Program

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

XML Code:

```
<?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="User details"
        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_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:text="View data"
        android:layout_below="@+id/buttondelete"
        />
</RelativeLayout>
```

Java Code:

```
package com.example.database;
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(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)
```

```
            Toast.makeText(MainActivity.this, "New Entry Inserted",
Toast.LENGTH_LONG).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_LONG).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, "Entry deleted",
Toast.LENGTH_LONG).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, "No entry exists",
Toast.LENGTH_LONG).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();

            }
        });
 }
}
```

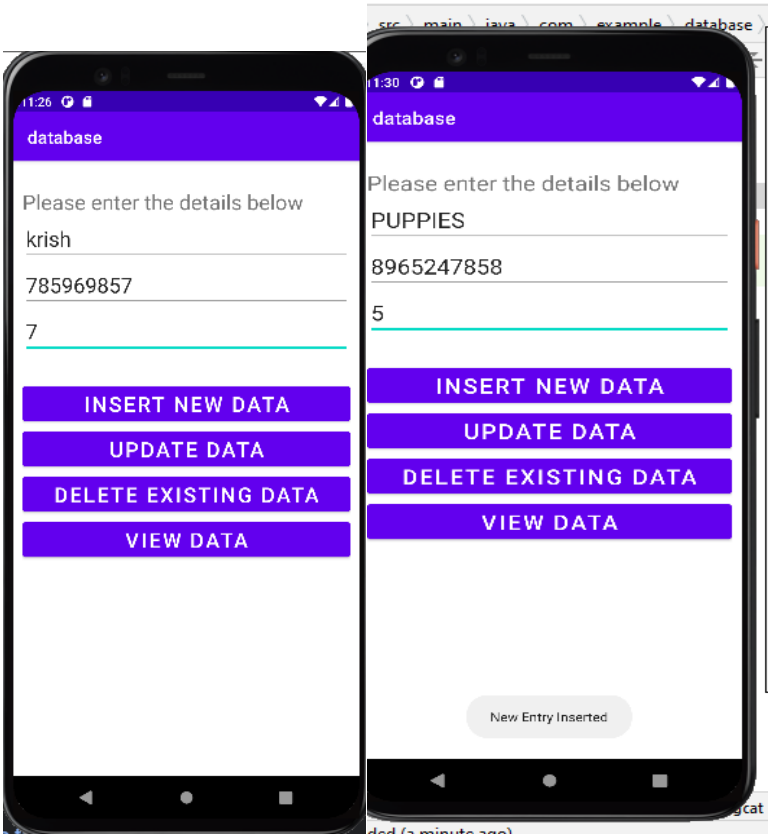
DBHelper.java

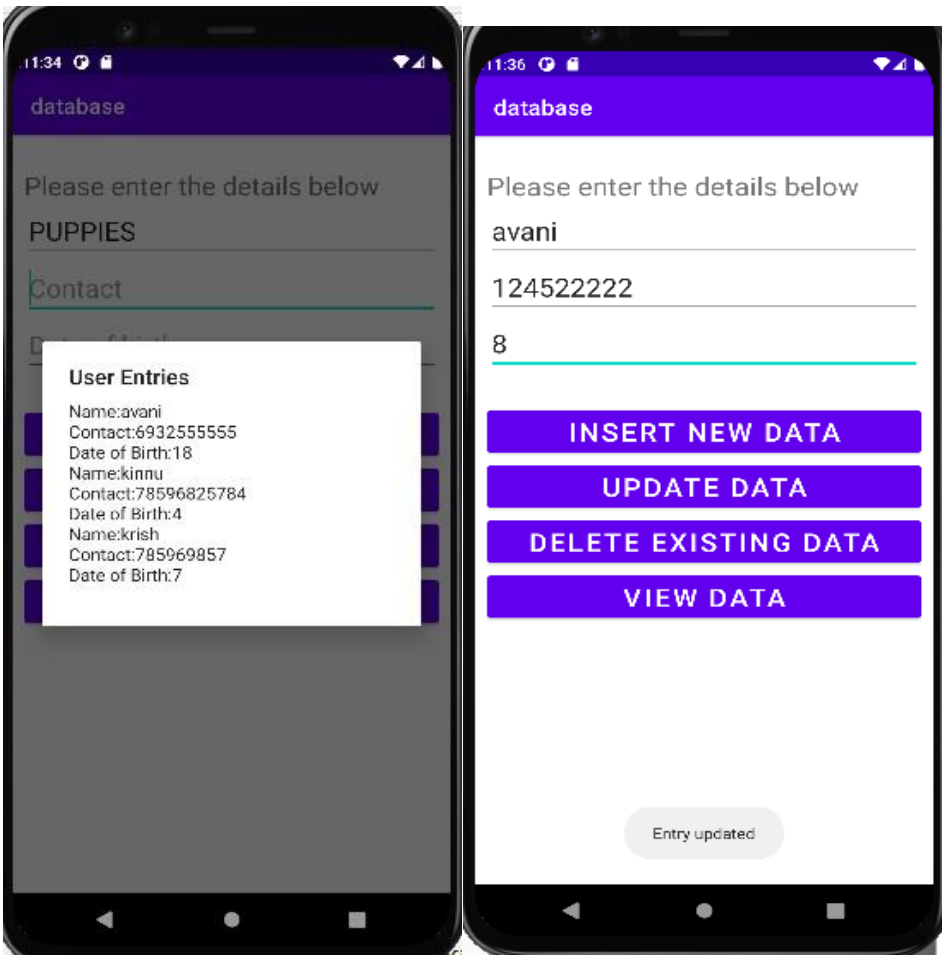
```
package  com.example.database;
import android.content.ContentValues;
import  android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

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);
```

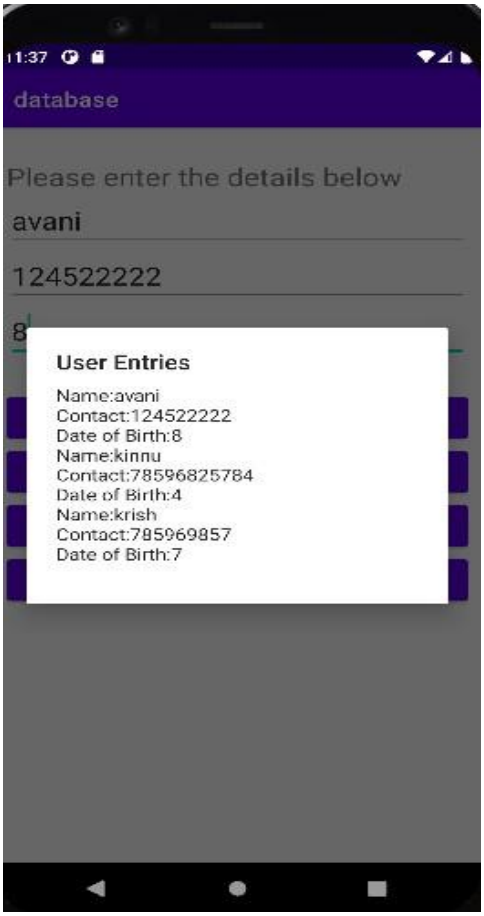
```
        if(result==-1){
            return false;
        }else{
            return true;
        }
    }
    public Boolean updateuserdata(String name, String contact, String dob){
        SQLiteDatabase DB=this.getWritableDatabase();
        ContentValues contentValues=new ContentValues();
        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:


11:26
database
Please enter the details below
krish
785969857
7
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
VIEW DATA
11:30
database
Please enter the details below
PUPPIES
8965247858
5
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
VIEW DATA
New Entry Inserted


11:34
database
Please enter the details below
PUPPIES
Contact
User Entries
Name:avani
Contact:6932555555
Date of Birth:18
Name:kinnu
Contact:78596825784
Date of Birth:4
Name:krish
Contact:785969857
Date of Birth:7
11:36
database
Please enter the details below
avani
124522222
8
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
VIEW DATA
Entry updated


11:37
database
Please enter the details below
avani
124522222
8
User Entries
Name:avani
Contact:124522222
Date of Birth:8
Name:kinnu
Contact:78596825784
Date of Birth:4
Name:krish
Contact:785969857
Date of Birth:7