Online Chat Assignment

## Q. Write a program to insert value in database using SQLite in Android.

To insert the values in SQLite database of Android, which is an open database of android and does not require ant type of additional third-party connection over database. So, SQLite is the one of the best database options for android devices.

Android SQLite is a lightweight and opensource SQL database that stores data to a text file on a device. Android SQLite is the most preferred method of storing data in any android applications.

So, here to insert data in that database steps are as follows, here are some screenshots of my own project where the availability of resources and clear the data of android database. Thus, steps are as follows;
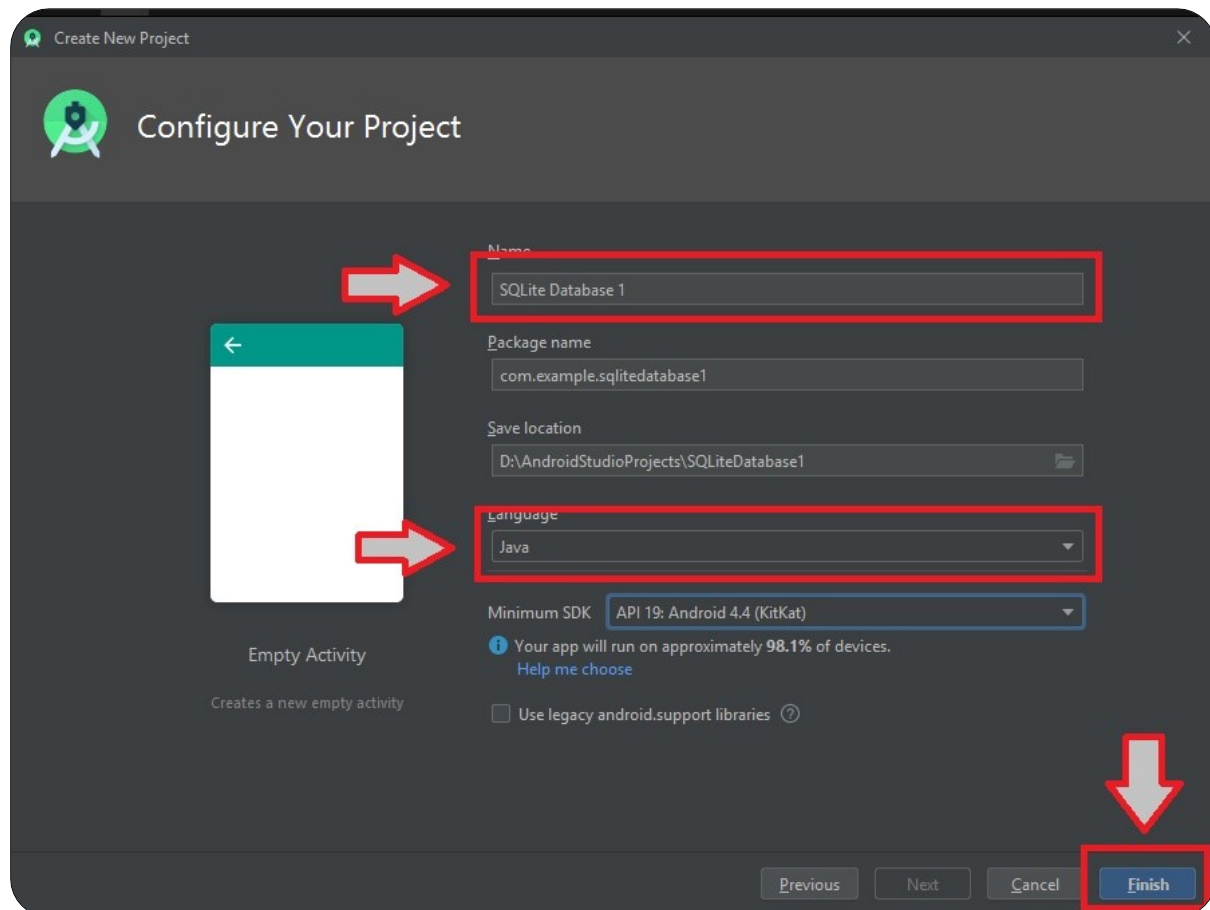
Step 01:

Open ant type od android IDE, let suppose we are using Android Studio, and start a new project.
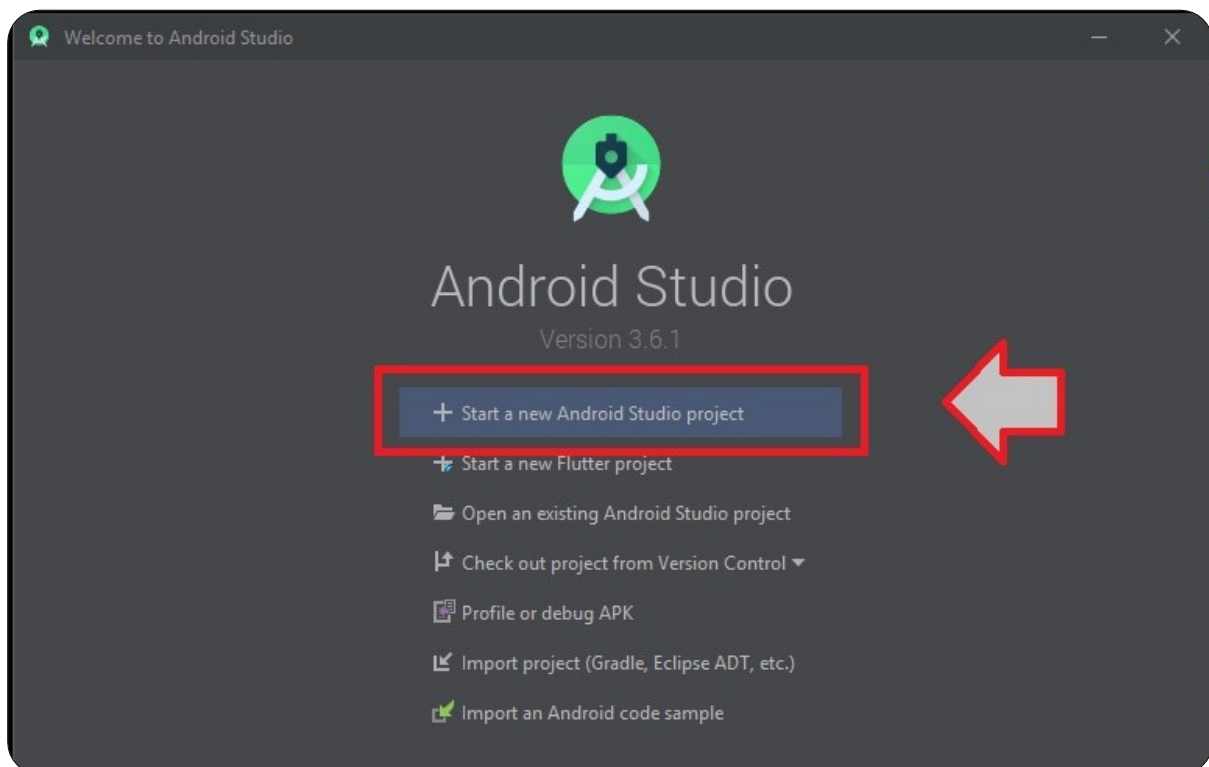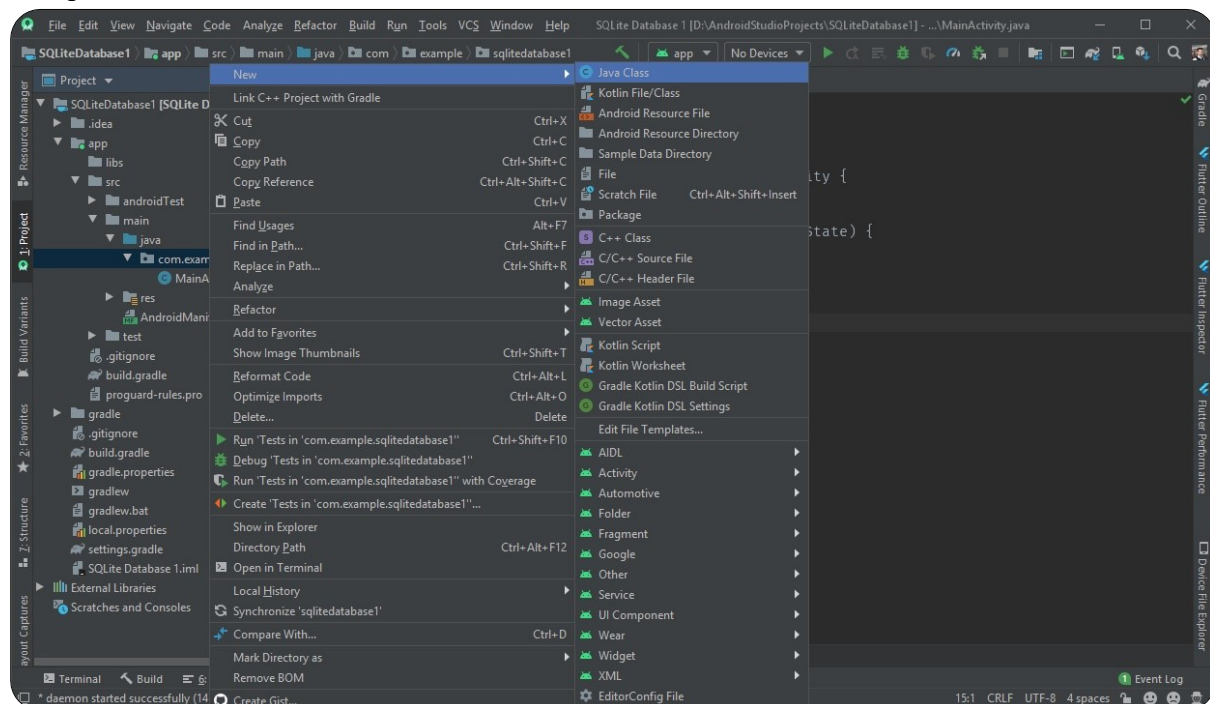

Step 02:

Create a new Android project in any type of IDE (for development of android), let suppose we are taking Android Studio as an Android IDE and let name our project as SQLite Database 1.

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Now, select your programming language as java, select API level (recommend to be select lower…) and Click on finish button as shown above image.
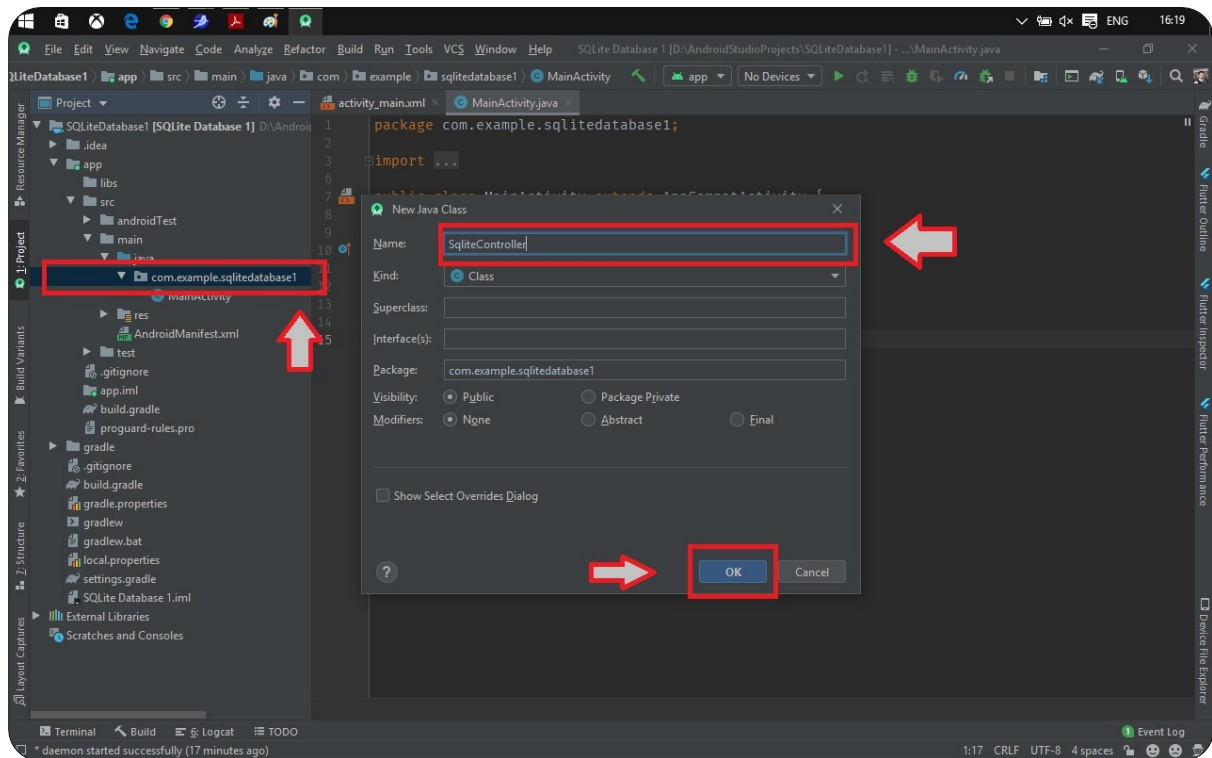
Step 03:

Now, on the same folder of our MainActivity.java create a new Java class and named that class as SqliteController.
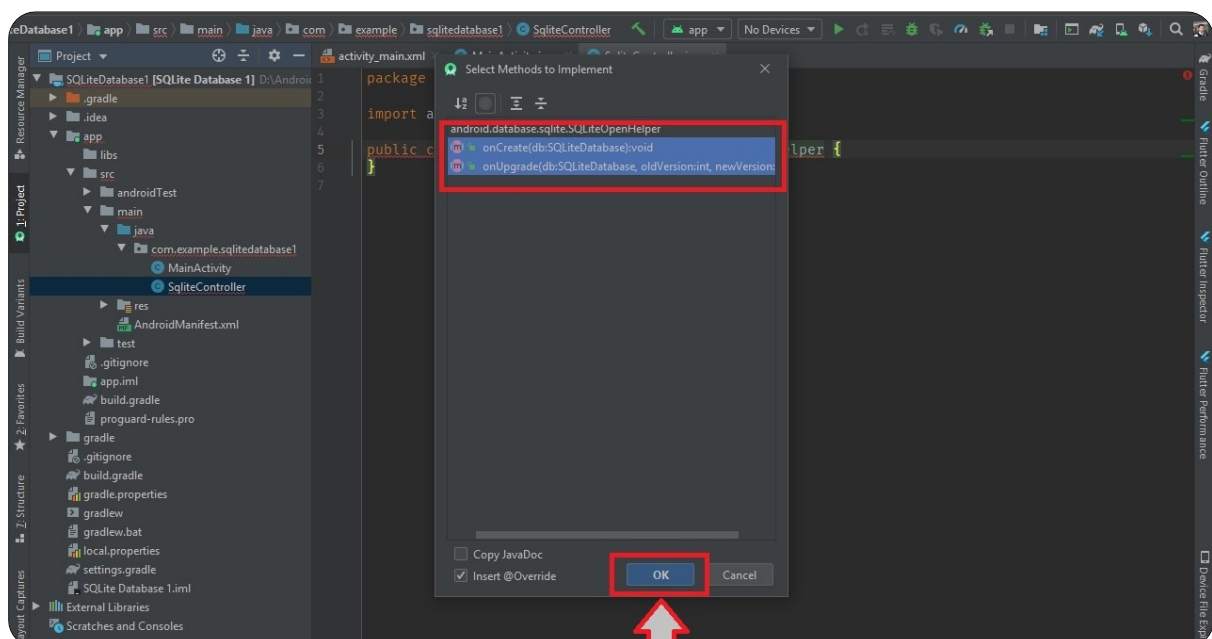
Step 04:

Now named as above step and click to OK of the same window with the click of public file of java in the folder which containing the MainActivity.java.

Step 05:

Now, the IDE shows an error on the folder containing the new java file i.e. SqliteController.java so click Alt + Enter key to identify the remaining methods or included files for the code.

Step 06:

Now what we're going to do is, first of all we're going to create the instance of sqlite database, but last tutorial we have added in the constructor of this database helper this extra line so that we can see the database created.

Okay so, now its time to remove this line and you can paste the same line here because we're are going to use this SQLite database instance in our insert data method so just paste it.

Step 07:

Now the second thing which we need here is the instance of a class called content value and just press Alt + Enter to import all the classes

Step 08:

Now we are going to take this content value instance and we're going to put some data into the column, and it takes two arguments, first is the column name in which you want to insert the data and second is the value itself, so our first column name for name was column two. You can see here. So, column 2, the value which we're going to pass. This is the value we are going to pass here, okay. In the same way, we will do the same for column 3 or the surname column and the marks column, right. And this will correspond to the value, surname and the marks value.

Step 09 :

Now once this is done we can just insert our data using this db instance, db.insert and this takes 3 arguments, first is the table name so our table name is this variable, second is null and third is our content value which we have created

These are the above steps to follow and create an SQLite database made to create the insertion of the data for the user.

Program
SqliteController.java
```
package com.example.sqlitedatabase1;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

public class SqliteHelper extends SQLiteOpenHelper {
    public static final String DATABASE_NAME = "Student.db";
```

```java
    public static final String TABLE_NAME = "student_table";
    public static final String COL_1 = "ID";
    public static final String COL_2 = "NAME";
    public static final String COL_3 = "SURNAME";
    public static final String COL_4 = "MARKS";


    public SqliteHelper(Context context) {
        super(context, DATABASE_NAME, null, 1);
    }


    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create table " + TABLE_NAME +" (ID INTEGER
PRIMARY KEY AUTOINCREMENT,NAME TEXT,SURNAME TEXT,MARKS INTEGER)");
    }


    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int
newVersion) {
        db.execSQL("DROP TABLE IF EXISTS "+TABLE_NAME);
        onCreate(db);
    }


    public boolean insertData(String name,String surname,String
marks) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(COL_2,name);
        contentValues.put(COL_3,surname);
        contentValues.put(COL_4,marks);
        long result = db.insert(TABLE_NAME,null ,contentValues);
        if(result == -1)
            return false;
        else
            return true;
    }


    public Cursor getAllData() {
        SQLiteDatabase db = this.getWritableDatabase();
        Cursor res = db.rawQuery("select * from "+TABLE_NAME,null);
        return res;
    }
}
```

MainActivity.java

```java
package com.example.sqlitedatabase1;

import android.app.AlertDialog;
import android.database.Cursor;
import android.support.v7.app.ActionBarActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;



public class MainActivity extends ActionBarActivity {
    SqliteHelper myDb;
    EditText editName,editSurname,editMarks ,editTextId;
    Button btnAddData;
    Button btnviewAll;
    Button btnDelete;

    Button btnviewUpdate;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        myDb = new SqliteHelper(this);

        editName = (EditText)findViewById(R.id.editText_name);
        editSurname = (EditText)findViewById(R.id.editText_surname);
        editMarks = (EditText)findViewById(R.id.editText_Marks);
        editTextId = (EditText)findViewById(R.id.editText_id);
        btnAddData = (Button)findViewById(R.id.button_add);
        btnviewAll = (Button)findViewById(R.id.button_viewAll);
        btnviewUpdate= (Button)findViewById(R.id.button_update);
        btnDelete= (Button)findViewById(R.id.button_delete);

        AddData();
        viewAll();
    }
    public  void AddData() {
        btnAddData.setOnClickListener(
                new View.OnClickListener() {
```

```java
                @Override
                public void onClick(View v) {
                    boolean isInserted = myDb.insertData
                    (editName.getText().toString(),
                            editSurname.getText().toString(),
                            editMarks.getText().toString() );
                    if(isInserted == true)
                        Toast.makeText(MainActivity.this,"Data
                        Inserted",Toast.LENGTH_LONG).show();
                    else
                        Toast.makeText(MainActivity.this,"Data
                        not Inserted",Toast.LENGTH_LONG).show();
                }
            }
        );
    }

    public void viewAll() {
        btnviewAll.setOnClickListener(
                new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        Cursor res = myDb.getAllData();
                        if(res.getCount() == 0) {
                            // show message
                            showMessage("Error","Nothing found");
                            return;
                        }

                        StringBuffer buffer = new StringBuffer();
                        while (res.moveToNext()) {
                            buffer.append("Id :"+
                                res.getString(0)+"\n");
                            buffer.append("Name :"+
                                res.getString(1)+"\n");
                            buffer.append("Surname :"+
                                res.getString(2)+"\n");
                            buffer.append("Marks :"+
                                res.getString(3)+"\n\n");
                        }
                        showMessage("Data",buffer.toString());
                    }
                }
        );
    }
```

```java
    public void showMessage(String title,String Message){
        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        builder.setCancelable(true);
        builder.setTitle(title);
        builder.setMessage(Message);
        builder.show();
    }
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        int id = item.getItemId();
        if (id == R.id.action_settings) {
            return true;
        }
        return super.onOptionsItemSelected(item);
    }
}
```

activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

<RelativeLayout
android:layout_width="match_parent"
    android:layout_height="match_parent"
xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceLarge"
        android:text="Name"
```

```
        android:id="@+id/textView"
        android:layout_alignParentTop="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceLarge"
        android:text="Surname"
        android:id="@+id/textView2"
        android:layout_below="@+id/editText_name"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceLarge"
        android:text="Marks"
        android:id="@+id/textView3"
        android:layout_below="@+id/editText_surname"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/editText_name"
        android:layout_alignTop="@+id/textView"
        android:layout_toRightOf="@+id/textView"
        android:layout_toEndOf="@+id/textView" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/editText_surname"
        android:layout_alignTop="@+id/textView2"
        android:layout_toRightOf="@+id/textView2"
        android:layout_toEndOf="@+id/textView2" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/editText_Marks"
```

```xml
        android:layout_below="@+id/editText_surname"
        android:layout_toRightOf="@+id/textView3"
        android:layout_toEndOf="@+id/textView3" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add Data"
        android:id="@+id/button_add"
        android:layout_below="@+id/editText_Marks"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true"
        android:layout_marginTop="76dp" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="View All"
        android:id="@+id/button_viewAll"
        android:layout_above="@+id/button_update"
        android:layout_centerHorizontal="true" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textAppearance="?android:attr/textAppearanceLarge"
        android:text="id"
        android:id="@+id/textView_id"
        android:layout_below="@+id/editText_Marks"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/editText_id"
        android:layout_alignTop="@+id/textView_id"
        android:layout_toRightOf="@+id/textView3"
        android:layout_toEndOf="@+id/textView3" />

</RelativeLayout>


</androidx.constraintlayout.widget.ConstraintLayout>
```

Screenshots of created application are as follows: