Program no: 21

Aim: Program to implement various SQLite operations : (INSERT, UPDATE ,DELETE ,SELECT).

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout 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:padding="10dp"
   tools:context=".MainActivity">
   <TextView
      android:id="@+id/texttitle"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginTop="20dp"
      android:text="Please enter the details below"
      android:textSize="24dp"/>

   <EditText
      android:id="@+id/name"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Name"
      android:textSize="24dp"
      android:layout_below="@+id/texttitle"
      android:inputType="textPersonName"/>
   <EditText
      android:id="@+id/contact"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Contact"
      android:textSize="24dp"
      android:layout_below="@+id/name"
      android:inputType="number"/>
   <EditText
      android:id="@+id/dob"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Date Of Birth"
      android:textSize="24dp"
      android:layout_below="@+id/contact"
      android:inputType="number"/>
   <Button
      android:id="@+id/buttonInsert"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
```

```
        android:textSize="24dp"
        android:text="Insert New Data"
        android:layout_marginTop="30dp"
        android:layout_below="@+id/dob"/>
    <Button
        android:id="@+id/buttonUpdate"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:text="Update Data"
        android:layout_marginTop="30dp"
        android:layout_below="@+id/buttonInsert"/>
    <Button
        android:id="@+id/buttondelete"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:text="Delete Existing Data"
        android:layout_below="@id/buttonUpdate"/>

    <Button
        android:id="@+id/buttonView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:layout_below="@id/buttondelete"/>

</RelativeLayout>
```

MainActivity.java

```
package com.example.sqllite;


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 name, contact, dob;
    Button insert, update, delete, view;
    DBHelper DB;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
        name=findViewById(R.id.name);
        contact=findViewById(R.id.contact);
        dob=findViewById(R.id.dob);
        insert=findViewById(R.id.buttonInsert);
        update=findViewById(R.id.buttonUpdate);
        delete=findViewById(R.id.buttondelete);
        view=findViewById(R.id.buttonView);
        DB=new DBHelper(this);
        insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT=name.getText().toString();
                String contactTXT=contact.getText().toString();
                String dobTXT=dob.getText().toString();

                Boolean checkinsertdata=DB.insertuserdata(nameTXT,contactTXT,dobTXT);
                if(checkinsertdata==true)
                    Toast.makeText(MainActivity.this, "New Entry Inserted",
Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "unable to insert",


Toast.LENGTH_SHORT).show();
            }
        });
        update.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT=name.getText().toString();
                String contactTXT=contact.getText().toString();
                String dobTXT=dob.getText().toString();

                Boolean checkupdatedata=DB.updateuserdata(nameTXT,contactTXT,dobTXT);
                if(checkupdatedata==true)
                    Toast.makeText(MainActivity.this, "Entry updated",
Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "Not updated",
Toast.LENGTH_SHORT).show();
            }
        });
        delete.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String nameTXT=name.getText().toString();

                Boolean checkdeletedata=DB.deletedata(nameTXT);
                if(checkdeletedata==true)
                    Toast.makeText(MainActivity.this,"Entrydeleted",
```

```
Toast.LENGTH_SHORT).show();
            else
                Toast.makeText(MainActivity.this,"Not deleted", Toast.LENGTH_SHORT).show();
        }
    });
    view.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Cursor res=DB.getdata();
            if(res.getCount()==0){
                Toast.makeText(MainActivity.this,"Noentryexists",
Toast.LENGTH_SHORT).show();
                return;
            }
            StringBuffer buffer=new StringBuffer();
            while(res.moveToNext()){
                buffer.append("Name:"+res.getString(0)+"\n");
                buffer.append("Contact:"+res.getString(1)+"\n");
                buffer.append("Date of Birth:"+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();

        }
    });


}
}
```

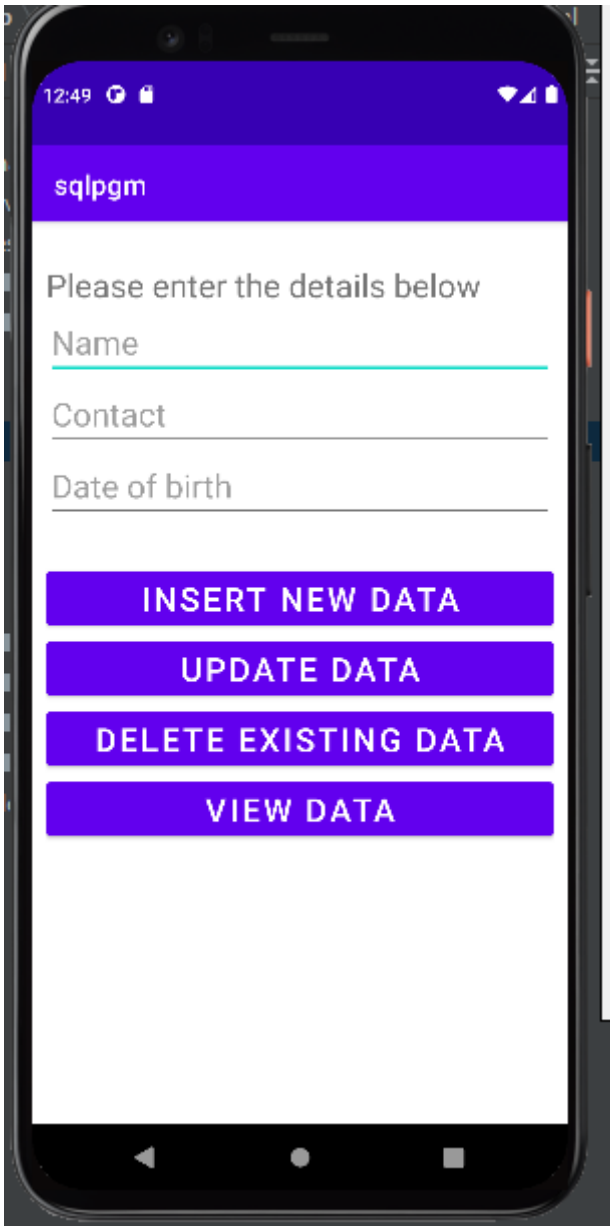
DBHelper.java

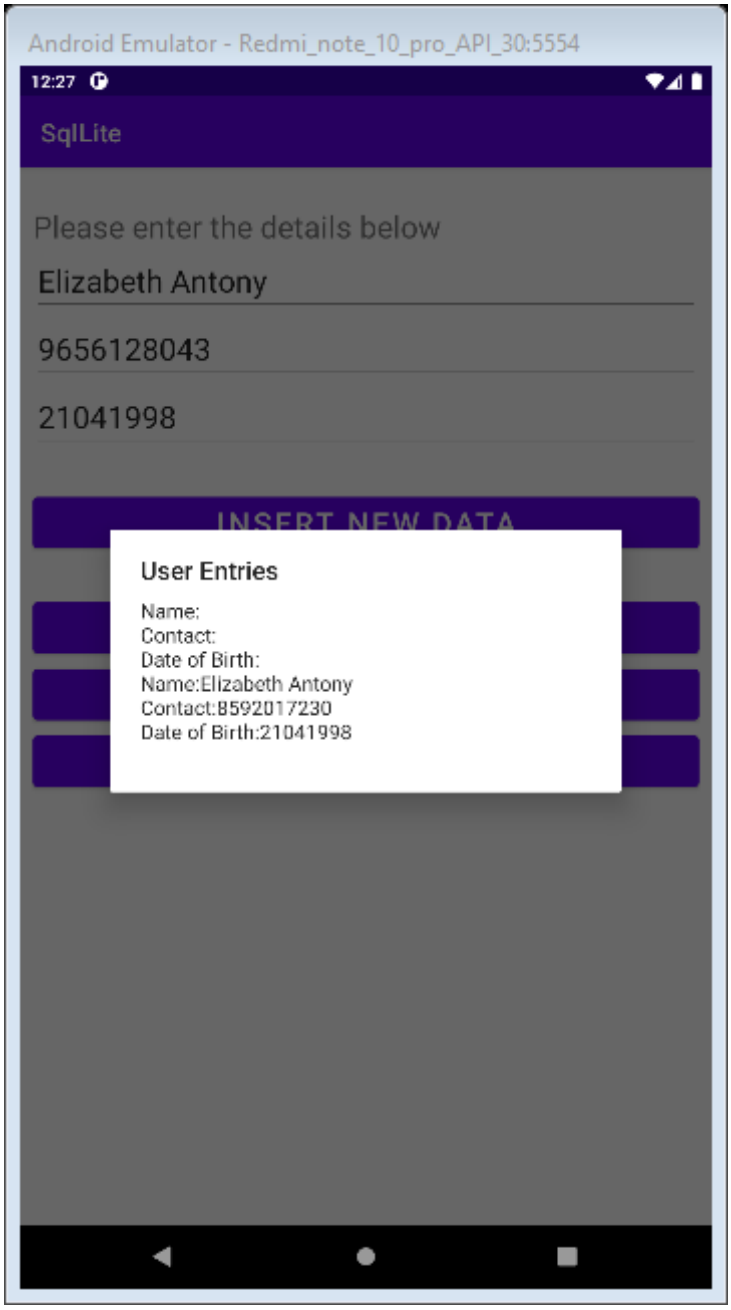
```
package com.example.sqllite;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;
import androidx.annotation.Nullable;

public class DBHelper extends SQLiteOpenHelper {
    public DBHelper(Context context) {
        super(context, "Userdata", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase db) {
        db.execSQL("create Table Userdetails(name TEXT primary key, contact TEXT, dob
```

```
TEXT)");

    }

    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {
        db.execSQL("drop Table if exists Userdetails");
    }
    public Boolean insertuserdata(String name, String contact, String dob){
        SQLiteDatabase DB=this.getWritableDatabase();
        ContentValues contentValues=new ContentValues();
        contentValues.put("name",name);
        contentValues.put("contact",contact);
        contentValues.put("dob",dob);
        long result=DB.insert("Userdetails", null, contentValues);
        if(result==-1){
            return false;
        }else{
            return true;
        }
    }

    public Boolean updateuserdata(String name, String contact, String dob){
        SQLiteDatabase DB=this.getWritableDatabase();
        ContentValues contentValues=new ContentValues();
        contentValues.put("contact",contact);
        contentValues.put("dob",dob);
        Cursor cursor=DB.rawQuery("Select * from Userdetails where name=?", new
String[]{name});
        if(cursor.getCount()>0) {
            long result = DB.update("Userdetails", contentValues, "name=?", new String[]{name});
            if (result == -1) {
                return false;
            } else {
                return true;
            }
        }else{
            return false;
        }
    }
    public Boolean deletedata(String name){
        SQLiteDatabase DB=this.getWritableDatabase();
        Cursor cursor=DB.rawQuery("Select * from Userdetails where name=?", new
String[]{name});
        if(cursor.getCount()>0) {
            long result = DB.delete("Userdetails", "name=?", new String[]{name});
            if (result == -1) {
                return false;
            } else {
                return true;
            }
```

```
        }else{
            return false;
        }
    }
    public Cursor getdata (){
        SQLiteDatabase DB=this.getWritableDatabase();
        Cursor cursor=DB.rawQuery("Select * from Userdetails",null);
        return cursor;
    }
}
```

Output:


12:49
sqlpgm
Please enter the details below
Name
Contact
Date of birth
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
VIEW DATA


Android Emulator - Redmi_note_10_pro_API_30:5554
12:27
SqlLite
Please enter the details below
Elizabeth Antony
9656128043
21041998
INSERT NEW DATA
User Entries
Name:
Contact:
Date of Birth:
Name:Elizabeth Antony
Contact:8592017230
Date of Birth:21041998