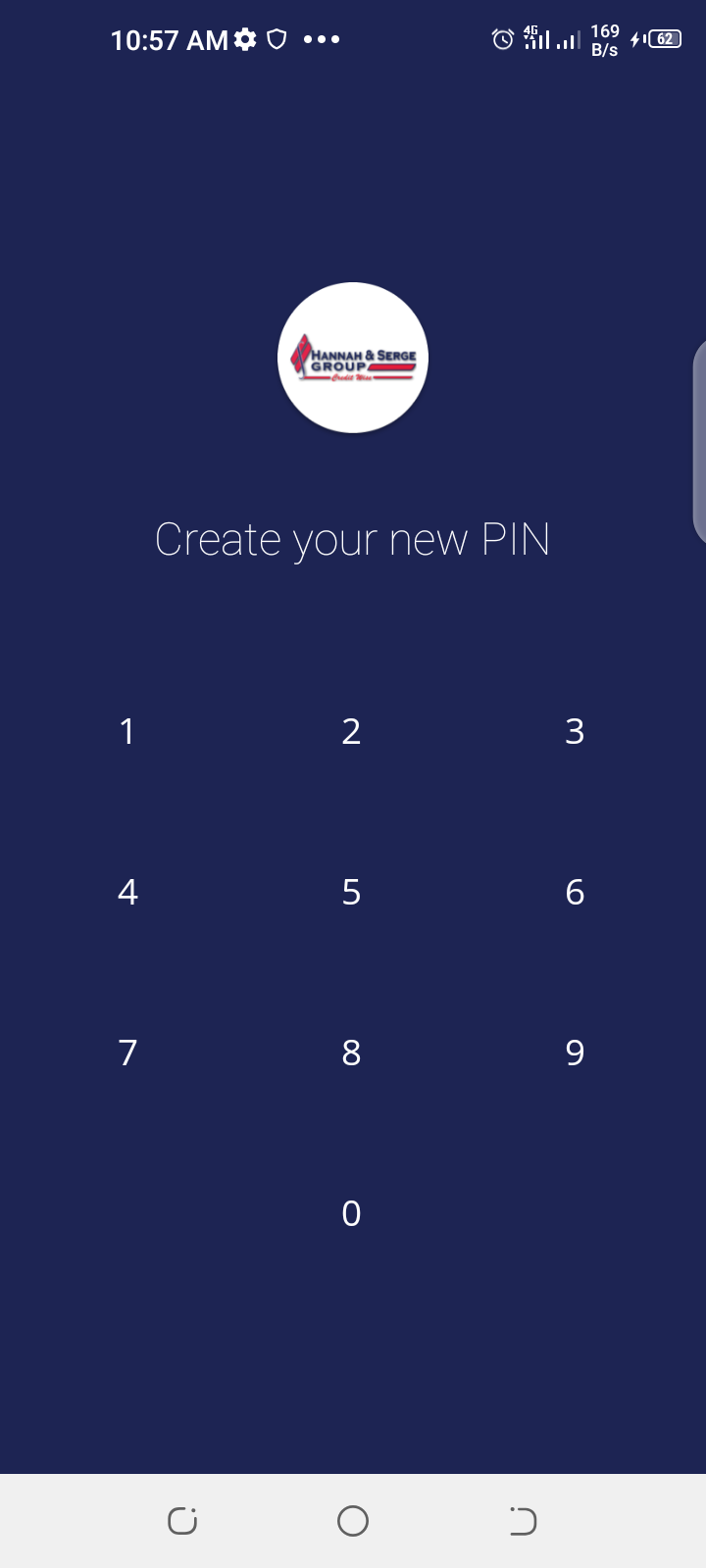
### The following screenshot will illustrate more on this utility Bills:

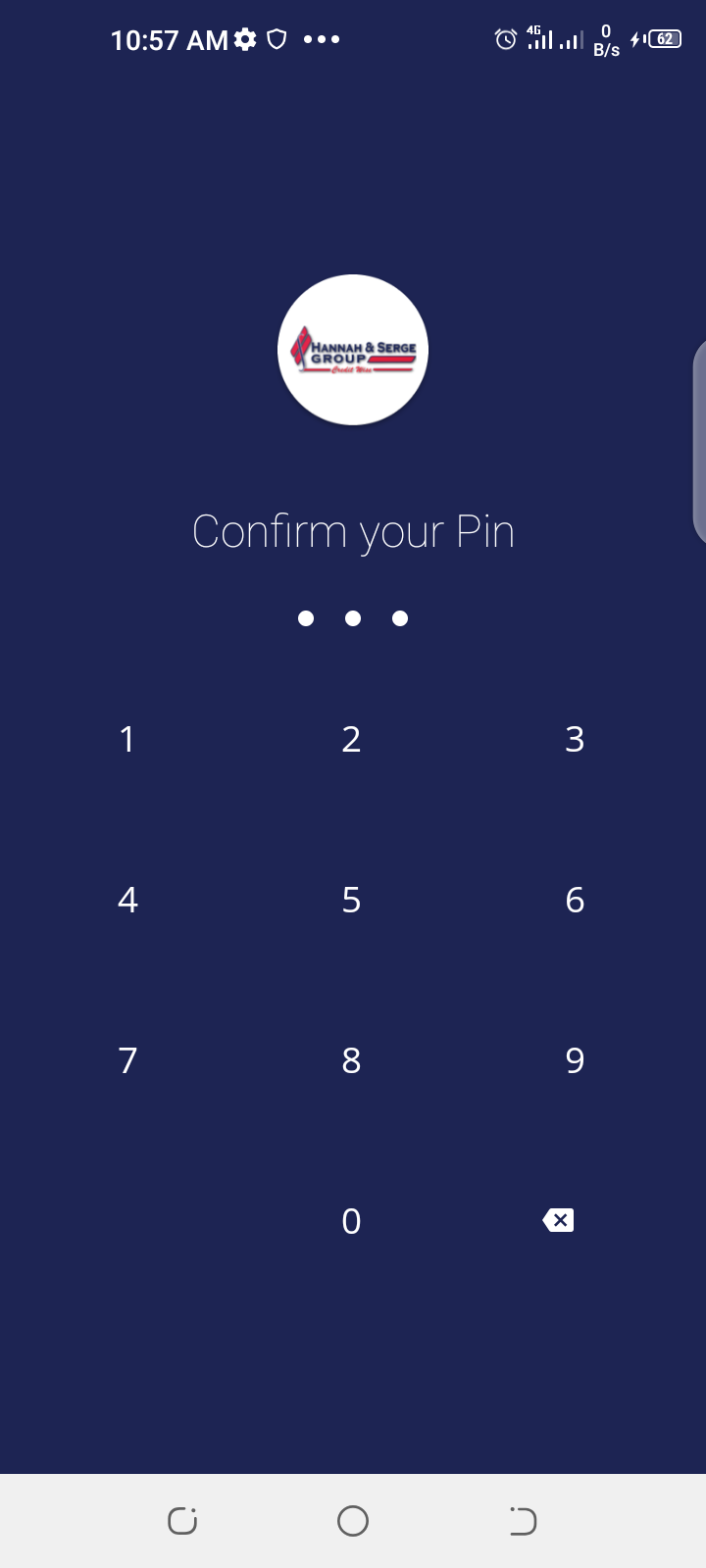


## The authentication pin part is not yet implemented. Details explained below:

The pin part of the authentication is supposed to give the user at most three trials of pin attempt then on failure the user is supposed to be taken to a pin setter activity where he or she is going to create a new pin and then later on taken through the One Time Password email verification. After that he or she will be able to login again without any problems. This is one of the parts yet to be implemented.

### The following screenshots will illustrate more on this:

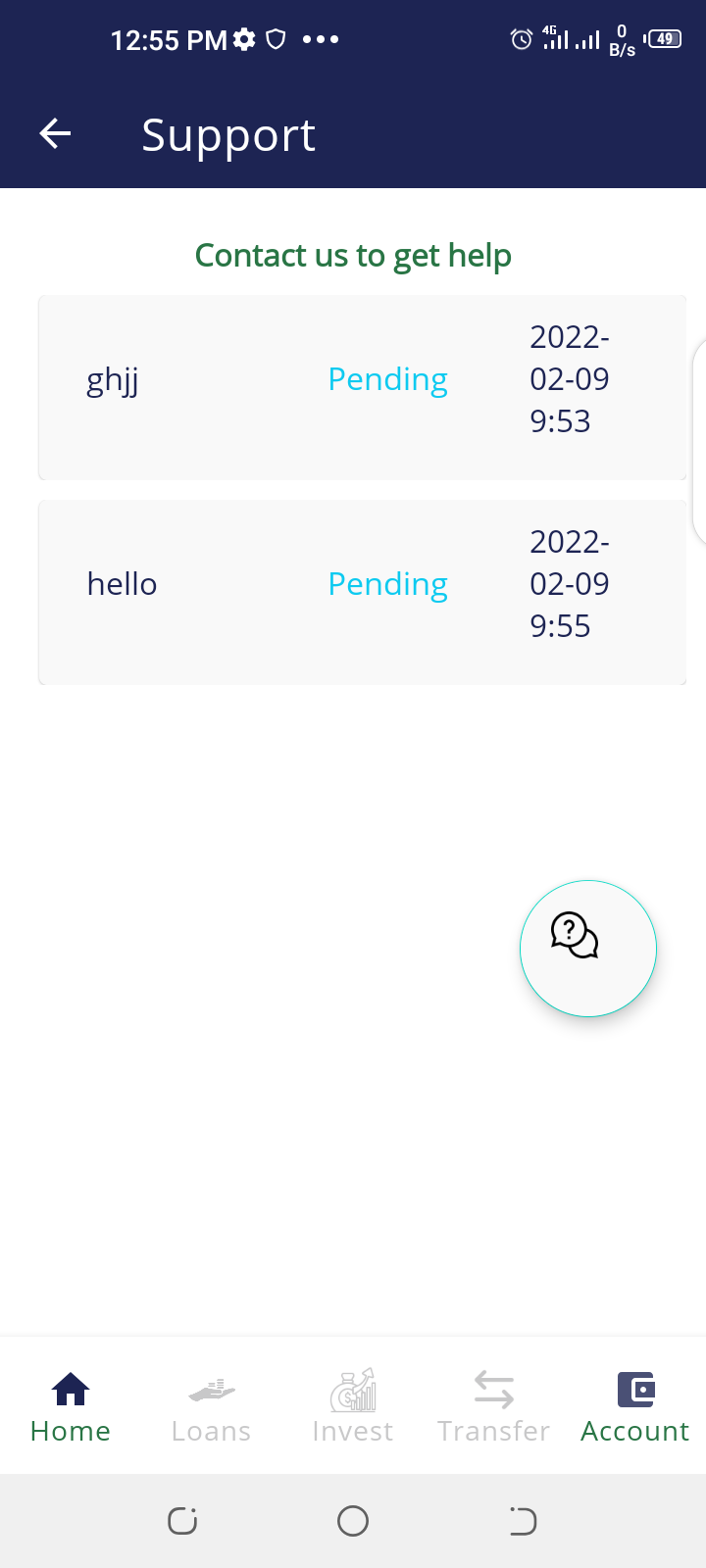




## The Messaging functionality is not yet fully implemented.

The messages can only be sent by now but cannot be replied by the company admin. That particular functionality is yet to be implemented. This will enable a good customer service.

### A screenshot of the support messaging Activity



## The cache and User data is not getting cleared whenever a user logs out in the application:

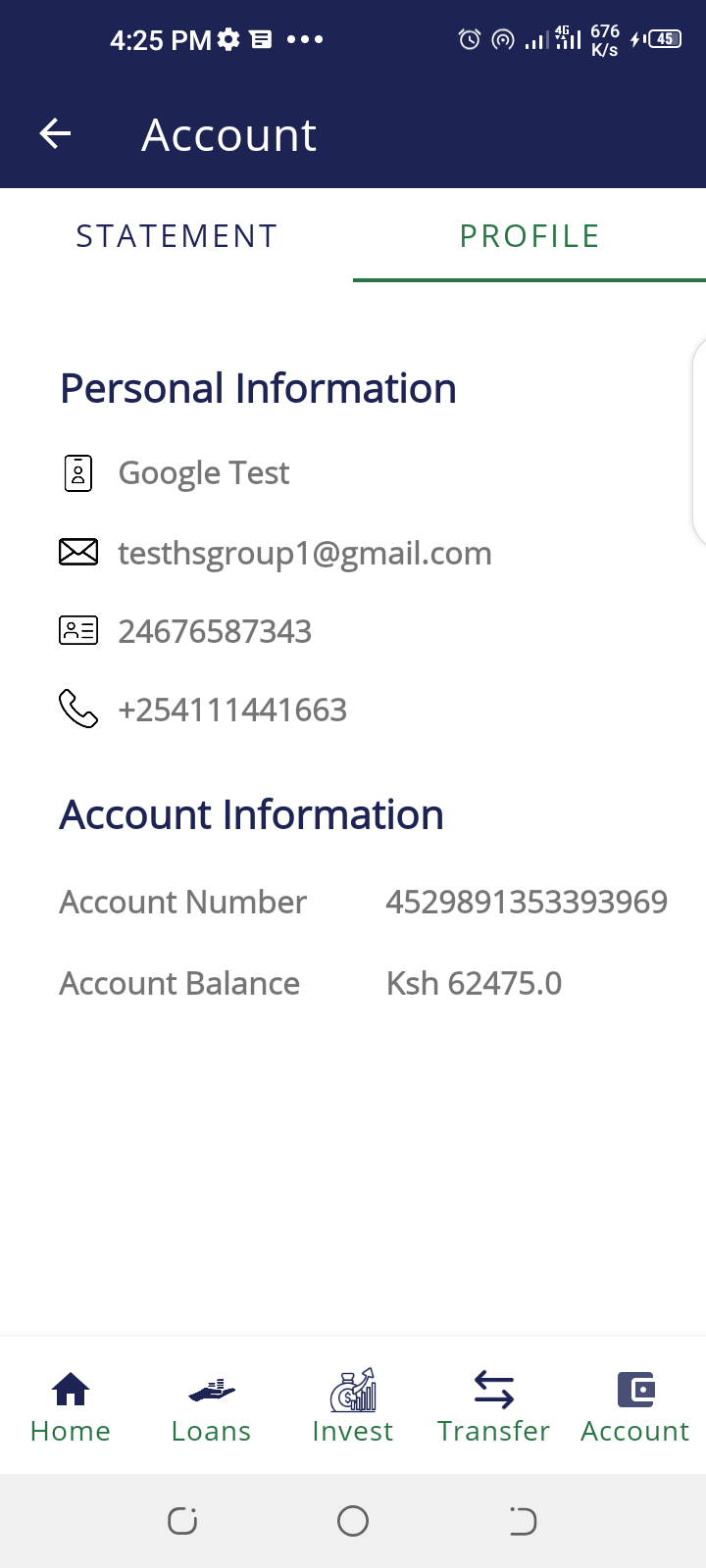
This has some impacts on the application such that when the user decides to log in with a different email the one time Password email verification is still sent to the initial logged out email. This can be a lot of headaches to the users especially figuring out where the problem is.

# Real time data sync on some APIs not working.

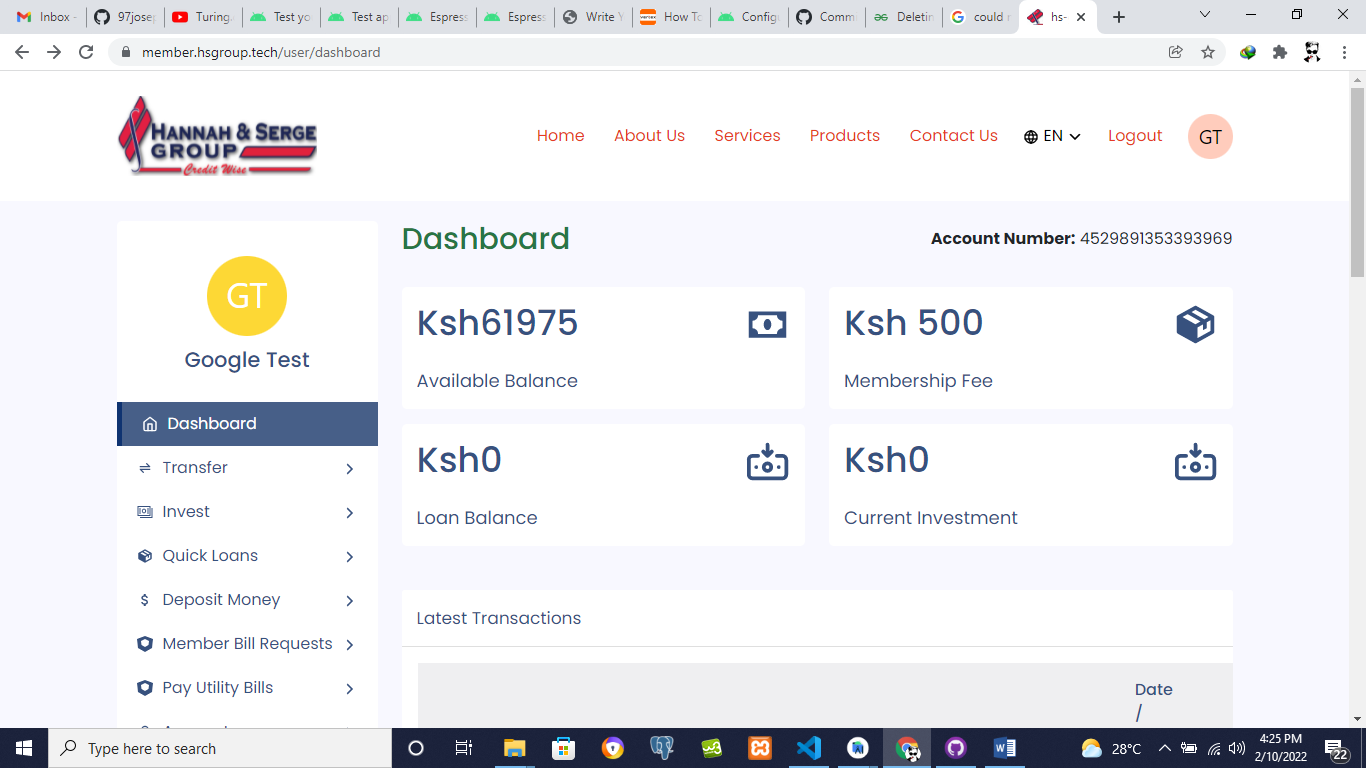
Don’t sync data from the server in real time. Example of this APIs functionalities includes the one responsible for account balance checking. The screenshots below comprise of the balance tab on the website and the balance on the android application. There are also screenshots of the latest transaction of the same account both on web and on the android application.

From the statements above we realize that the data sync in the web account is not similar to the data in the android application. This issue has to be fixed as well.

## A screenshot showing the balance on the android application

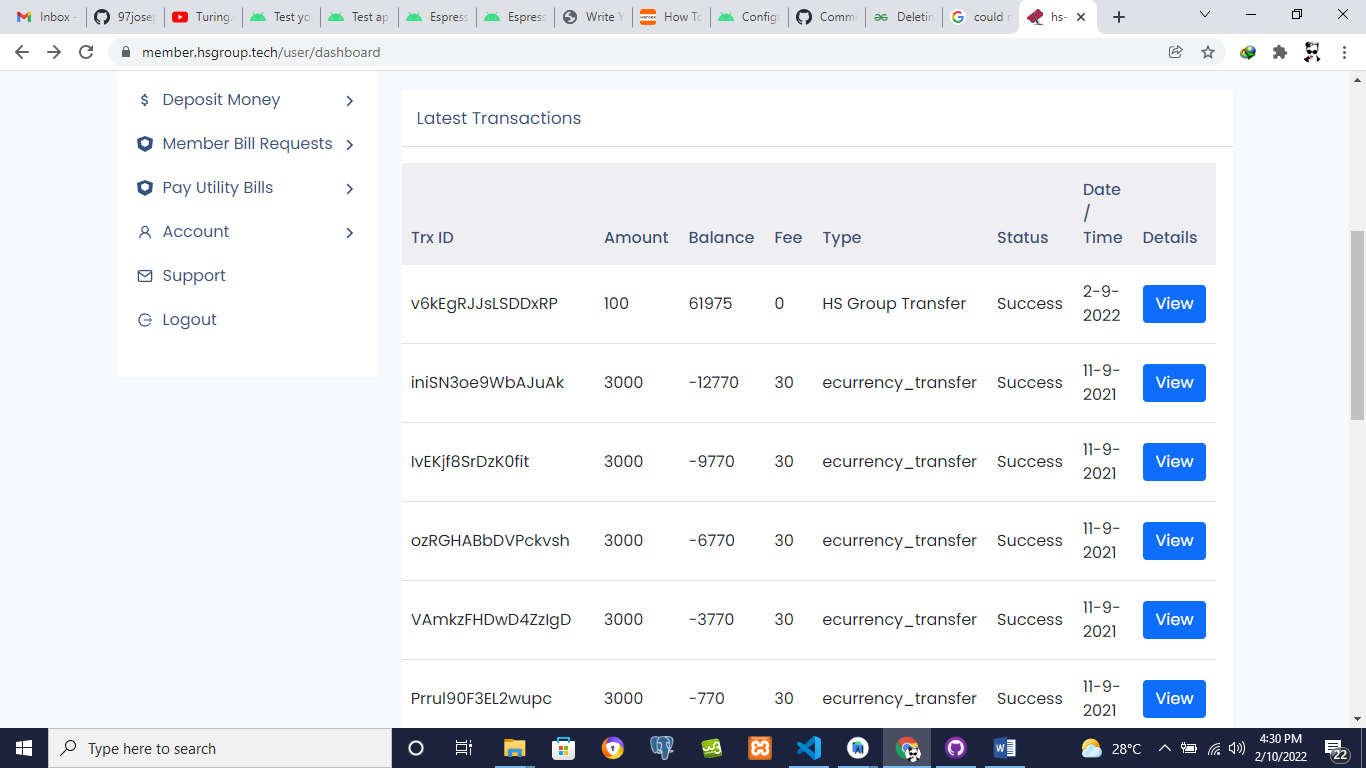
****

## A screenshot showing the balance on the website.



## A screenshot showing the latest transactions on the android application.C:\Users\Lovestrant\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Screenshot_20220210-163021.png

A screenshot showing the latest transactions on the web application



# 

# RECOMMENDATIONS

Most functionalities of the application has already been implemented including the Loan borrowing, Investment tab, fund transfer, Deposit History, Account functionalities, and Settings. Other functionalities such as Support staff chat and reply, Pin reset and Utilities payment has not yet been implemented.

There are also some crashes as described above that are causing the application to not function currently.

We recommend that the crashes be fixed first before to enable the application be hosted in the google play store. After the crashes have been minimized the application can now qualify the play requirements and the users can use the early version as the other remaining functionalities are being worked on.