Mobile App Development
In-Class Assessment 6 (2 Hours)

Basic Instructions:

1. This is an In Class Assessment, which counts for 10% of the total course grade.
2. This assessment is an individual effort. Each student is responsible for her/his own assessment and its submission.
3. Once you have picked up the assessment, you may not discuss it in any way with anyone until the assessment period is over.
4. During the assessment, you are allowed to use the course videos, slides, and your code from previous home works and in class assignments. You can use the internet to search for answers. You are NOT allowed to use code provided by other students or solicit help from other online persons.
5. Answer all the assessment parts, all the parts are required.
6. During the assessment the teaching assistants and Instructors will pass by each student and ask them to demonstrate their application. Your interaction with the teaching assistants and instructors will be taken into consideration when grading your assessment submission.
7. Please download the support files provided with the assessment and use them when implementing your project.
8. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will loose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
9. Create a zip file which includes all the project folder, any required libraries, and your presentation material. Submit the exported file using the provided canvas submission link.
10. **Do not try to use any Social Messenger apps, Emails, Or Cloud File Storage services in this exam.**
11. **Failure to follow the above instructions will result in point deductions.**
12. **Any violation of the rules regarding consultation with others will not be tolerated and will result disciplinary action and failing the course.**

In-Class Assessment 6 (100 Points)

In this assignment you will develop a shopping cart app.

1. You are provided with a skeleton application that has all the layouts and fragment files created.
    a. You should add an app using "edu.uncc.assessment06" package name to your Firebase project.
    b. Replace the "google-services.json" with your Firebase provided file.
    c. The skeleton app includes the full implementation of the login and signup screen, see Fig 1(a) and 1(b)
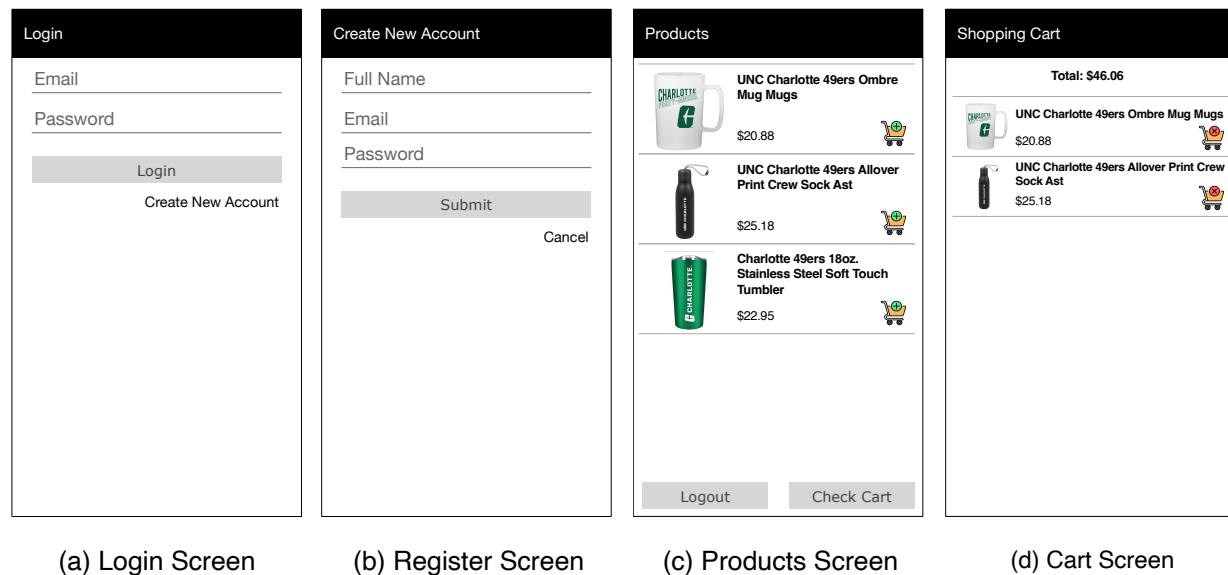   d. The Products screen is also implement as shown in Fig 1(c).

| (a) Login Screen | (b) Register Screen | (c) Products Screen | (d) Cart Screen |

Figure 1, Application Wireframe

Part 1: Products Fragment (40 Points)

This fragment is shown in Figure 1(c), the fragment lists the products and allows the user to add products to their shopping cart. The requirements are as follows:

1. The code for retrieving and displaying the list of products is already provided as part of the skeleton app.
2. This app requires that each logged in user have their own shopping cart that is stored on Firestore. **Where each product added to the cart should be stored as a separate Document in Firestore.**
3. Clicking on the "Add To Cart" icon should:
    a. Add the selected product to the user's cart on Firestore, then display a Toast message indicating that the item has been successfully added to the cart.
4. Clicking the "Check Cart" should communicate with the Main Activity to:
    a. Replace the current fragment with the Cart Fragment.
    b. Add the current fragment to the back stack.
5. Clicking the "Logout" should communicate with the Main Activity to:
    a. Logout the currently logged in user
    b. Replace the current fragment with the Login Fragment.

Part 2: Cart Fragment (60 Points)
This fragment is shown in Figure 1(d), the fragment displays the list of products currently in the shopping cart. The requirements are as follows:
1. Retrieve the the cart for the currently logged in user from Firestore
    a. Use a SnapShotListener to retrieve the products and display the total dollar amount as shown at the top of Fig 1(d).
2. Display the products retrieved from Firestore as shown in Figure 1(d).
3. Clicking on the "Delete from Cart" icon should:
    a. Delete the selected product from the user's cart that is stored on Firestore.
    b. The total dollar amount should be updated to show the sum of prices of all the products in the cart.

Section:	
Student Name:	
Student ID:	

Part #	Features	Total	Grade	Comments
P1	Add to Cart: - Product added to Firestore for the corresponding logged in user. - Each added cart item is stored in a separate document	30		
P1	Clicking "Check Cart" button: - Shows the Cart fragment - Pushes the current fragment back stack. **Interface Implementation REQUIRED**	5		
P1	Clicking "Logout" button: - Logout out performed - Show the Login Fragment **Interface Implementation REQUIRED**	5		
P2	SnapShotListener setup and products added to currently logged in user's cart retrieved in an array list.	20		
P2	Total computed correctly and shown at top of fragment	10		
P2	RecyclerView Adapter created and is displaying items as shown in Fig 1(d).	10		
P2	Delete from Cart: - Product deleted from Firestore. - RecyclerView refreshed to show the current products in cart. - The total is computed correctly.	20		
	Total	**100**		
	Table 1: Grading Key			