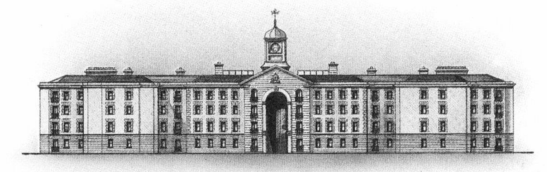

GRIFFITH COLLEGE DUBLIN

Assignment Cover Sheet

Student name: Auizio Diniz Neto

Student number: 3001825

Faculty: **Computing Science**

Course: Computer Science **Stage/year:** 4

Subject: Mobile Development [BSCH-MD/Dub/PT]

Study Mode: Full time _____ Part-time x

Lecturer Name: Dr. Abubakr Siddig

Assignment Title: Developing an Android App - Milestone 2

No. of pages:

Disk included? Yes _____ No x

Additional Information: (ie. number of pieces submitted, size of assignment, A2, A3 etc)

Date due: 27/11/2022

Date submitted: 27/11/2022

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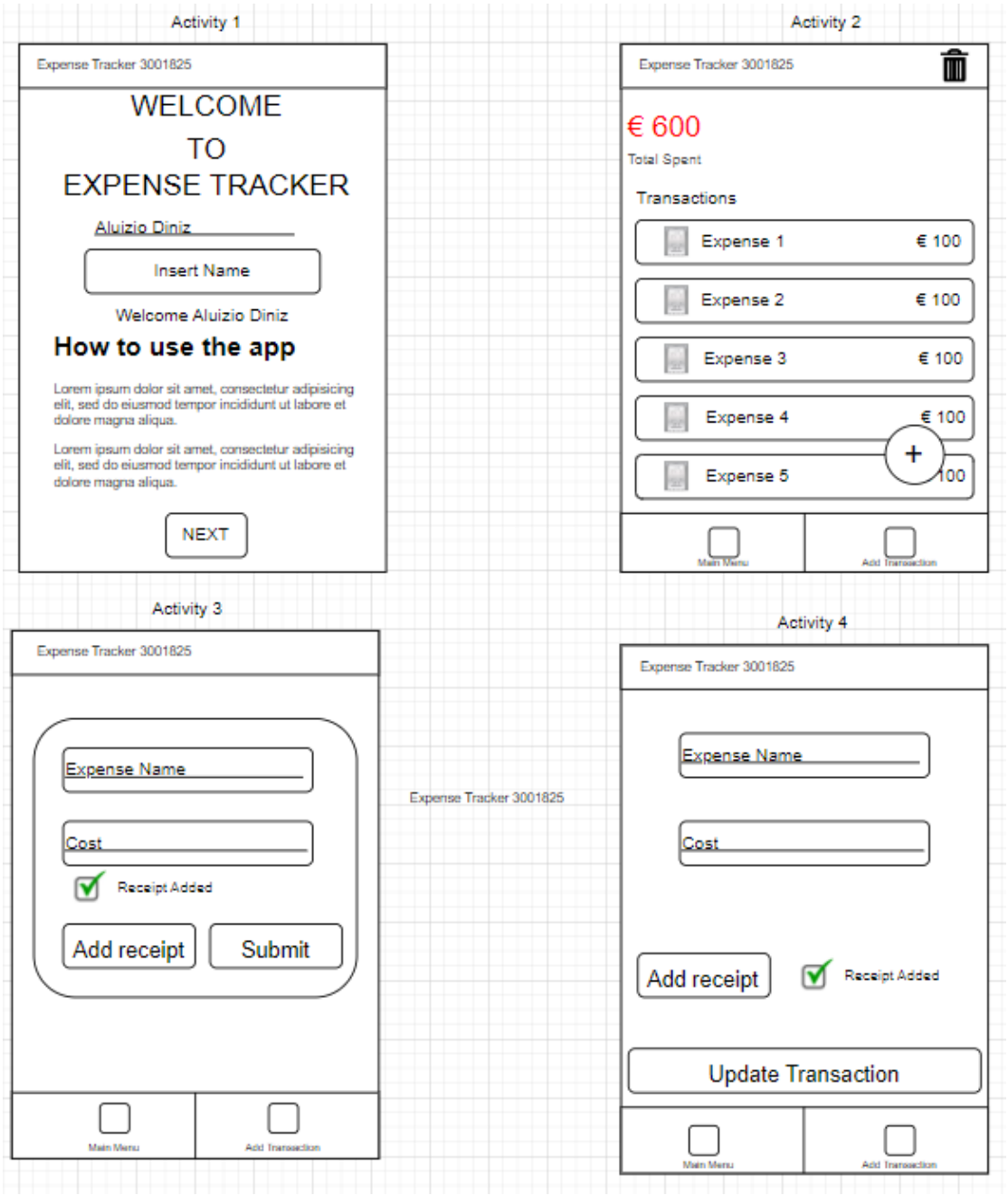
Signed: _____Aluizio Diniz _____ Date: _____27/11/2022_____

New Design



Activity 4: this is a new activity that was not in the original project, although during the second milestone I realized that the user needed a way to change the data that was already allocated in the database.

** Please not that more changes were made to the final design project, such as the instructions, button navigation bar, and extra buttons.

Implementation upgrades

Here are some of the upgrades I successfully implemented for this beta version.

1. **onSwiped Function:** in the previous version there was not a single way to delete the transactions, in this version I have implemented the option to swipe the bars to the right and delete the transaction. Notice that the total spent is already being updated automatically. This option also includes an undo option which reverses the action just done by reupdating the database with the transaction list that was there before and had been saved prior deletion.

2. **deleteAll Function:** in the top bar I have added a custom menu with an image of a bin (obtained from the drawable folder) which builds a pop up box and asks the user whether they want to delete the whole database data or not. If yes is selected, the database gets restored.

3. **new updateActivity:** in addition to my previous layout that was discussed in the first milestone, I decided to add a new activity that gets prompted on screen when one of the transactions is clicked. The new activity works to update a transaction that has been previously input into the database.

4. **User Friendly constraints:** I decided to add a few constraints in order to make the user experience as friendly as possible and also very self explanatory. When the user tries to submit any data to the repository with a missing field the user gets a toast message saying the fields cannot be empty and the box turns red so the user easily realizes there is missing data.

5. **Database:** the database has been fully implemented, and all the data submitted by the user is being stored into the database and displayed on the secondActivity.

6. **updateTotalSpent Function:** the system is now adding all the amounts input into the database and displaying it to the user. Using the variable total.
```
val total = allTransaction.map { it.amount }.sum()
```

7. **Connection among activities:** now all the activities are connected to each other the app is working fine without crashing.

To be implemented

In this section we will talk about the features I intend to implement for the second milestone.

1. **Design:** overall I believe the design I constructed is very user friendly, however there are two main changes I intend to introduce for the final milestone:
    - **Bottom navigation bar:** as an extra user friendly tool I want to add a bottom navigation bar with 2 options(main menu, add transaction). Although it sounds redundant, this is a tool that is present in almost every single app nowadays so I intend to add it.

    - **Instructions on how to use:** some written instructions on how to use the app in the very first Activity.
    - **CardView in RecyclerView:** add a cardView to display the receipt picture in the recyclerView all together with the expense name and cost.

2. **Button implementation:** the button to add a receipt that should redirect to use the camera sensor still has not been implemented.

3. **Database:** include another variable in the database for the receipt image(obtained via camera sensor).

Difficulties

The main difficulty found during the first milestone is now solved, and the recyclerView is not working properly by receiving the data from the Room Database that was implemented.

The main difficulty faced during this milestone was finding different ways for the user to interact with the app in order to make the experience as intuitive and smooth as possible. I believe this difficulty has been handled very well by implementing different tools such as: add buttons, delete database button in the top bar, swiping function, etc.

I believe the biggest difficulty for the next milestone is going to be implementing the camera sensor to add pictures into the database. This picture will have to be inserted into the database and displayed on the second activity where the recyclerView is.

Conclusion

The second milestone was probably the one where most of the was done, although the original design had already been created during the first milestone, most of it had not been implemented yet, so the majority of the coding part was in fact written during the second milestone.

During the second milestone I was able to practice much more my coding skills, and also correct some parts of the codes(specially for the recyclerView) that was not working properly(or even not working at all) from the first milestone.

Although the original design had been implemented some changes were made to it, for several reasons: make the app more user friendly, implement a different functionality that we happened to come across only during the second milestone, etc.

Therefore we can conclude that even though we can create a very good design, when comes to implementing it we most likely will face difficulties that might lead to changes in the original design. These changes might not be specified in the original project, but they are very welcome as long as they add a better user experience.

GitHub Link

https://github.com/aluiziod/Kotlinapp.git