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**Batch & Roll:** A3-63

**Experiment No.10**

**Title:** To design an Android application using SQLite database for CRUD operations.

MainActivity.java

package com.example.expt10sqlite;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

Button b1,b2,b3,b4;

EditText name,age;

String str,str1;

Boolean r1,r2;

int r3;

DBHelper mydb;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

name = findViewById(R.id.name);

age = findViewById(R.id.age);

b1 = findViewById(R.id.insert);

b2 = findViewById(R.id.update);

b3 = findViewById(R.id.delete);

b4 = findViewById(R.id.get);

mydb= new DBHelper(MainActivity.this);

b1.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

str=name.getText().toString();

str1=age.getText().toString();

r1=mydb.insertRecord(str,str1);

}

});

b2.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String str2=name.getText().toString();

String str3=age.getText().toString();

r2=mydb.updateData(str2,str3);

}

});

b3.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

String str4=name.getText().toString();

r3=mydb.deleteData(str4);

}

});

b4.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent=new Intent(MainActivity.this, MainActivity2.class);

startActivity(intent);

}

});

}

}

Activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout 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"

tools:context=".MainActivity">

<EditText

android:id="@+id/age"

android:layout\_width="100dp"

android:layout\_height="wrap\_content"

android:layout\_marginBottom="444dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.443"

app:layout\_constraintStart\_toEndOf="@+id/textView2" />

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="136dp"

android:text="Name"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.212"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<EditText

android:id="@+id/name"

android:layout\_width="100dp"

android:layout\_height="wrap\_content"

android:layout\_marginTop="120dp"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.415"

app:layout\_constraintStart\_toEndOf="@+id/textView"

app:layout\_constraintTop\_toTopOf="parent" />

<TextView

android:id="@+id/textView2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginBottom="460dp"

android:text="Age"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.212"

app:layout\_constraintStart\_toStartOf="parent" />

<Button

android:id="@+id/insert"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="116dp"

android:text="Insert Data"

app:layout\_constraintEnd\_toStartOf="@+id/update"

app:layout\_constraintHorizontal\_bias="0.536"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/textView2" />

<Button

android:id="@+id/update"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="100dp"

android:layout\_marginEnd="36dp"

android:text="Update data"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/age" />

<Button

android:id="@+id/delete"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="68dp"

android:text="delete data"

app:layout\_constraintEnd\_toStartOf="@+id/get"

app:layout\_constraintHorizontal\_bias="0.54"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/insert" />

<Button

android:id="@+id/get"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="68dp"

android:layout\_marginEnd="64dp"

android:text="get data"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/update" />

</androidx.constraintlayout.widget.ConstraintLayout>

MainActivity.java

package com.example.expt10sqlite;

import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;

import android.os.Bundle;

import android.widget.ArrayAdapter;

import android.widget.ListView;

import android.widget.Toast;

import java.util.ArrayList;

public class MainActivity2 extends AppCompatActivity {

DBHelper mydb;

ListView obj;

ArrayList<String> listitem;

ArrayAdapter adapter;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

mydb = new DBHelper(this);

obj = (ListView) findViewById(R.id.lv);

listitem = new ArrayList<>();

Cursor cursor = mydb.getAllData();

if (cursor.getCount()==0){

Toast.makeText(this, "No Data found", Toast.LENGTH\_SHORT).show();

}

else{

while(cursor.moveToNext()){

listitem.add(cursor.getString(0));

listitem.add(cursor.getString(1));

}

adapter = new ArrayAdapter<>(this, android.R.layout.simple\_list\_item\_1, listitem);

obj.setAdapter(adapter);

}

}

}

Activity\_main2.xml

<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.ConstraintLayout 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"

tools:context=".MainActivity2">

<ListView

android:id="@+id/lv"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_alignParentTop="true"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

DBHelper.java

package com.example.expt10sqlite;

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 static final String DATABASE\_NAME = "Users";

Context context;

public DBHelper(Context context){

super(context,DATABASE\_NAME,null,1);

}

@Override

public void onCreate(SQLiteDatabase sqLiteDatabase) {

sqLiteDatabase.execSQL("create table cust "+"(name text,age text)");

}

@Override

public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {

sqLiteDatabase.execSQL("DROP TABLE IF EXISTS cust");

onCreate(sqLiteDatabase);

}

public boolean insertRecord(String name, String age){

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put("name",name);

contentValues.put("age",age);

db.insert("cust",null,contentValues);

return true;

}

public Cursor getAllData(){

SQLiteDatabase db = this.getReadableDatabase();

Cursor res = db.rawQuery("select \* from cust",null);

return res;

}

public boolean updateData (String name2, String age2) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put("name", name2);

contentValues.put("age", age2);

db.update("cust", contentValues, "name = ? ", new String[] { name2 } );

return true;

}

public Integer deleteData (String name3) {

SQLiteDatabase db = this.getWritableDatabase();

return db.delete("cust", "name = ? ", new String[] { name3 });

}

}

Output:-

