Program 16

Write a program to create database using SQLite and perform INSERT and SELECT.

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
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"
    android:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Database Operations"
        android:layout_gravity="center"
        android:layout_marginTop="50dp"
        android:textSize="25sp"
        android:textStyle="bold"/>
    <EditText
```

```
        android:id="@+id/rollno"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Roll no"
        android:layout_marginHorizontal="20dp"

       android:layout_marginTop="30dp"/>
    <EditText
        android:id="@+id/name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Name"
        android:layout_marginHorizontal="20dp"
        android:layout_marginTop="10dp"/>
    <EditText
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Email ID"
        android:layout_marginHorizontal="20dp"
        android:layout_marginTop="10dp"/>

<Button
        android:id="@+id/insert_btn"
        android:layout_width="286dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="30dp"
        android:backgroundTint="#8BC34A"
        android:text="Insert into table" />
```

```
    <Button
        android:id="@+id/select_btn"
        android:layout_width="286dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="30dp"
        android:backgroundTint="#8BC34A"
        android:text="View from table"/>
</LinearLayout>
```

MainActivity.java

```
package com.example.sqlite;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import android.database.Cursor;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
public class MainActivity extends AppCompatActivity{
    EditText rollno, name, email;
    Button insert_btn, select_btn;
    dhelpher db;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        rollno=findViewById(R.id.rollno);
        name=findViewById(R.id.name);
        email=findViewById(R.id.email);
        insert_btn=findViewById(R.id.insert_btn);
        select_btn = findViewById(R.id.select_btn);
        db=new dhelpher(getApplicationContext());

        insert_btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                int rollno_num = Integer.parseInt(rollno.getText().toString());
                String name_txt = name.getText().toString();
                String email_txt = email.getText().toString();



                boolean insert_result = db.insertToDB(rollno_num, name_txt,
email_txt);
                if (insert_result) {
                    Toast.makeText(getApplicationContext(), "Inserted
successfully."
                            Toast.LENGTH_LONG).show();
                }
                else {
                    Toast.makeText(getApplicationContext(), "Insertion
failed!!",Toast.LENGTH_LONG).show();
```

```
            }

        }
    });

    select_btn.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View view) {
            Cursor res = db.selectFromDB();
            if (res.getCount() == 0) {
                Toast.makeText(getApplicationContext(), "No entry Exist",
Toast.LENGTH_LONG).show();
            } else {
                StringBuffer buffer = new StringBuffer();
                while (res.moveToNext()){
                    buffer.append("rollno:" + res.getString(0) + "\n");
                    buffer.append("Name:" + res.getString(1) + "\n");
                    buffer.append("email:" + res.getString(2) + "\n");
                }
                AlertDialog.Builder builder = new
AlertDialog.Builder(MainActivity.this);
                builder.setCancelable(true);
                builder.setTitle("User Entries");



                builder.setMessage(buffer.toString());
                builder.show();
```

```
            }
        }
    });
  }
}
```

DBhelpher.java

```
package com.example.sqlite;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;
public class dhelpher extends SQLiteOpenHelper {
  public dhelpher(@Nullable Context context) {
    super(context, "MyDB", null, 1);
  }

  @Override
  public void onCreate(SQLiteDatabase sqliteDatabase) {
    sqliteDatabase.execSQL("CREATE TABLE userdetails (rollno
INTEGER PRIMARY KEY, name TEXT, email TEXT)");
  }
```

```
@Override
public void onUpgrade(SQLiteDatabase sqLiteDatabase,int i,int i1){
   sqLiteDatabase.execSQL("Drop table if exists userdetails");
}
public boolean insertToDB(int rollno, String name, String email) {
   SQLiteDatabase db = this.getWritableDatabase();
   ContentValues values = new ContentValues();
   values.put("rollno", rollno);
   values.put("name", name);
   values.put("email", email);
   long result = db.insert("userdetails", null, values);
   if (result >= 0) {
      return true;
   } else {
      return false;
   }
}

public Cursor selectFromDB() {
   SQLiteDatabase DB = this.getWritableDatabase();
   Cursor cursor = DB.rawQuery("Select * from userdetails", null);
   return cursor;
}

public boolean updateToDB(int rollno, String name, String email) {
   SQLiteDatabase db = this.getWritableDatabase();
   ContentValues values = new ContentValues();
   values.put("name", name);
   values.put("email", email);
```

```
        Cursor check_user = db.rawQuery("SELECT * from userdetails
WHERE rollno=?", new
                String[]{String.valueOf(rollno)});
        if (check_user.getCount() > 0) {



            long update_user_query = db.update("userdetails", values,
"rollno=?", new String[]{String.valueOf(rollno)});

            if (update_user_query >= 0) {
                return true;
            } else {
                return false;
            }
        } else{

            return false;

        }
    }

    public boolean deleteFromDB(int rollno)
    {
        SQLiteDatabase db=this.getWritableDatabase();
        Cursor check_user=db.rawQuery("SELECT * FROM userdetails
WHERE rollno=?",new
                String[] {String.valueOf(rollno)});
        if(check_user.getCount()>(0)){
            long delete_user_query=db.delete("userdetails", "rollno=?", new
```

```
                String[]{String.valueOf(rollno)});
            if(delete_user_query >=0) {
                return true;
            }
            else{
                return false;
            }
        }
        else{

            return false;
        }
    }
}
```