

COURSE OUTCOME - 5

PROGRAM NO: 1

AIM: Create database using SQLite and perform INSERT and SELECT

PROGRAM CODE:

JAVA CODE:

MainActivity.java

```
package com.example.co5_q1insertread;

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, address, number;

    Button add, update, delete, viewuser;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);

    }

    public void insertUser(View view){
```

```
name = findViewById(R.id.name);

address = findViewById(R.id.add);

number = findViewById(R.id.num);

DBHelper DB = new DBHelper(this);

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

String add = address.getText().toString();

String num = number.getText().toString();

Boolean checkinsert = DB.insertuserDB(nam,add,num);

if(checkinsert){

    Toast.makeText(this, "User added Succesfully", Toast.LENGTH_SHORT).show();

}

else{

    Toast.makeText(this, "User not added", Toast.LENGTH_SHORT).show();

}

name.setText("");

address.setText("");

number.setText("");

}

public void updateUser(View view){

    name = findViewById(R.id.name);

    address = findViewById(R.id.add);

    number = findViewById(R.id.num);

    DBHelper DB = new DBHelper(this);
```

```
String nam = name.getText().toString();

String add = address.getText().toString();

String num = number.getText().toString();

Boolean checkupdate = DB.UpdateuserDB(nam,add,num);

if(checkupdate){

    Toast.makeText(this, "User data updated Succesfully",
        Toast.LENGTH_SHORT).show();

}

else{

    Toast.makeText(this, "User date not updated", Toast.LENGTH_SHORT).show();

}

name.setText("");

address.setText("");

number.setText("");

}

public void deleteUser(View view){

    name = findViewById(R.id.name);

    DBHelper DB = new DBHelper(this);

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

    Boolean checkdelete= DB.DeleteuserDB(nam);

    if(checkdelete){

        Toast.makeText(this, "User deleted Succesfully", Toast.LENGTH_SHORT).show();

    }

    else{
```

```
        Toast.makeText(this, "User not deleted", Toast.LENGTH_SHORT).show();
    }

    name.setText("");

    address.setText("");

    number.setText("");
}

public void viewUser(View view){

    DBHelper DB = new DBHelper(this);

    Cursor res = DB.getuserDB();

    AlertDialog.Builder alert = new AlertDialog.Builder(this);

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

        alert.setCancelable(true);

        alert.setTitle("Users Data");

        alert.setMessage("No user found");

        alert.show();

    }

    else {

        StringBuffer buffer = new

        StringBuffer(); while

        (res.moveToNext()) {

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

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

            buffer.append("Mobile Number:" + res.getString(2) + "\n\n");

        }

    }

}
```

```
        alert.setCancelable(true);

        alert.setTitle("Users Data");

        alert.setMessage(buffer.toString());

        alert.show();

        name.setText("");

        address.setText("");

        number.setText("");
    }
}
}
```

DBHelper.java

```
package com.example.co5_q1insertread;

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, "User.DB", null, 1);

    }

    @Override
```

```

public void onCreate(SQLiteDatabase DB) {

    DB.execSQL("create table userdata(name Text primary key, address TEXT,
number TEXT)");

}

@Override

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

    DB.execSQL("drop Table if exists userdata");

}

public Boolean insertuserDB(String name,String address, String number){

    SQLiteDatabase DB = this.getWritableDatabase();

    ContentValues cv = new ContentValues();

    cv.put("name",name);

    cv.put("address",address);

    cv.put("number",number);

    long result =DB.insert("userdata",null,cv);

    if(result==-1){

        return false;

    }

    else{

        return true;

    }

}

public Boolean UpdateuserDB(String name,String address, String number){

    SQLiteDatabase DB = this.getWritableDatabase();

```

```

ContentValues cv = new ContentValues();

cv.put("address",address);

cv.put("number",number);

Cursor cursor = DB.rawQuery("Select * from userdata where name = ?",new
String[]{name});

if(cursor.getCount()>0){

    long result = DB.update("userdata",cv,"name=?",new String[]{name});

    if(result==-1){

        return false;

    }

    else{

        return true;

    }

}

else{

    return false;

}

}

public Boolean DeleteuserDB(String name){

    SQLiteDatabase DB = this.getWritableDatabase();

    Cursor cursor = DB.rawQuery("Select * from userdata where name = ?",new
String[]{name});

    if(cursor.getCount()>0){

        long result = DB.delete("userdata","name=?",new String[]{name});

```



```

        if(result==-1){

            return false;

        }

        else{

            return true;

        }

    }

    else{

        return false;

    }

}

public Cursor getuserDB(){

    SQLiteDatabase DB = this.getWritableDatabase();

    Cursor cursor = DB.rawQuery("Select * from userdata",null); return

    cursor;

}

}

```

XML CODE:

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">

```

```
<Button
    android:id="@+id/adduser"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="insertUser"
    android:text="Add User"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.526"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.455" />
```

```
<Button
    android:id="@+id/view"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="viewUser"
    android:text="View Users"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.528"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.787" />
```

```
<Button
    android:id="@+id/delete"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="deleteUser" android:text="Delete
    User"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.528"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.664" />
```

```
<EditText
    android:id="@+id/name"
    android:layout_width="188dp"
    android:layout_height="43dp"
    android:ems="10"
    android:hint="Name"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.578"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.174" />
```

```
<EditText android:id="@+id/num"
    android:layout_width="188dp"
    android:layout_height="43dp"
    android:ems="10"
    android:hint="Mobile Number"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.578"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.354" />
```

```
<TextView
    android:layout_width="319dp"
    android:layout_height="27dp"
    android:text="User Registration"
    android:textAlignment="center"
    android:textAllCaps="true"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.629"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
```

```

        app:layout_constraintVertical_bias="0.042" />

<EditText android:id="@+id/add"
    android:layout_width="188dp"
    android:layout_height="43dp"
    android:ems="10"
    android:hint="Address"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.578"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.271" />

<Button
    android:id="@+id/update"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="updateUser" android:text="Update
    User Data"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.528"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.571" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

RESULT: The program executed successfully and obtained the output.

OUTPUT

The image displays three sequential screenshots of a mobile application interface for user management. The app is titled "CO5_Q1(INsert&READ)" and features a dark theme with purple accents.

Screenshot 1 (Left): Shows the "USER REGISTRATION" screen. The input fields are filled with "Ananya B", "ananya", and "4790542". The "ADD USER" button is highlighted in purple. Below it are buttons for "UPDATE USER DATA", "DELETE USER", and "VIEW USERS".

Screenshot 2 (Middle): Shows the same registration screen, but the "ADD USER" button is now grey, and a white toast message at the bottom states "User added Succesfully".

Screenshot 3 (Right): Shows a "Users Data" list. It contains the following entries:

- Name:Shana
Address:NP
Mobile Number:1134689
- Name:Shana Parween
Address:NP
Mobile Number:12467900
- Name:
Address:
Mobile Number:
- Name:christy raj
Address:Raj
Mobile Number:1235689
- Name:Ananya B
Address:ananya
Mobile Number:4790542

PROGRAM NO :2

AIM: Perform UPDATE and DELETE on SQLite database

PROGRAM CODE:

JAVA CODE:

MainActivity.java

```
package com.example.co5_q2updatedelete;
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, address, number;
    Button add, update, delete, viewuser;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void insertUser(View view){
        name = findViewById(R.id.name);
        address = findViewById(R.id.add);
        number = findViewById(R.id.num);
        DBHelper DB = new DBHelper(this);
        String nam = name.getText().toString();
        String add = address.getText().toString();
        String num = number.getText().toString();
        Boolean checkinsert = DB.insertuserDB(nam,add,num);
        if(checkinsert){
            Toast.makeText(this, "User added Succesfully", Toast.LENGTH_SHORT).show();
        }
        else{
            Toast.makeText(this, "User not added", Toast.LENGTH_SHORT).show();
        }
    }
}
```

```

        name.setText("");
        address.setText("");
        number.setText("");
    }
    public void updateUser(View view){
        name = findViewById(R.id.name);
        address = findViewById(R.id.add);
        number = findViewById(R.id.num);
        DBHelper DB = new DBHelper(this);
        String nam = name.getText().toString();
        String add = address.getText().toString();
        String num = number.getText().toString();
        Boolean checkupdate = DB.UpdateuserDB(nam,add,num);
        if(checkupdate){
            Toast.makeText(this, "User data updated Succesfully",
                Toast.LENGTH_SHORT).show();
        }
        else{
            Toast.makeText(this, "User date not updated", Toast.LENGTH_SHORT).show();
        }
        name.setText("");
        address.setText("");
        number.setText("");
    }
    public void deleteUser(View view){
        name = findViewById(R.id.name);
        DBHelper DB = new DBHelper(this);
        String nam = name.getText().toString();
        Boolean checkdelete= DB.DeleteuserDB(nam);
        if(checkdelete){
            Toast.makeText(this, "User deleted Succesfully", Toast.LENGTH_SHORT).show();
        }
        else{
            Toast.makeText(this, "User not deleted", Toast.LENGTH_SHORT).show();
        }
        name.setText("");
        address.setText("");
        number.setText("");
    }
    public void viewUser(View view){
        DBHelper DB = new DBHelper(this);

```

```

Cursor res = DB.getuserDB();
AlertDialog.Builder alert = new AlertDialog.Builder(this);
if(res.getCount()==0){
    alert.setCancelable(true);
    alert.setTitle("Users Data");
    alert.setMessage("No user found");
    alert.show();
}
else {
    StringBuffer buffer = new
    StringBuffer(); while
    (res.moveToNext()) {
        buffer.append("Name:" + res.getString(0) + "\n");
        buffer.append("Address:" + res.getString(1) + "\n");
        buffer.append("Mobile Number:" + res.getString(2) + "\n\n");
    }
    alert.setCancelable(true);
    alert.setTitle("Users Data");
    alert.setMessage(buffer.toString());
    alert.show();
    name.setText("");
    address.setText("");
    number.setText("");
}
}
}

```

DBHelper.java

```

package com.example.co5_q2updatedelete;
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, "User.DB", null, 1);
    }
    @Override
    public void onCreate(SQLiteDatabase DB) {

```



```

        DB.execSQL("create table userdata(name Text primary key, address TEXT,
number TEXT)");
    }
    @Override
    public void onUpgrade(SQLiteDatabase DB, int i, int i1) {
        DB.execSQL("drop Table if exists userdata");
    }
    public Boolean insertuserDB(String name,String address, String number){
        SQLiteDatabase DB = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put("name",name);
        cv.put("address",address);
        cv.put("number",number);
        long result = DB.insert("userdata",null,cv);
        if(result==-1){
            return false;
        }
        else{
            return true;
        }
    }
    public Boolean UpdateuserDB(String name,String address, String number){
        SQLiteDatabase DB = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put("address",address);
        cv.put("number",number);
        Cursor cursor = DB.rawQuery("Select * from userdata where name = ?",new
String[]{name});
        if(cursor.getCount()>0){
            long result = DB.update("userdata",cv,"name=?",new String[]{name});
            if(result==-1){
                return false;
            }
            else{
                return true;
            }
        }
        else{
            return false;
        }
    }

```

```

    }
}
public Boolean DeleteuserDB(String name){
    SQLiteDatabase DB = this.getWritableDatabase();
    Cursor cursor = DB.rawQuery("Select * from userdata where name = ?",new
String[]{name});
    if(cursor.getCount(>0){
        long result = DB.delete("userdata","name=?",new String[]{name});
        if(result==1){
            return false;
        }
        else{
            return true;
        }
    }
    else{
        return false;
    }
}
}
public Cursor getuserDB(){
    SQLiteDatabase DB = this.getWritableDatabase();
    Cursor cursor = DB.rawQuery("Select * from userdata",null); return
cursor;
}
}

```

XML CODE:

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">

    <Button
        android:id="@+id/adduser"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"

```

```
android:onClick="insertUser"
android:text="Add User"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.526"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.455" />
```

```
<Button
    android:id="@+id/view"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="viewUser"
    android:text="View Users"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.528"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.787" />
```

```
<Button
    android:id="@+id/delete"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:onClick="deleteUser" android:text="Delete
    User"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.528"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.664" />
```

```
<EditText
    android:id="@+id/name"
    android:layout_width="188dp"
    android:layout_height="43dp"
    android:ems="10"
```

```
android:hint="Name"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.578"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.174" />
```

```
<EditText android:id="@+id/num"
    android:layout_width="188dp"
    android:layout_height="43dp"
    android:ems="10"
    android:hint="Mobile Number"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.578"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.354" />
```

```
<TextView
    android:layout_width="319dp"
    android:layout_height="27dp"
    android:text="User Registration"
    android:textAlignment="center"
    android:textAllCaps="true"
    android:textStyle="bold"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.629"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.042" />
```

```
<EditText android:id="@+id/add"
    android:layout_width="188dp"
```

```
android:layout_height="43dp"
android:ems="10"
android:hint="Address"
android:inputType="textPersonName"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.578"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.271" />
```

<Button

```
android:id="@+id/update"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:onClick="updateUser"
android:text="Update User Data"
app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintHorizontal_bias="0.528"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toTopOf="parent"
app:layout_constraintVertical_bias="0.571" />
```

</androidx.constraintlayout.widget.ConstraintLayout>

RESULT:The program executed successfully and obtained the output.

OUTPUT

9:24 18%

CO5_Q2(UPDATE&DELETE)

USER REGISTRATION

Name

Address

Mobile Number

ADD USER

UPDATE USER DATA

DELETE USER

VIEW USERS

User data updated Succesfully

9:24 18%

CO5_Q2(UPDATE&DELETE)

USER REGISTRATION

Name

Address

Mobile Number

ADD USER

UPDATE USER DATA

DELETE USER

VIEW USERS

User deleted Succesfully