Mobile Computing Lab 8: Write a Program to insert and display data from database using Android/other

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Code:

(activity_main.xml)

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/and
roid"
    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">

    <EditText
        android:id="@+id/id"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="42dp"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint ="Enter ID"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/name"
        android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
    android:layout_marginTop="140dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:hint ="Enter Name"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.502"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<EditText
    android:id="@+id/addr"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="232dp"
    android:ems="10"
    android:inputType="textPersonName"
    android:hint ="Enter Address"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.502"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/insert"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="348dp"
    android:text="Insert"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />

<Button
    android:id="@+id/display"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="452dp"
```

```
        android:text="Display"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

(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;

import com.example.sqlite.DBHelper;

public class MainActivity extends AppCompatActivity {
    EditText id, name, addr;
    Button insert, display;
    DBHelper DB;

    @Override
    protected void onCreate(Bundle
savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name = findViewById(R.id.name);
        id = findViewById(R.id.id);
        addr = findViewById(R.id.addr);
        insert = findViewById(R.id.insert);
        display = findViewById(R.id.display);
        DB = new DBHelper(this);
```

```
        insert.setOnClickListener(new
View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String nameTXT =
name.getText().toString();
                String idTXT =
id.getText().toString();
                String addrTXT =
addr.getText().toString();

                Boolean checkinsertdata =
DB.insertuserdata(idTXT, nameTXT, addrTXT);
                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();
            }        });


        display.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("ID
:"+res.getString(0)+"\n");
                    buffer.append("Name
```

```
:"+res.getString(1)+"\n");
                    buffer.append("Address
:"+res.getString(2)+"\n\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.sqlite;

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

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(id TEXT
primary key, name TEXT,addr  TEXT)");
    }

    @Override
```

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

    public Boolean insertuserdata(String id, String
name, String addr)
    {
        SQLiteDatabase DB =
this.getWritableDatabase();
        ContentValues contentValues = new
ContentValues();
        contentValues.put("id", id);
        contentValues.put("name", name);
        contentValues.put("addr", addr);
        long result=DB.insert("Userdetails", null,
contentValues);
        if(result==-1){
            return false;
        }else{
            return true;
        }
    }

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

    }
}
```