

Guidelines for SQLite Database in Android Assignment in MCC :-

A) You can refer the following Video Lectures for SQLite Database in Android :-

1. Creating database and table:

- a) <https://www.youtube.com/watch?v=cp2rL3sAFmI&list=PLS1QulWo1RIaRdy16cOzBO5Jr6kEagA07&index=1>
- b) <https://www.youtube.com/watch?v=p8TaTgr4uKM&list=PLS1QulWo1RIaRdy16cOzBO5Jr6kEagA07&index=2>

2. Inserting data in table:

<https://www.youtube.com/watch?v=T0CIYrJukPA&list=PLS1QulWo1RIaRdy16cOzBO5Jr6kEagA07&index=3>

3. Retrieving data from table:

<https://www.youtube.com/watch?v=PA4A9lesyCg&list=PLS1QulWo1RIaRdy16cOzBO5Jr6kEagA07&index=5>

4. Recycler View:

<https://www.youtube.com/watch?v=caUfVkjII7I>

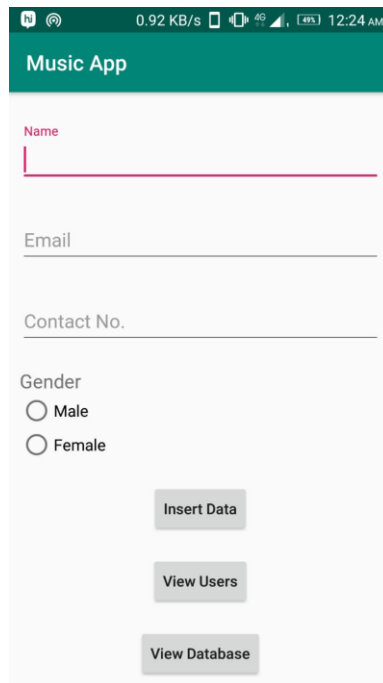
5. If you want to view the contents of your database, refer following links:

- a) <https://stackoverflow.com/questions/17529766/view-contents-of-database-file-in-android-studio>
- b) https://github.com/sanathp/DatabaseManager_For_Android
- c) <https://www.youtube.com/watch?v=P5vpaGoBlBY&feature=youtu.be&t=3m40s>

B) Steps :-

1. Create a UI :

- i. Create an activity, design the screen in XML file of that activity
- ii. Bind the UI components from XML into Java file of the activity.
- iii. In my project, "First Activity" is the first screen of app. There are four fields: Name, Email, Contact No and Gender.
- iv. After that there are three buttons: Insert Data, View Users, View Database.
- v. "Insert Data" button will insert the details you will fill in the above four fields in the Database.
- vi. "View Users" button will take you to next screen "Second Activity" where all the users whose data is inserted till now will shown in a list format.
- vii. The third button "View Database" is **not mandatory**, it is optional. If you want to view the contents of your database, then only add this button.



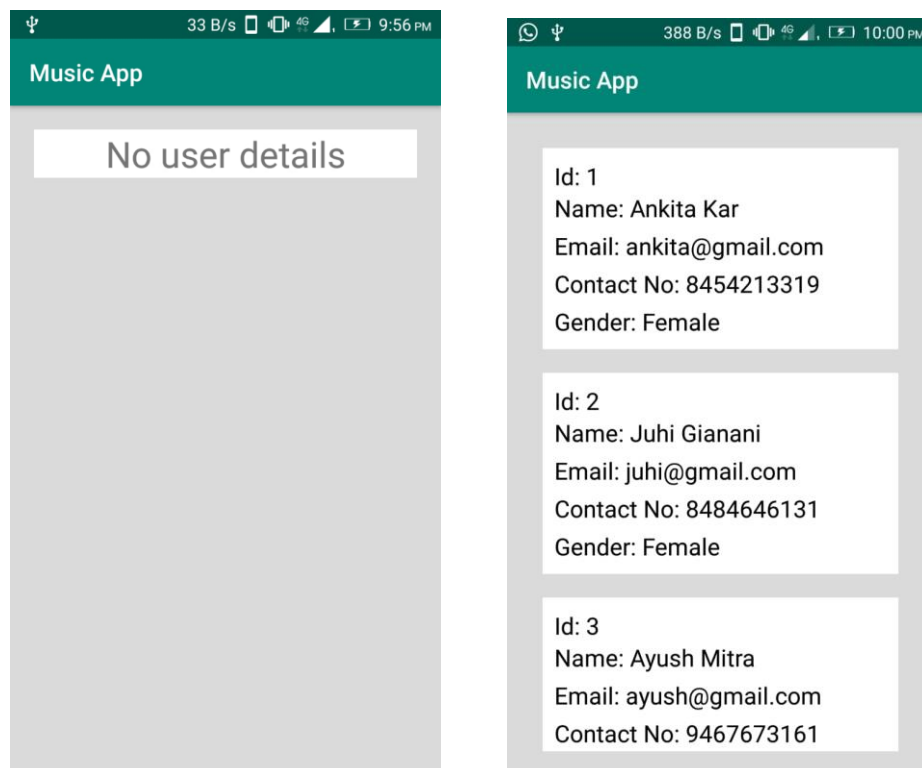
2. Create a Database Helper class :

- i. Create a Java class which will extend inbuilt class **SQLiteOpenHelper**.
- ii. In this class you will define all the parameters of your database such as: Database Name, Table Name, Columns in your tables, schema of your tables, different methods for performing CRUD (Create, Read, Update, Delete) operations in your database.
- iii. Define methods for creation, insertion and retrieval of data by referring the video lectures.
- iv. In my project, "DatabaseHelper.java" is the Java class which has all the parameters of my database.
- v. My database name is "Music App" which has only one table "Users".
- vi. The "Users" table has 5 columns and its schema is: Id (Integer, Primary Key, Autoincrement), Name (Text), Email (Text), Contact_No (Text), Gender (Text).
- vii. I have made two methods in "DatabaseHelper.java":-
 - a) insertUserDetails() : for inserting data of a user
 - b) getAllUserDetails(): for getting data of all users
- viii. The I have called "insertUserDetails()" in "FirstActivity.java" and "getAllUserDetails()" in "SecondActivity.java".
- ix. Refer my project and the above video lectures, things will get more clear.

3. Create RecyclerView for viewing retrieved data :

- i. RecyclerView is a container in Android using which we can show data in a list format (Such as chat list in WhatsApp).
- ii. For recycler view, you need to create 3 files:
 - a) A resource file (XML file) where you will design one row of your recycler view.
 - b) A Model Class (Java file) where you will define the model of your data which you are going to set in recycler view.
 - c) An Adapter Class (Java file) where you are going to set the data into the UI components of row which you have defined in the XML file.
- iii. After creating these three files, set the adapter to the recycler view.
- iv. In my project,

- a) Resource file is “row_users.xml” in layout folder in res.
- b) Model class is “ModelForUser.java”
- c) Adapter class is “UserRecyclerViewAdapter.java”
- v. After this, I have retrieved the data from database and set the adapter to recycler view in “SecondActivity.java” file.
- vi. Also if there are no tuples in “Users” table, then in next screen it shows there are no users in a TextView.
- vii. You can use any other way to show the retrieved data. There is **no compulsion** for making a RecyclerView for showing the retrieved data. You can show the data in a ListView or in an Alert Box or in any other way.
- viii. Also you can write your own modified function in Database Helper class for retrieving data for a particular user instead of retrieving data of all users, and show it in your own way.
- ix. Refer the video lecture mentioned above for creating the RecyclerView.



4. Creating Database Manager class (Optional) :

- i. This step is **not mandatory**. Follow this step only if you want to view database contents since database contents can't be seen on Android App directly.
- ii. Follow the 3 links which are mentioned above in 5th point of section A. Watch the video mentioned in sub-point (c) to get more clear idea.
- iii. In my project, “AndroidDatabaseManager.java” is the Database Manager Class.
- iv. There might be some error after you copy the contents from the GitHub project mentioned above in sub-point (b). Those errors will depend upon the version of Android Studio you are using currently. So if you get some errors, you need to solve them by searching on internet.

0 B/s

10:40 PM

Select Table

Users

No. Of Records : 6

Click here to change this table

Click on the row below to update values or delete the tuple

Id	Name	Email	Contact_No	Gen
1	Ankita Kar	ankita@gmail.com	8454213319	Fem
2	Juhi Gianani	juhi@gmail.com	8484646131	Fem
3	Ayush Mitra	ayush@gmail.com	9467673161	Mal
4	Deepesh Nagora	deepesh@gmail.com	7461344001	Mal
5	Priya Gupta	proya@gmail.com	9440181643	Fem
6	Arpita Kar	arpita@gmail.com	0487673164	Fem

PREVIOUS

NEXT

Error Messages will be displayed here

CUSTOM QUERY

C) My Project Link :-

I am sharing GitHub and Google drive link of my project for reference. From GitHub you can directly clone the project. While from Google drive you can download the Zip file of project.

1. **GitHub Link:** <https://github.com/AnkitaKar1998/MusicApp>
2. **Drive Link:** <https://drive.google.com/file/d/1JxRgwCC0c0HruW5kHcga6D0t68sqFiXK>

- By Ankita Kar