

## MAP524 – Mobile App Development Android

### Assignment – 4

#### Instructions:

- This assignment is to be done individually.
- I will use **Google Pixel 4 XL configured with API 27** to run and test the app. If you are on MacBook with M1 chip, you can use the emulator that is compatible on your machine but make sure that you submit the video of the app execution in the drop box.
- Besides implementing the required functionality submissions are required to use the correct coding conventions used in class, professional organization of the code, alignment, clarity of names is all going to be part of the evaluation.

#### Task:

You are to refactor the MyOrder app that you created for assignment 2 that allows the user to place an order for coffee and display the list of orders placed. The app should provide following functionalities:

- **(25 points)** Set up the Room database (Entity, DAO and Database) that will allow you to store coffee order details. Considering the practice done in class, determine the entity attributes and their data types. In DAO interface, add the necessary functions and queries for CRUD operations.
- **(25 points)** You must organize your code as per Android Jetpack architecture components practiced in the class. There must be clear separation of concerns between UI and database operations classes. No database operation should be performed directly from UI thread. You must create repository class and viewmodel class for database access. The database must be accessed in the Activity only using the view model.
- **(15 points)** The first screen that allows the user to choose the details of their order should now save the order details in the Room DB instead of array of objects. Each record to be stored in Room should at least contain id, coffee\_type, size and quantity. If user wants to place another order, you are to add another record in Room.
- **Note:** Now, you just have to open the next screen when the options menu item is clicked. You won't need to send the data along.
- **(15 points)** The second screen that displays a RecyclerView should now display all the orders fetched from Room DB. Each RecyclerView cell should display selected coffee, its size and quantity.
- **(20 points)** The RecyclerView should allow the user to update the number of coffee (quantity) in specific order. Also, allow the user to delete any order from the list.

#### Submission Checklist:

- Write the comments containing your student ID, full name at top of each file.
- Once you complete the app, create the zip of your entire project folder using following steps:
  - o In Android Studio, open **"Build"** menu and select **"Clean Project"**.
  - o Open **"File"** menu → select **"Export"** → select **"Export to zip file"**.

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- Upload the exported **.zip** file in drop box.
- A **screen/video recording** demonstrating your app execution with all the functionalities or any errors if you have any.
- In the comment section of your submission, write the **reflection** (approximately a paragraph) mentioning your learning in the assignment, any difficulties that you have faced while doing the assignment and how you manage to resolve them.