Individual Report

Joel Giladi

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CSIS 4175 – 001

Individual work performed:

Initial Layout

In the beginning of the project, I took responsibility for creating the home screen, the transfer and deposit fragments seen on the home screen, based on UI designs that were provided as a template by Thays.

Home Activity

Implemented the viewmodel. Spent a lot of time discovering how to use with together with firebase database to store the data. Later set the fragments to use the viewmodel for retrieving data and sending them as intents to their respective activities.

Implemented onDataChanged listener to recover user data and send them to the viewmodel by creating a new User and storing them as the viewmodel’s livedata value.

Every time the data would change, a new user would be created and replace the previous user with the most current data.

Next, I learned I had to set the fragments as “observers” of the Home Activity viewmodel, and use the user (stored as a value) to retrieve the most current data from the database.

That data would then be passed on as an intent to the deposit and transfer activities from each respective fragment.

Deposit Activity

With the initial layout provided by other group members, I worked on refining the calculations used to change the balance of a user when they click the deposit button.

I then managed to code the firebase lines to update the data on the backend.

Transfer Activity

Helped in finalizing the database connectivity and properly updating the back end of both a receiving and depositing user.

Our group ran into serious issues whereby a receiving user’s balance would get updated, even when the sending user’s balance was too low. Despite some refinement, we realized there seems to be an inconsistent delay when asking the database to check if a user’s balance, thereby causing a receiving user to get “free money”.

Thays found that by returning the sending user to the home screen, that problem got solved due to the time it took for the app to perform the operation.

Transactions Activity

Implemented Recyclerview code for the Transactions history, to display all the transactions. I originally developed it for the admin activity, thinking it would be an admin task to view the transactions, but the group decided it wanted to implement it in the individual user’s transaction activity. Initially, I used a FirbaseRecyclerview and Firebase adapter, but ran into problems when trying to figure out how to filter the data for an individual user only.

Despite spending many hours on it, I was unable to find how to filter individual transactions to display only the observing users’, therefore posing a potential “privacy” issue.

I implemented the firebaseAdapter code, and ViewHolder code needed to get the recycler working, and was instrumental in discovering how to make it work, and later changed the entire recyclerview model to an Android built-in adapter after Thays managed to get it to work for the user list section.

Final report

For the final report, I took care of layout a lot of the early skeleton. I wrote down the project overview, and inserted a brief description for each activity. I carried over our project log and made adjustments to include all the pieces of work I was involved in. I provided the team with a notepad document on which I kept lots of the issues we encountered and the solutions that we came up with.

Joel

General timeline

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| --- | --- | --- |
| **Date** | **Hours** | **Description** |
| October 15th | 3 | Created Home Activity and began laying foundation constraints for Home and deposit fragments. Implemented early layout inflater code. |
| October 23rd | 1 | Added Deposit fragment. Copied icon created by Thays on Figma and added it to the project. Resolved github issues. |
| November 1st | 1 | Added constraints to deposit, account, and transfer fragments and created floating action button that will later serve to refresh the home activity. |
| November 2nd | 2 | Wrote part of interim report |
| November 25 | 4 | Set up Signup feature to connect to database |
| November 26 | 5 | Getting login to work and forward to home activity |
| November 27 | 5 | Attempt to find a way to retrieve individual children from DataSnapshot from the onDataChange method.  Issues: When we sign in, we sign in using our authentication data, which exists as a separate entity to our live data.  We had to find a way to make the corresponding realtime DB data to populate. |
| November 30 | 3 | Managed to manipulate ViewModel and get the balance to update. |
| December 1 | 1.5 | Added transition functionality to both deposit and transfer fragments. |
| December 2 | 2 | Finalized Deposit activity to and made it successfuly transfer balance when a user deposits an amount of money they wish to have on their account. |
| December 3 | 2 | Implemented Transfer functionality. |
| December 4 | 5 | Worked with Thays on fixing an issue with transfer functionality. |
| December 5 | 9 | Implemented Transactions recyclerview.  Moved Transactions recyclerview to their own activity.  Manipulated changes to display emails intead of IDs |
| December 6 | 8 | Worked on final report and filmed final video. Helped fix last minute bugs in the code and assisted with merge requests to combine the project elements together |