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## **COURSE OUTCOME 5**

## **PROGRAM 19**

**AIM** : Create database using SQLite and perform INSERT and SELECT

### **PROGRAM 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");

```

	<pre>         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("");      }  }  } </pre>
DBHelper.java	<pre> 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) { </pre>

```

        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:	<pre> &lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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"&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;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" </pre>
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	<pre> app:layout_constraintVertical_bias="0.664" /&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;EditText     android:id="@+id/add" </pre>
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	<pre> 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" /&gt;  &lt;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" /&gt;  &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
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## OUTPUT

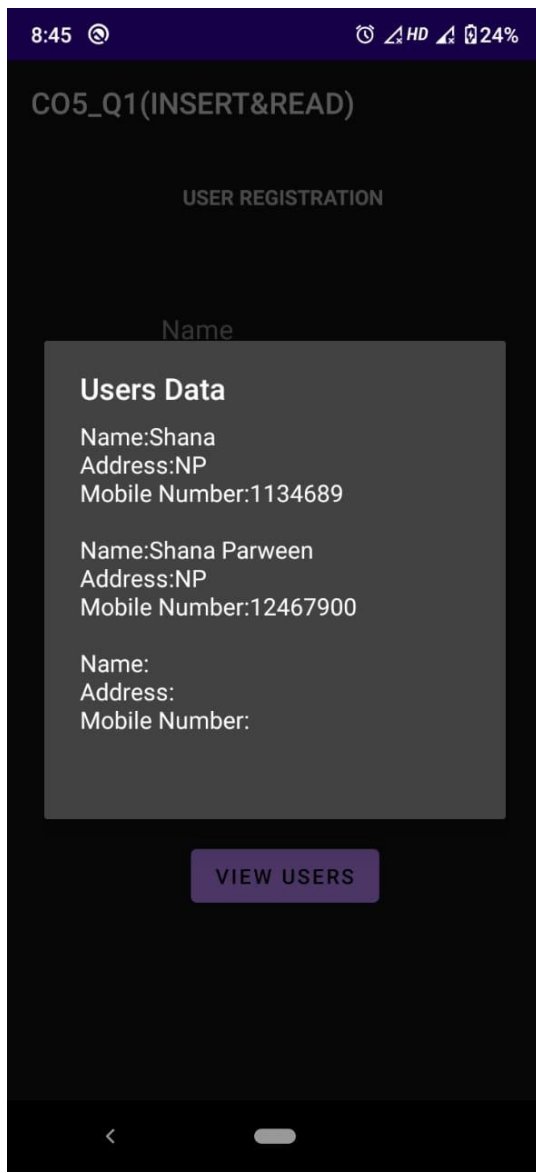
The image displays two side-by-side screenshots of a mobile application interface, both titled "CO5\_Q1(INsert&READ)".

**Left Screenshot (Time: 8:45):**

- Section: USER REGISTRATION
- Input fields: Name (Shana Parween), NP (1348900269)
- Buttons: ADD USER, UPDATE USER DATA, DELETE USER, VIEW USERS

**Right Screenshot (Time: 8:46):**

- Section: USER REGISTRATION
- Input fields: Name, Address, Mobile Number
- Buttons: ADD USER, UPDATE USER DATA, DELETE USER, VIEW USERS
- Message: User added Successfully



**RESULT:** The above program is successfully executed and obtained the output

## **PROGRAM 20**

**AIM** : Perform UPDATE and DELETE on SQLite database

### **PROGRAM CODE**

MainActivity.java	<pre>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);</pre>
-------------------	--

```

        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();
        }
    }

```



	<pre> 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(""); } } } </pre>
DBHelper.java	<pre> 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); </pre>

```

        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;
        }
    }

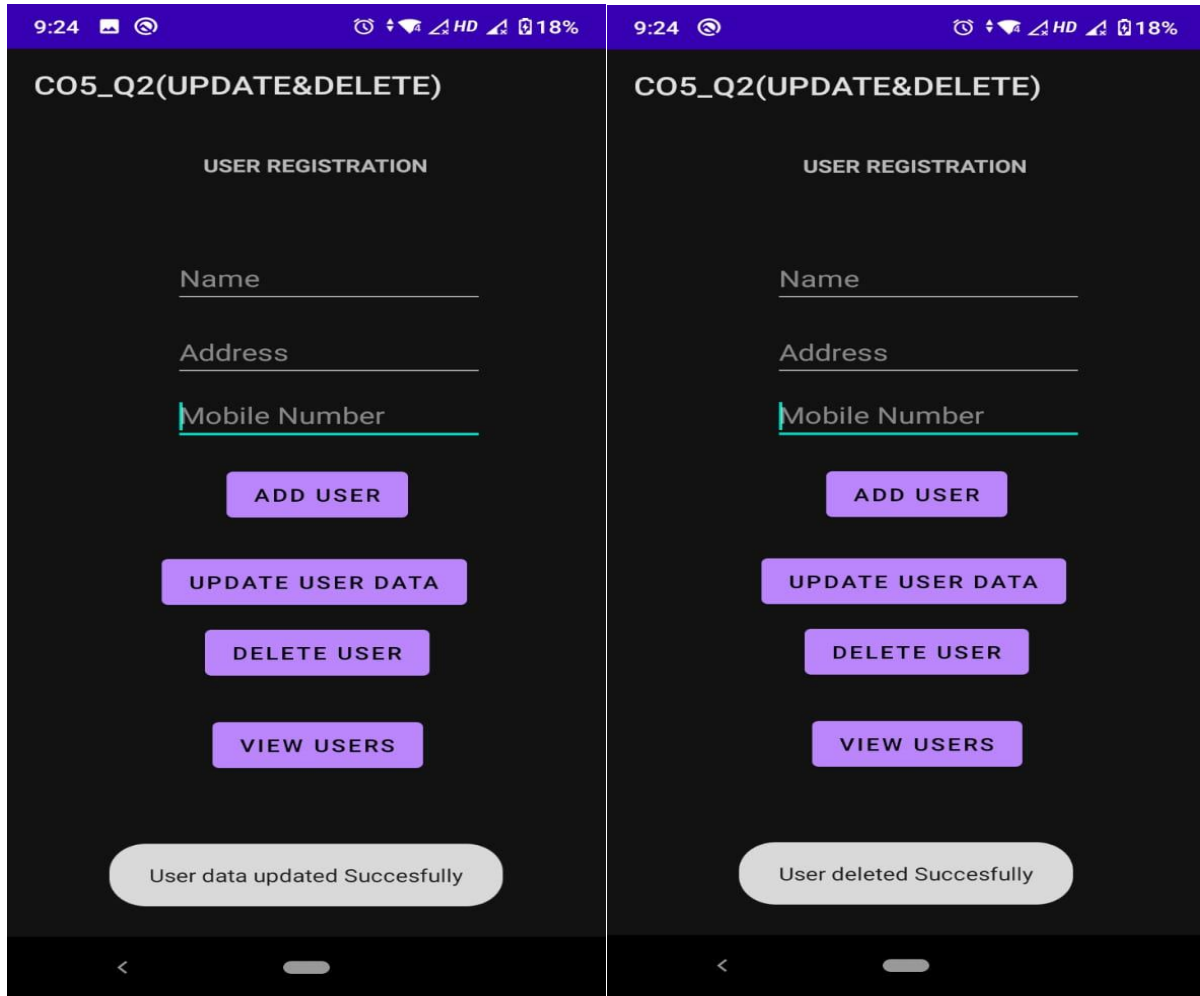
```

	<pre>     } } public Cursor getuserDB(){     SQLiteDatabase DB = this.getWritableDatabase();     Cursor cursor = DB.rawQuery("Select * from userdata",null);     return cursor; } } </pre>
Activity_main.xml	<pre> &lt;?xml version="1.0" encoding="utf-8"?&gt; &lt;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"&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;Button     android:id="@+id/delete" </pre>

	<pre> 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" /&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;TextView     android:layout_width="319dp"     android:layout_height="27dp"     android:text="User Registration"     android:textAlignment="center"     android:textAllCaps="true"     android:textStyle="bold" </pre>
--	---

	<pre> 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" /&gt;  &lt;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" /&gt;  &lt;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" /&gt;  &lt;/androidx.constraintlayout.widget.ConstraintLayout&gt; </pre>
--	--

## OUTPUT



**RESULT:** The above program is successfully executed and obtained the output