Mobile App Development

In-Class Assessment 8 (2 Hours)

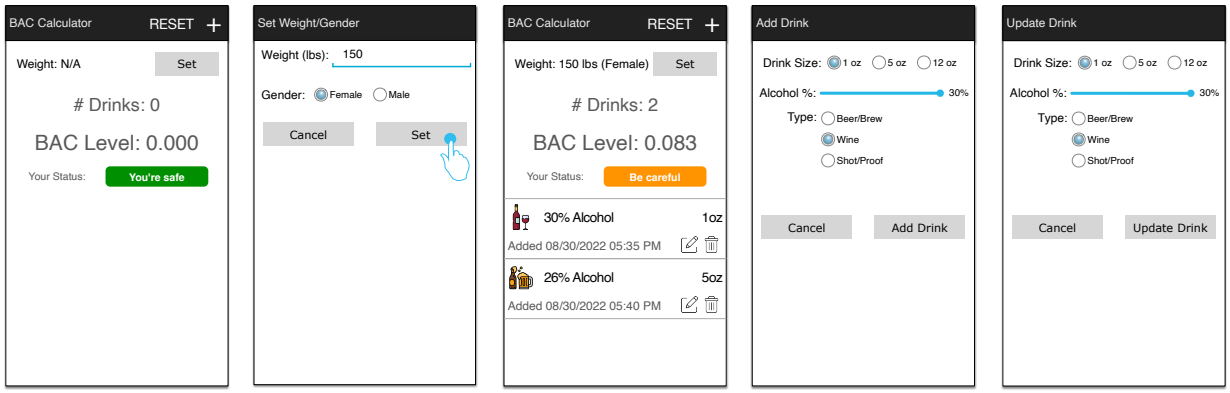
Basic Instructions:

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 8 (100 Points)

In this assignment you will develop a BAC calculator app

1. Use the provided skeleton application:
   a. The skeleton app includes the full implementation of the UI, fragment communication, and transition related code.
   b. Use the provided Drink class
   c. Use the Room library to store data in a database. The room library should use the Drink class as an entity, and setup Dao and Database objects.
   d. The Set Profile Fragment is already implemented and the skeleton code includes the code required to pass and store the user profile.



(a) BAC Fragment (b) Setup Profile (c) BAC Fragment (d) Add Drink (e) Update Drink

Figure 1, Application Wireframe

Part 1 (60 Points): BAC Calculator Fragment

This fragment shows the user profile, the number of drinks, BAC level and your status and the list of drinks as shown in Figs 1(a) and 1(c). The requirements are as follows:

1. The provided skeleton app implements all the UI, RecyclerView adapter, and the BAC calculation and status computation.
2. Implement the “getDrinksAndNotifyAdapter” method:
   a. Retrieve the list of the drinks from the database and add it to the mDrinks array list
   b. Notify the adapter that the data has changed.
3. Clicking the “Delete” button in a row item should:
   a. Delete the selected drink from the database in the commented area provided in the skeleton app.
4. Clicking the “Reset” menu item should:
   a. Delete all the drinks from the database in the commented area provided in the skeleton app.

Part 2 (20 Points): Add Drink Fragment

The Add Drink Fragment allows the user to add a new drink as shown in Fig 1(d). The requirements are as follows:

1. The UI and validation is implemented in the skeleton app
2. Clicking the “Add Drink” button :
    a. Insert the new drink object into the database in the commented area provided in the skeleton app.

Part 3 (20 Points): Update Drink Fragment

The Update Drink Fragment allows the user to update a drink as shown in Fig 1(e). The requirements are as follows:

1. The UI and validation is implemented in the skeleton app. This fragment receives the drink object that will be updated.
2. Clicking the “Update Drink” button:
    a. The updated drink should be updated in the database in the commented area provided in the skeleton app.
    b. Check this https://developer.android.com/training/data-storage/room/accessing-data#convenience-update

Section:	
Student Name:	
Student ID:	

Part #	Features	Total	Grade	Comments
P2	Successfully insert a new Drink item in the database using the Rooms Library.	20		
P1	Successfully implemented the **getDrinksAndNotifyAdapter** method to retrieve the drinks from the database and refresh the recycler view.	20		
P1	Successfully implemented the drink delete from the database.	20		
P1	Successfully implemented the reset feature which deletes all the drinks from the database.	20		
P3	Successfully updated a Drink item in the database using the Rooms Library.	20		
Total		**100**		

Table 1: Grading Key