**Assignment2 – MAP524**

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1. **Question and Answer**
2. **Screenshots (I will put video separately instead of the link)**

**As the code is not required, I did not put it.**

**In addition, as this assignment requires a room DB functionality not a SQLite, I modified some code from NetworkingProject which is project of week 9 to fully use Room DB functions.**

**How did you implement this project: what are the main classes and their functionality?**

**AppDatabase** – It creates database based on the database status. For example, If it turns out that the database is null then it builds the database called ‘car.db’.

**Car** – Manage the car properties (i.e. id, carModel1, carModel2, year, isFavorite)

**CarAdapter** – It sets the test field and set the image based on the status of the isFavorite property. And handle the onclick function inside the CarViewHolder class which extends Recycler.Viewholder and implements a onClick function. So, when the user clicks one of the viewholder it displays a dialog and send a data back to constructor with initializing the value of property isFavorite to true.

**CarDao** – It handles the SQL command so that you can insert and get all the data. I used *onConflict = OnConflictStrategy.REPLACE* which allows you to modify.

**JsonManager** – It gets the json string as a parameter and try to parse it. In my case I used getString() function which returns the string value of the variable in for loop. Then it initializes a new car object using car constructor.

**MainActivity** – used livedata functionality so whenever the data changes, it applies changes. (referenced from: <https://developer.android.com/topic/libraries/architecture/livedata>) Also implemented alertDialogCar function and returnAPIData which gets the data from database.

**MyApplication** – call the getInstance function inside AppDatabase with current application as a parameter.

**NetworkingClass** – used callback interface which interacts NetworkingClass and the activity. By using callback interface, it gets data from database based on which activity used. In our case MainActivity. Then, it creates new thread and get the data using InputStream and then return the string using returnAPIData function to the activity where the networkingclass is used.

**How the data transferred in your app?**

Transferring data from database to MainAcitivity and the data will be transferred into adapter to build the list.

When a user clicks ‘ok’ in the dialog, it sends the selected list to database and then notifying the activity using callback interface.

navigate back in call back function which is navigating back to main activity where we again get all data from database with the updated car image

**What did you learn from this project?**

I learned how to deal with callback interface which is managed by particular activity. I found it attractive that the data is used depending on the activity I use. And as it was the first time to handle json format data in android course, I learned how to parse it and manage through this project. In addition, in terms of the layout, I found out why recycler view is called recycler view because it is literally recycler the view form.

**Screenshot**



