CMPS 312 Mobile App Development
Banking App
Lab Assignment 5
Deadline - Sunday, October 3, 2023, @ 11:59PM

Objective

The objective of this assignment is for you to practice how to,

- Read and write data to Firestore from an Android app
- Listen to changes in Firestore data in realtime
- Use Firebase Authentication and security rules to secure Firestore data
- Write complex Firestore queries

Preparation

1. Sync the Lab GitHub repo and copy the **Assignment/Assignment5** folder into your repository.
2. Open the project **QuickMart App** in Android Studio. The project has the baseline code implementation using JSON Files.
3. You are encouraged to use your assignment 4/5 solution as the startup code.

Overview

In this assignment, your task is to replace the given bassline solution of **QuickMart App's** which currently uses json files to **Cloud Firestore** and achieve similar functionalities as assignment 4/5 with one extra feature to allow users to Register and Login to the application.
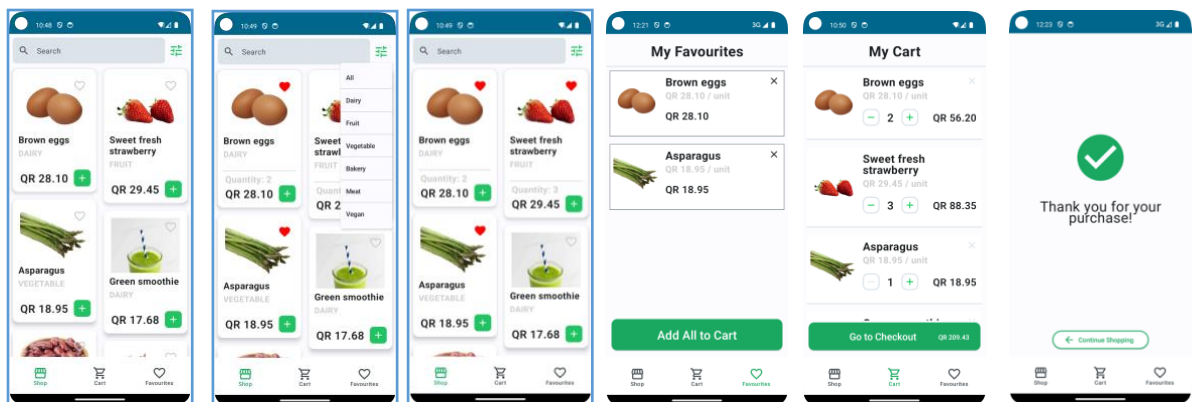

Figure 1 : QuickMart App

Implementation Instructions

This assignment's functionalities are the same as the previous assignment 4/5 with one extra feature which is authentication. So, if you would like to understand how the application works then please read the assignment 4 and 5 pdf file.

The application class diagram is shown below. Feel free to add any extra properties to the application if you need it.
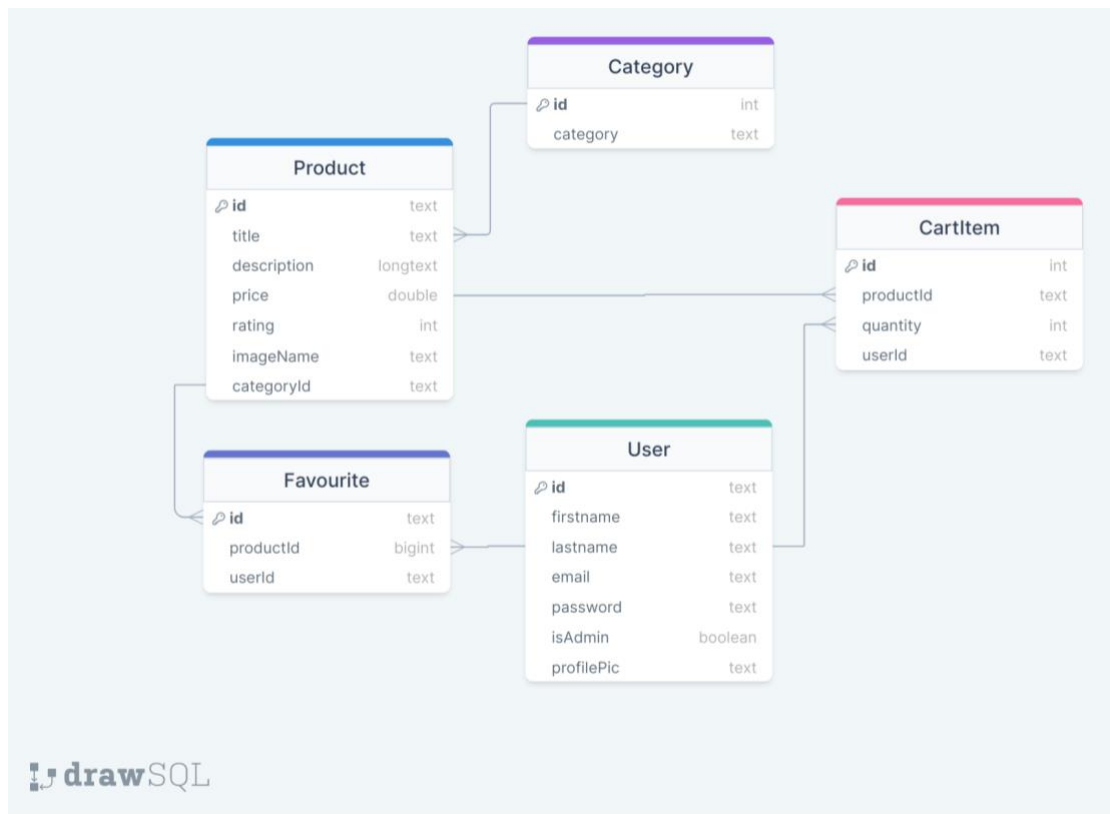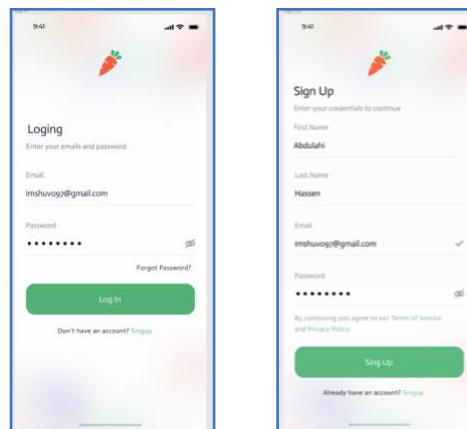

Figure 2 QuickMart ER Diagram

1.   Design and implement user registration and login features into the app. ==You should only allow logged-in users to read and write data==. Also, the data should only be viewed by logged-in users.

2. When the user logs in, they should only see their own cart items and favourite items. They should not be allowed to see other users items.
3. As soon as any changes happen to the online collections these changes must be immediately reflected on your app without refreshing. Hint➜ use snapshot listners with callback flows

4. When a user logs out, you should navigate the user to the login screen and remove all the listeners to the cloud firestore collections.
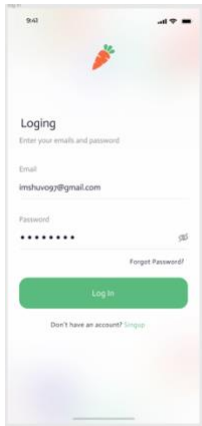
5. The remaining features should be the same as previous 2 assignments.

Important It is expected that each student to have a **unique app** that accomplishes the tasks. You are free to use any theme/font/colour/icons that you would like to use. Also, discussing with your colleagues is allowed, however, please avoid sharing your code. If any plagiarism is detected then both parties will get zero.

Submit the testing sheet as well as the code under "**your_repository/assignments/assignment5**"