SSN COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
UCS1711 - Mobile Application Development Lab
Exercise – 5 Android Application for CRUD Operations on Database

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AIM:

1. Create a database using SQLite which contains the following fields:
Name, Address, Phone, Email
2. Create an activity with the below buttons
Insert, Display, Edit, Delete and when these buttons are pressed a new activity should open.

CODE:

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="match_parent"
       android:layout_height="wrap_content"
       android:text="Please enter the details below"
       android:textSize="24dp"
       android:layout_marginTop="20dp"
       />
   <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="Address"
        android:textSize="24dp"
        android:layout_below="@+id/contact"
        android:inputType="text"/>

    <EditText
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Email"
        android:textSize="24dp"
        android:layout_below="@+id/dob"
        android:inputType="text"/>

    <Button
        android:id="@+id/btnInsert"
        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/email"/>

    <Button
        android:id="@+id/btnUpdate"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:text="Update Data"
        android:layout_below="@id/btnInsert"/>
    <Button
        android:id="@+id/btnDelete"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:text="Delete Existing Data"
        android:layout_below="@id/btnUpdate"/>
    <Button
        android:id="@+id/btnView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="24dp"
        android:text="View Data"
        android:layout_below="@id/btnDelete"/>
</RelativeLayout>
```

DBHelper.java:

```
package com.example.a078_ex5_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.db", null, 1);
   }

   @Override
   public void onCreate(SQLiteDatabase DB) {
       DB.execSQL("create Table Userdetails(name TEXT primary key, contact TEXT, dob
TEXT, email TEXT)");
   }

   @Override
   public void onUpgrade(SQLiteDatabase DB, int i, int i1) {
       DB.execSQL("drop Table if exists Userdetails");
   }

   public Boolean insertuserdata(String name, String contact, String dob, String
email)
   {
       SQLiteDatabase DB = this.getWritableDatabase();
       ContentValues contentValues = new ContentValues();
       contentValues.put("name", name);
       contentValues.put("contact", contact);
       contentValues.put("dob", dob);
       contentValues.put("email", email);

       long result=DB.insert("Userdetails", null, contentValues);
       if(result==-1){
           return false;
       }else{
           return true;
       }
   }


   public Boolean updateuserdata(String name, String contact, String dob, String
email) {
       SQLiteDatabase DB = this.getWritableDatabase();
       ContentValues contentValues = new ContentValues();
       contentValues.put("contact", contact);
       contentValues.put("dob", dob);
       contentValues.put("email", email);
```

```
        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;

    }
}
```

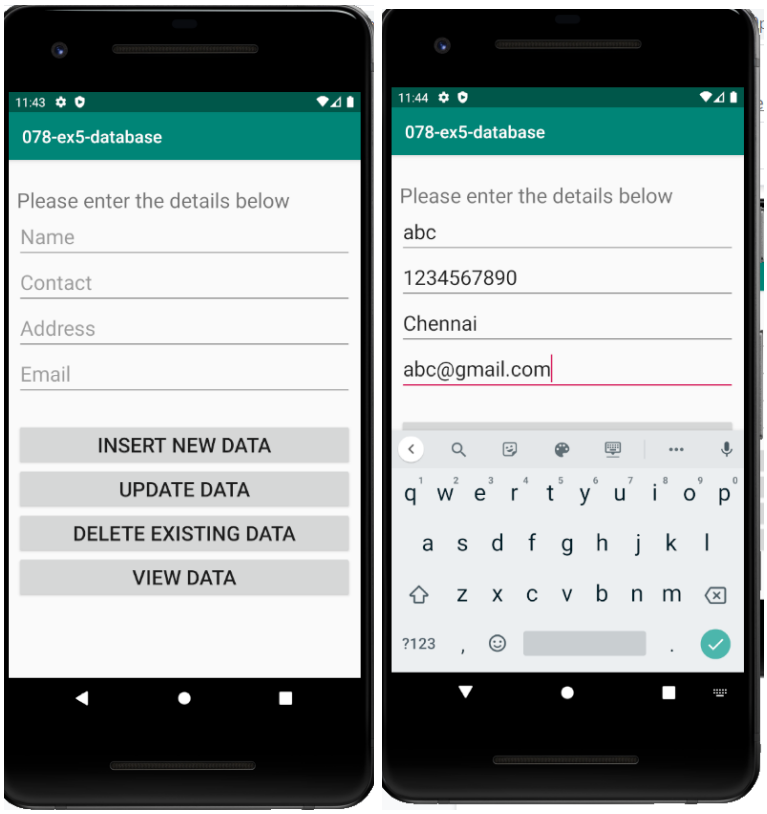
MainActivity.java:

```
package com.example.a078_ex5_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, email;
   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);
       email = findViewById(R.id.email);

       insert = findViewById(R.id.btnInsert);
       update = findViewById(R.id.btnUpdate);
       delete = findViewById(R.id.btnDelete);
       view = findViewById(R.id.btnView);
       DB = new DBHelper(this);
       insert.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               String nameTXT = name.getText().toString();
               String contactTXT = contact.getText().toString();
               String dobTXT = dob.getText().toString();
               String emailTXT = email.getText().toString();

               Boolean checkinsertdata = DB.insertuserdata(nameTXT, contactTXT,
dobTXT, emailTXT);
               if(checkinsertdata==true)
                   Toast.makeText(MainActivity.this, "New Entry Inserted",
Toast.LENGTH_SHORT).show();
               else
                   Toast.makeText(MainActivity.this, "New Entry Not Inserted",
Toast.LENGTH_SHORT).show();
           }        });
       update.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
               String nameTXT = name.getText().toString();
               String contactTXT = contact.getText().toString();
               String dobTXT = dob.getText().toString();
               String emailTXT = email.getText().toString();

               Boolean checkupdatedata = DB.updateuserdata(nameTXT, contactTXT,
dobTXT, emailTXT);
               if(checkupdatedata==true)
                   Toast.makeText(MainActivity.this, "Entry Updated",
Toast.LENGTH_SHORT).show();
               else
                   Toast.makeText(MainActivity.this, "New Entry Not Updated",
Toast.LENGTH_SHORT).show();
           }        });
       delete.setOnClickListener(new View.OnClickListener() {
           @Override
```

```
            public void onClick(View view) {
                String nameTXT = name.getText().toString();
                Boolean checkudeletedata = DB.deletedata(nameTXT);
                if(checkudeletedata==true)
                    Toast.makeText(MainActivity.this, "Entry Deleted",
Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "Entry Not Deleted",
Toast.LENGTH_SHORT).show();
            }        });

        view.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Cursor res = DB.getdata();
                if(res.getCount()==0){
                    Toast.makeText(MainActivity.this, "No Entry Exists",
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("Address :"+res.getString(2)+"\n");
                    buffer.append("Email :"+res.getString(3)+"\n\n");
                }

                AlertDialog.Builder builder = new
AlertDialog.Builder(MainActivity.this);
                builder.setCancelable(true);
                builder.setTitle("User Entries");
                builder.setMessage(buffer.toString());
                builder.show();
            }        });
    }}
```

OUTPUT:


11:43
078-ex5-database
Please enter the details below
Name
Contact
Address
Email
INSERT NEW DATA
UPDATE DATA
DELETE EXISTING DATA
VIEW DATA
11:44
078-ex5-database
Please enter the details below
abc
1234567890
Chennai
abc@gmail.com