## Program no: 21

## Aim: Program to implement various SQLite operations:(INSERT, UPDATE,

## DELETE, SELECT)

**XML 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="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\_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:**

## MainActivity.java

## package com.example.mydatabaseapp;

## 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;

## DBmain 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 DBmain(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, "Entry deleted", 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, "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("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();

## }

## });

## }

## }

## DBmain.java

## package com.example.mydatabaseapp;

## 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 DBmain extends SQLiteOpenHelper {

## public DBmain(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:**

## 

