

Project 3

Term 2-Individual Assignment



May 23, 2022

Warren jaftha-219005303

Cape Peninsula University of Technology

Contents

[INTRODUCTION 2](#_Toc104202057)

[1.What did you learn about application development so far while working on the project? 2](#_Toc104202058)

[2.Do you have any working code so far; what code is not working so far? 2](#_Toc104202059)

[GITHUB (INDIVIDUAL REPOSITORY OR GROUP REPOSITORY) 23](#_Toc104202060)

[SELF-REFLECTION 23](#_Toc104202061)

[3.What challenges did you come across and how did you overcome these challenges? 23](#_Toc104202062)

[4.What did you learn through reviewing your partners porting of the project? 23](#_Toc104202063)

[PROGRESS 24](#_Toc104202064)

[1.How much of the work is completed? 24](#_Toc104202065)

[2.Remaining work items 24](#_Toc104202066)

[3.Challenges Experienced 24](#_Toc104202067)

[4. How were the challenges handled? 25](#_Toc104202068)

[4. Conclusion 25](#_Toc104202069)

# INTRODUCTION

As we approach the end of the 2nd Term. My Team and I have made great progress with our application as with this term we focused more on the back-end development side of our application as we incorporated a working live database, and an authentication system for users to log in. In this report I will answer many questions and cover many topics ranging from what I have learnt so far? what are the improvements for this term? what are the outstanding tasks? All the way to Coding Evidence, ERD diagrams as well as what LinkedIn Learning courses I watched to prepare myself for this assignment

# 1.What did you learn about application development so far while working on the project?

What I have learned so far in terms of coding this assignment is how to code a User Registration page, Login Page and a Forget password page that has a user authentication system as well as a **live working database that captures users’ info as well as saves their notes that they typed**. The Database software that we used was **Firebase**. Watching **LinkedIn** Courses and different **YouTube** videos has taught me a lot of how to implement databases into any app for authentication and saving users info.

I have also learned how to work better with others by listening to my other group members opinions, learning how to compromise and meet everyone’s needs. I have learned to be a better leader. I have learned how to comprehend instructions better that my supervisor has given me and following them to the end to produce perfect results

I learned a lot about Firebase and how it is used in everyday life when designing databases and back-end servers for apps to function and store users’ data.

Lastly the one thing I also learned about application development is how it is used to solve everyday problems that individuals go through on a daily basis and that it can impact people lives in a tremendous way only for the positive by helping them solve their problem.

# 2.Do you have any working code so far; what code is not working so far?

Yes, I do have working code, all the 3 pages which I have helped work on the Login, Sign-Up and the Forgot Password all work and are running, and our main notes page Is working. The signup page was my main responsibility, but I had to assist my team with both the login and forgot password page, so I included It in my work. To my recollection there isn’t any code that isn’t working me, and my group have work relentlessly to make sure that there are no errors.

I shall provide Screenshots of all the Code and I shall provide a link to my GitHub Repository if you want to check out my code.

**CODE FOR SIGNUP PAGE**

**SIgnUp.java**

Text

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Text

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

**EXPLANATION**

This code is basically responsible for the back-end functionality of our Sign-Up page. So, what happens on this page is that the user creates an account using this page to which the software stores it on the **Firebase database** which we have created.

Graphical user interface, text, application, email

Description automatically generatedafter this the software will send the user an email to verify their account so that they can login

Graphical user interface, text, application, email

Description automatically generated

After this the software will send After the user has created an account then the page sends the user back to the login page so that they will have to login

**SignUp.xml**

Text

Description automatically generated with medium confidence

Text

Description automatically generated

Text

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated

Graphical user interface, application

Description automatically generatedText

Description automatically generated

**EXPLANATION**

This code that I have presented in the xml file is the design code for the page and this is how it will look when viewing it on a phone. Note that this is not the final design this is just the prototype design that we are wanting to present.

Contains a Header, 2 EditText , a button to take the user to the signup page and a link and the bottom to take the user back to the login page.

**LOGIN PAGE**

**SignIn.java**

Graphical user interface, text

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Text

Description automatically generated with medium confidence

**EXPLANATION**

This code which I have shown now is for the login page. The functionality of this page is simple. After the user has verified their email, the app will take you to the login page. Once there the user will need to input their email and password which they have chosen. Then the software will check on the database if those details are correct if they are correct then the app will let the user in but if the details are not correct then the user cannot enter.

**SignUp.xml**

Graphical user interface, text

Description automatically generated

Timeline

Description automatically generated with low confidence

Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

Graphical user interface, application

Description automatically generatedText

Description automatically generated

**Explanation**

This xml code which I have presented in for the SignIn page. This will be responsible for the design and UI for the page. It will look like this.

It contains 2 Edit Texts for your Email and Password. 2 buttons, 1 for you to confirm that you want to login and the other to take you to the register page to create an account. And a link named “Forgot Password” which takes you to the Forgot password page.

**Forgot Password Page**

**ForgotPassword.java**

Text

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated with low confidence

Graphical user interface, text, application

Description automatically generated

**EXPLANATION**

Graphical user interface, text, application, email

Description automatically generatedThis part of the code is basically suited for when the user forgets their password and wants to reset it. So, what happens is that the user goes to the login page and basically clicks on the link that takes them to the forget password page. The user will then insert their email to which the program will then validate if the email entered is correct or not. if the email is incorrect the program will display an error message and If the email is correct, then the program will send an email to the user with a link to reset their password

Graphical user interface, application, Teams

Description automatically generated

**ForgotPassword.xml**

Text

Description automatically generated

Text

Description automatically generated

Text, letter

Description automatically generated

Graphical user interface, application

Description automatically generated

**EXPLANATION**

This code which I have presented is responsible for the design aspect of the forgot password page. And it looks like this

It contains 2 Text Views which act as headers.

Contains 1 Text field where the email must be placed

Contains 1 button for the confirmation to send reset password email

At the bottom is a link to take the user back to the login page

# GITHUB (INDIVIDUAL REPOSITORY OR GROUP REPOSITORY)

https://github.com/Wareezy/PROJECT-3-TERM-2-INDIVIDUAL-REPORT.git

# SELF-REFLECTION

# 3.What challenges did you come across and how did you overcome these challenges?

These are the problems we experienced and how we overcome them from Term 1 to Term 2. The first issue we encountered was that not everyone in the group was familiar with Android Studio, the IDE (Integrated Development Environment) that we were using to code the application. To combat this, I and one of my other group members who knew a lot about android guided the other students in our group and showed them the ropes and inner workings of android studio, as well as recommended linkedin courses to watch to help them understand.

Another issue we had was that we did not have regular meetings with our group, which caused a lot of uncertainty amongst ourselves. We overcame this by holding a weekly meeting to review our progress with our projects and any challenges that any of the group members were experiencing. This ensured that everyone was heard.

As the leader, I had difficulty dividing jobs among my team members since some members didn't like the task they were assigned, and because most of our group members had never worked with Android Studio, they simply didn't know how to execute certain things. I tackled this issue by simply asking the members what work they believed they wanted to accomplish or that they were able to code using their understanding of application development, and we eventually came to a consensus on what everyone's task was after days of discussion.

# 4.What did you learn through reviewing your partners porting of the project?

What I learned from taking someone’s else’s code from their operating system and adding into your project is that it can cause a lot of errors. As the individual who you are taking code from could have a **different Gradle version** which could mess up your code.

**A GRADLE** file is a script written by Gradle, a technology that assists teams in developing and delivering software. And when everyone on the team has a different version then it causes errors in the code.

So, if you have an older Gradle version and you get someone’s code which contains a newer version of Gradle then your code will error since it isn’t the latest updated version of the coded functions needed

Another thing I learned is that when accepting other individuals code is that they may have **dependencies** added to their code that you may not know about then when you add it into the main project then some of their functions may not work as you didn’t know that there were dependencies that needed to be added. So, Communication is vital amongst team members

# PROGRESS

# 1.How much of the work is completed?

From Term 1 till Term 2. The work that is complete is **the Login Page, Registration Page, Forgot Password Page** the front-end and back-end of the pages is complete. These pages have full functionality and has an Authentication System for users to sign in.

The Database is complete. It can save both the user info and the Notes that the have inserted into our application.

The main pages responsible for creating a note such as **createnote, editnoteactivity, firebasemodel ,notedetails, notesactivity** is all complete.

# 2.Remaining work items

The only remaining work that needs to be done for the project is with the design aspects of the app. The group is not happy with the way that some of our pages look, and I agree. So, we still wanted to tweak and change the look of our project design look.

We still need to add a calendar function into our app so that users can save dates for when assignments in due but that is only for later so we also not focusing on that for now.

All we wanted to complete was the saving of the Notes and the User Authentication.

# 3.Challenges Experienced

3.1 The Challenges that I came across was that when coding the application, **we had an issue with the verification of emails**.

The issue was that when a user created an account, the application was intended to send a verification email to the user, but for some reason, it was not doing so which means that without receiving the email that meant that we couldn’t enter the main page which was adding a note.

3.2 Another problem that I came across was that the **app kept crashing when wanting to create a New Note**. Reason was that we had very important code missing in our **AndroidManifest.xml.**

3.3 Another problem that we faced when loading my teammates code onto my IDE I got a error with one of the pages that he coded. That was because I was missing a important dependency that needed to be added into the Gradle page.

# 4. How were the challenges handled?

4.1-(3.1 solution) I corrected it by recoding the part that was responsible for sending the email, after which I noticed that I had made an error in my code which was to do with the “checkverificationemail()” as I left out an “firebaseUser” function to check if email is valid and to then send a verification email to the user, and after searching up different websites and watching additional videos on the subject, I was able to fix it as I located a solution.

4.2-(3.2 solution) Reason was that we had very important code missing in our **AndroidManifest.xml.** After realizing this we went back and rewatched the videos that dealt with giving us insight on how the AndroidManifest page should be coded to which we added all the functions that needed to be added to which after running the app again then we saw that our program was working.

4.3-(3.3 solution) The way that we solved that problem was that I rewatched the YouTube video that he watched and I discovered that I was missing a dependency to which I simply added it and resynched my program then the issue was solved.

# 4. Conclusion

Coming to the end of my report my group and I have made much progress on our assignment, but this is not the end we still have much more to do in the future for our app to be perfect for our final viewing. The topics that were covered ranges from what I have learned while coding this project? what challenges I faced and how I overcame them all the way to what work did I complete so far and what still needs to be complete.