

PROGRAM No: 01

DATE: 10-08-2022

AIM: Design a Login Form with username and password using Linear Layout and toast valid credentials.

Program code :

Activity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    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:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="LOGIN PAGE"
        android:textSize="30dp" />
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter ur username"
        android:id="@+id/btn1"
        android:layout_marginTop="10dp" />
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Enter ur password"
        android:layout_marginTop="10dp"
        android:id="@+id/btn2"
        android:inputType="textPassword" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Login"
        android:id="@+id/et1"
        android:layout_marginLeft="150dp" />

</LinearLayout>
```

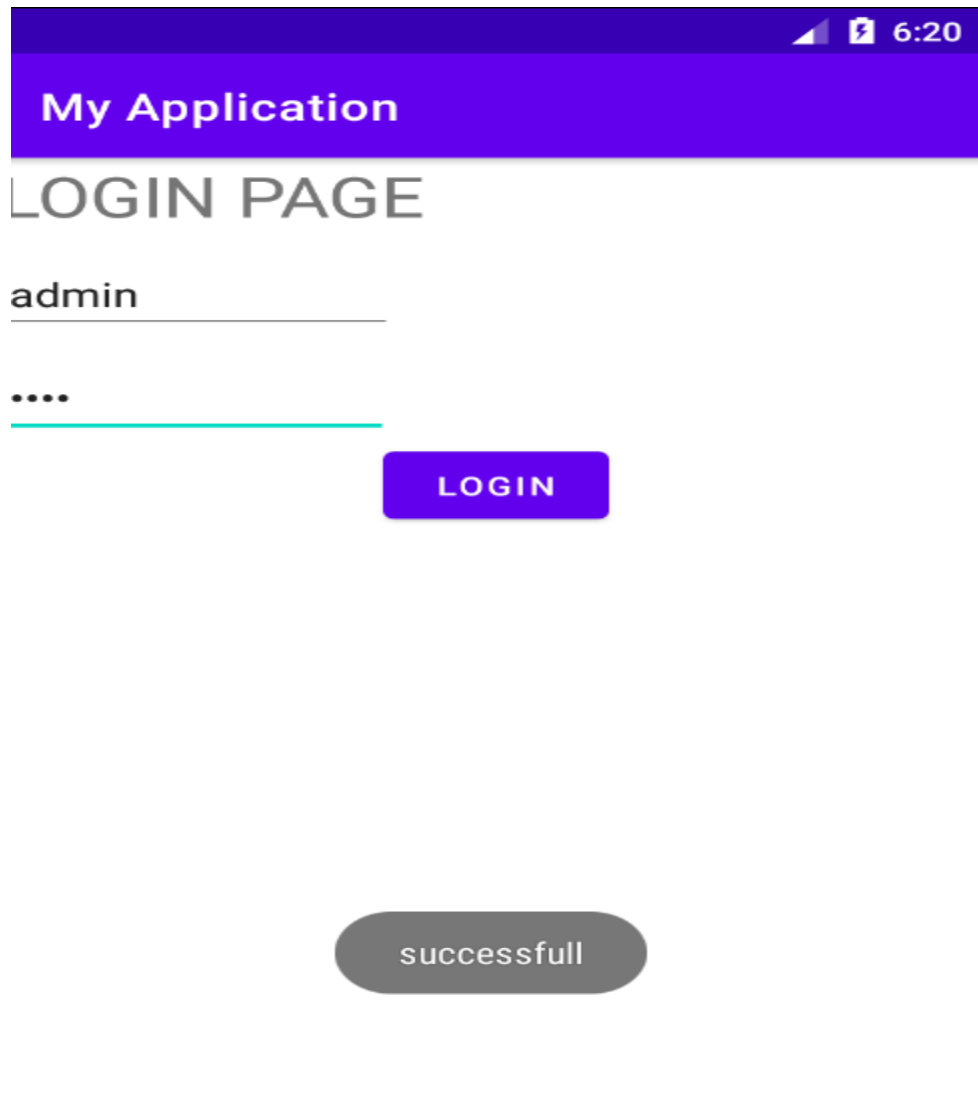
Mainactivity.xml

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
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 {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        EditText bnt1=findViewById(R.id.btn1);
        EditText bnt2=findViewById(R.id.btn2);
        Button button=findViewById(R.id.et1);
        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                validate (bnt1.getText().toString(),bnt2.getText().toString());
            }
            private void validate(String us,String p)
            {
                if (us.equals("admin")&&p.equals("1234"))
                {
                    Toast.makeText(getApplicationContext(),"successful",Toast.LENGTH_LONG).show();
                }
                else
                {
                    Toast.makeText(getApplicationContext(),"Unsuccessful",Toast.LENGTH_LONG).show();
                }
            }
        });
    }
}
```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:02

Date:16-08-2022

AIM: Write a program that demonstrate Activity Life cycle.

Program Code:

Activity.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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

Mainactivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.util.Log;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("Lifecycle", "onCreate invoked");
    }
}
```

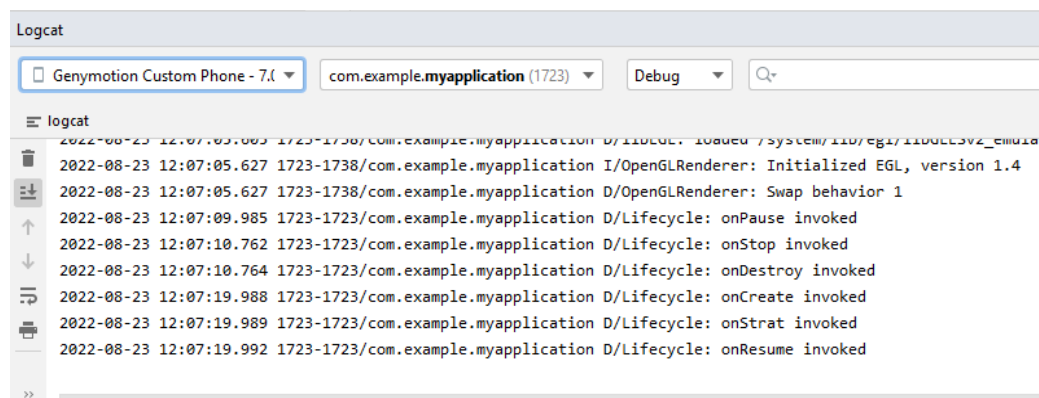
```

@Override
protected void onStart(){
    super.onStart();
    Log.d("Lifecycle","onStrat invoked");
}
@Override
protected void onResume(){
    super.onResume();
    Log.d("Lifecycle","onResume invoked");
}
@Override
protected void onPause(){
    super.onPause();
    Log.d("Lifecycle","onPause invoked");
}
@Override
protected void onStop(){
    super.onStop();
    Log.d("Lifecycle","onStop invoked");
}
@Override
protected void onRestart(){
    super.onRestart();
    Log.d("Lifecycle","onRestart invoked");
}
@Override
protected void onDestroy(){
    super.onDestroy();
    Log.d("Lifecycle","onDestroy invoked");
}
}

```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:03

Date:19-08-2022

AIM: Implementing basic Arithmetic operation of a single calculator.

Program Code:

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter first number" />
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/text1"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter second number"/>
    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/text2" />
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b1"
        android:text="ADD" />
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/b2"
        android:text="SUB"/></LinearLayout>
```

Mainactivity.java

```
package com.example.arithmetic;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    Button b,bb,bc,bd;
    EditText et1,et2;
    TextView tv1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        b=findViewById(R.id.b1);
        bb=findViewById(R.id.b2);
        bc=findViewById(R.id.b3);
        bd=findViewById(R.id.b4);
        et1=findViewById(R.id.et1);
        et2=findViewById(R.id.et2);
        tv1=findViewById(R.id.tv1);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Double a1=Double.parseDouble(et1.getText().toString());
                Double a2=Double.parseDouble(et2.getText().toString());
                Double r=a1+a2;
                tv1.setText("Result is="+String.valueOf(r));
            }
        });
        bb.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Double a1=Double.parseDouble(et1.getText().toString());
                Double a2=Double.parseDouble(et2.getText().toString());
                Double r=a1-a2;
                tv1.setText("Result is="+String.valueOf(r));
            }
        });
    }
}
```

```

bc.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Double a1=Double.parseDouble(et1.getText().toString());
        Double a2=Double.parseDouble(et2.getText().toString());
        Double r=a1*a2;
        tv1.setText("Result is="+String.valueOf(r));
    }
});
bd.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Double a1=Double.parseDouble(et1.getText().toString());
        Double a2=Double.parseDouble(et2.getText().toString());
        Double r=a1/a2;
        tv1.setText("Result is="+String.valueOf(r));
    }
});
}
}
}

```

Result : Program compiled successfully and output verified .

OUTPUT

My Application1	My Application1
Enter first number 5	Enter first number 5
Enter second number 3	Enter second number 3
ADD	ADD
SUB	SUB
MUL	MUL
DIV	DIV
Result is=8.0	Result is=2.0

My Application1	My Application1
Enter first number 5	Enter first number 5
Enter second number 3	Enter second number 3
ADD	ADD
SUB	SUB
MUL	MUL
DIV	DIV
Result is=1.6666666666666667	Result is=15.0

AIM: Implement validation on various UI control.

Program code:

Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="REGISTRATION"
        android:textColor="@color/design_default_color_error"
        android:textSize="30dp" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Name"
        android:id="@+id/name" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="Mobile No:"
        android:id="@+id/mob" />

    <EditText
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:hint="AGE"
        android:id="@+id/age" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Gender"
        android:textSize="20dp"
        android:textColor="@color/black" />

    <RadioGroup
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```

        android:id="@+id/rg" >
        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/b1"
            android:text="Male" />
        <RadioButton
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:id="@+id/b2"
            android:text="Female" />
    </RadioGroup>
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SUBMIT"
        android:id="@+id/button1" />
    <CheckBox
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="I agree all terms and conditions"
        android:id="@+id/checkbox" />

</LinearLayout>

```

Main Activity.java

```

package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    EditText name;
    EditText mobileneno;

```

```

EditText age;
RadioGroup radioGroup;
RadioButton male;
RadioButton female;
CheckBox checkbox;
Button button;
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    name=findViewById(R.id.name);
    mobilenumber=findViewById(R.id.mob);
    age=findViewById(R.id.age);
    radioGroup=findViewById(R.id.rg);
    male=findViewById(R.id.b1);
    female=findViewById(R.id.b2);
    checkbox=findViewById(R.id.checkbox);
    button=findViewById(R.id.button1);
    button.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            if (error()) {
                Intent i=new Intent( MainActivity.this,login.class);
                startActivity(i);
            }
        }
    });
}
private boolean error(){
    if(name.getText().toString().length()==0) {
        Toast.makeText(getApplicationContext(), "please enter your
name",Toast.LENGTH_LONG).show();
        return false;
    }
    else if (mobilenumber.getText().toString().length()==0) {
        Toast.makeText(getApplicationContext(), "please enter your mobile
number",Toast.LENGTH_LONG).show();
        return false;
    }
    else if (mobilenumber.getText().toString().length()!=10){
        Toast.makeText(getApplicationContext(), "please enter your 10 digit number",
Toast.LENGTH_LONG).show();
        return false;
    }
    else if (! male.isChecked() && ! female.isChecked()) {
        Toast.makeText(getApplicationContext(), "please enter your choose radio button",

```

```

Toast.LENGTH_LONG).show();
    return false;
}
else if (!checkbox.isChecked()) {
    Toast.makeText(getApplicationContext(), "please click on checkbox",
Toast.LENGTH_LONG).show();
    return false;
}
else{
    return true;
}
}
}
}

```

Activity_login.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=".login">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome to Login Page"
        tools:layout_editor_absoluteX="187dp"
        tools:layout_editor_absoluteY="66dp" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

Login.java

```

package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

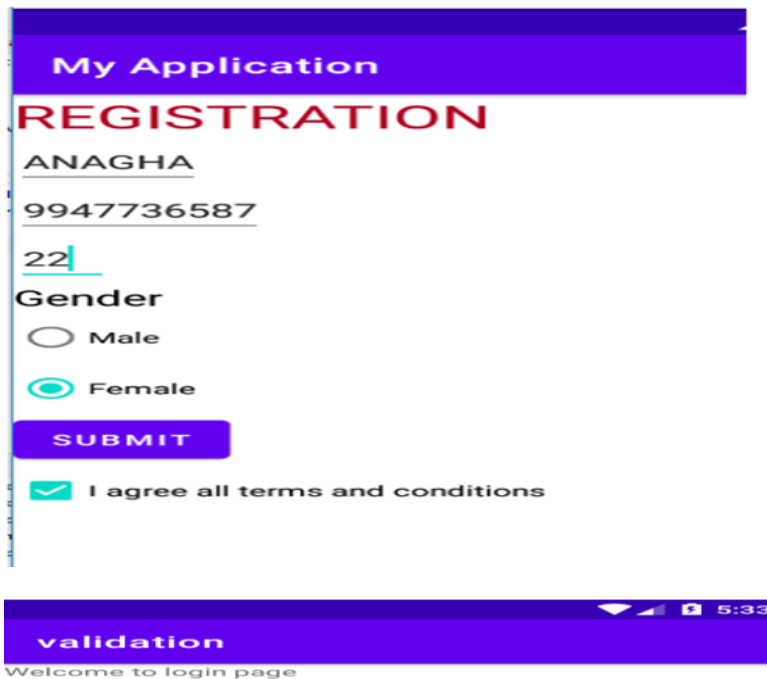
public class login extends AppCompatActivity {

```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_login);
}
}
```

Result : Program compiled successfully and output verified .

OUTPUT



AIM: Design a registration activity and store registration details in local memory of phone using intents and Shared Preferences.

Program 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"
    tools:context=".MainActivity"
    tools:ignore="HardcodedText">
    <TextView
        android:id="@+id/textview"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="32dp"
        android:text="Registration form"
        android:textColor="@android:color/black"
        android:textSize="24sp"/>
    <EditText
        android:id="@+id/edit1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textview"
        android:layout_marginStart="16dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="16dp"
        android:hint="Enter your name"
        android:padding="10dp"/>
    <EditText
        android:id="@+id/edit2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_below="@+id/edit1"
        android:layout_marginStart="16dp"
        android:layout_marginTop="8dp"
        android:layout_marginEnd="16dp"
        android:hint="Enter your age"
        android:padding="10dp"
        android:inputType="number"/>
```

```

<EditText
    android:id="@+id/edit3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/edit2"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="16dp"
    android:hint="Enter your Email id"
    android:padding="10dp"/>
<EditText
    android:id="@+id/edit4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/edit3"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="16dp"
    android:hint="Enter your Address"
    android:padding="10dp"/>
<EditText
    android:id="@+id/edit5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/edit4"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="16dp"
    android:hint="Enter your gender"
    android:padding="10dp"/>
<EditText
    android:id="@+id/edit6"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@+id/edit5"
    android:layout_marginStart="16dp"
    android:layout_marginTop="8dp"
    android:layout_marginEnd="16dp"
    android:hint="Enter your Qualification"
    android:padding="10dp"/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b1"
    android:layout_below="@+id/edit6"

```



```
        android:text="Submit"/>
    </RelativeLayout>
```

Mainactivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    private EditText name,age,email,address,gender,quali;
    Button b1;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        name=findViewById(R.id.edit1);
        age=findViewById(R.id.edit2);
        email=findViewById(R.id.edit3);
        address=findViewById(R.id.edit4);
        gender=findViewById(R.id.edit5);
        quali=findViewById(R.id.edit6);
        b1=findViewById(R.id.b1);
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent i=new Intent(MainActivity.this,MainActivity2.class);
                startActivity(i);
            }
        });
    }
    protected void onResume() {
        super.onResume();
        SharedPreferences sh = getSharedPreferences("mysharedpref", MODE_PRIVATE);
        String s1 = sh.getString("name", "");
        int a = sh.getInt("age", 0);
        String s2 = sh.getString("email", "");
```

```

String s3 = sh.getString("address", "");

String s4 = sh.getString("gender", "");
String s5 = sh.getString("quali", "");
name.setText(s1);
age.setText(String.valueOf(a));
email.setText(s2);
address.setText(s3);
gender.setText(s4);
quali.setText(s5);
}
protected void onPause() {
    super.onPause();
    SharedPreferences sharedPreferences = getSharedPreferences("mysharedpref",
        MODE_PRIVATE);
    SharedPreferences.Editor myEdit = sharedPreferences.edit();
    myEdit.putString("name", name.getText().toString());
    myEdit.putInt("age", Integer.parseInt(age.getText().toString()));
    myEdit.putString("email", email.getText().toString());
    myEdit.putString("address", address.getText().toString());
    myEdit.putString("gender", gender.getText().toString());
    myEdit.putString("quali", quali.getText().toString());
    myEdit.commit();
}
}

```

Activity_main2.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"
    tools:context=".MainActivity2">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welocome"/>
</RelativeLayout>

```

Mainactivity2.java

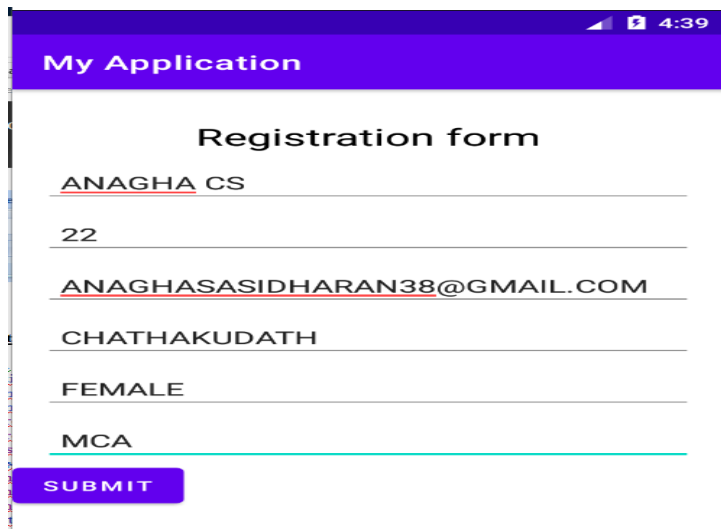
```
package com.example.myapplication;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
public class MainActivity2 extends AppCompatActivity {
```

@Override

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main2);  
}
```

Result : Program compiled successfully and output verified .

OUTPUT



The screenshot shows a mobile application interface with a purple header bar labeled "My Application". Below the header, the title "Registration form" is centered. The form consists of several text input fields, each with a red underline. The fields contain the following text: "ANAGHA CS", "22", "ANAGHASASIDHARAN38@GMAIL.COM", "CHATHAKUDATH", "FEMALE", and "MCA". At the bottom of the form, there is a purple button labeled "SUBMIT". The status bar at the top right shows the time as 4:39.



AIM: Design a simple Calculator using Grid Layout and Cascaded Linear Layout.

Program Code:

Activity.xml :

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter your first number"
        android:layout_row="0"
        android:layout_column="0" />
    <EditText
        android:layout_width="50dp"
        android:layout_height="50dp"
        android:id="@+id/n1"
        android:layout_row="1"
        android:layout_column="0"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Enter your second number"
        android:layout_row="2"
        android:layout_column="0"/>
    <EditText
        android:layout_width="50dp"
        android:layout_height="50dp"
        android:id="@+id/n2"
        android:layout_row="3"
        android:layout_column="0" />
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical">

    <Button
```

```

        android:text="ADD"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_row="4"
        android:layout_column="0"
        android:textColor="@color/black"
        android:background="@color/design_default_color_primary"
        android:id="@+id/add"/>
<Button
    android:text="MUL"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="4"
    android:layout_column="1"
    android:textColor="@color/black"
    android:background="@color/design_default_color_primary"
    android:id="@+id/mul"/>
<Button
    android:text="SUB"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="4"
    android:layout_column="2"
    android:textColor="@color/black"
    android:background="@color/design_default_color_primary"
    android:id="@+id/sub"/>
<Button
    android:text="DIV"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_row="4"
    android:layout_column="3"
    android:textColor="@color/black"
    android:background="@color/design_default_color_primary"
    android:id="@+id/div"/>
</LinearLayout>
<TextView
    android:hint="RESULT"
    android:layout_width="70dp"
    android:layout_height="50dp"
    android:layout_row="2"
    android:layout_column="2"
    android:id="@+id/result"
    android:textColor="@color/design_default_color_secondary"/>

</GridLayout>

```

Mainactivity.java

```
package com.example.myapplication1;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        final EditText a=findViewById(R.id.n1) ;
        final EditText b=findViewById(R.id.n2);
        Button add=findViewById(R.id.add);
        Button sub=findViewById(R.id.sub);
        Button mul=findViewById(R.id.mul);
        Button div=findViewById(R.id.div);
        final TextView result=findViewById(R.id.result);
        add.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Double n1=Double.parseDouble(a.getText().toString());
                Double n2=Double.parseDouble(b.getText().toString());
                Double r=n1+n2;
                result.setText(String.valueOf(r));
            }
        });

        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Double n1=Double.parseDouble(a.getText().toString());
                Double n2=Double.parseDouble(b.getText().toString());
                Double r=n1-n2;
                result.setText(String.valueOf(r));
            }
        });

        mul.setOnClickListener(new View.OnClickListener() {
            @Override
```

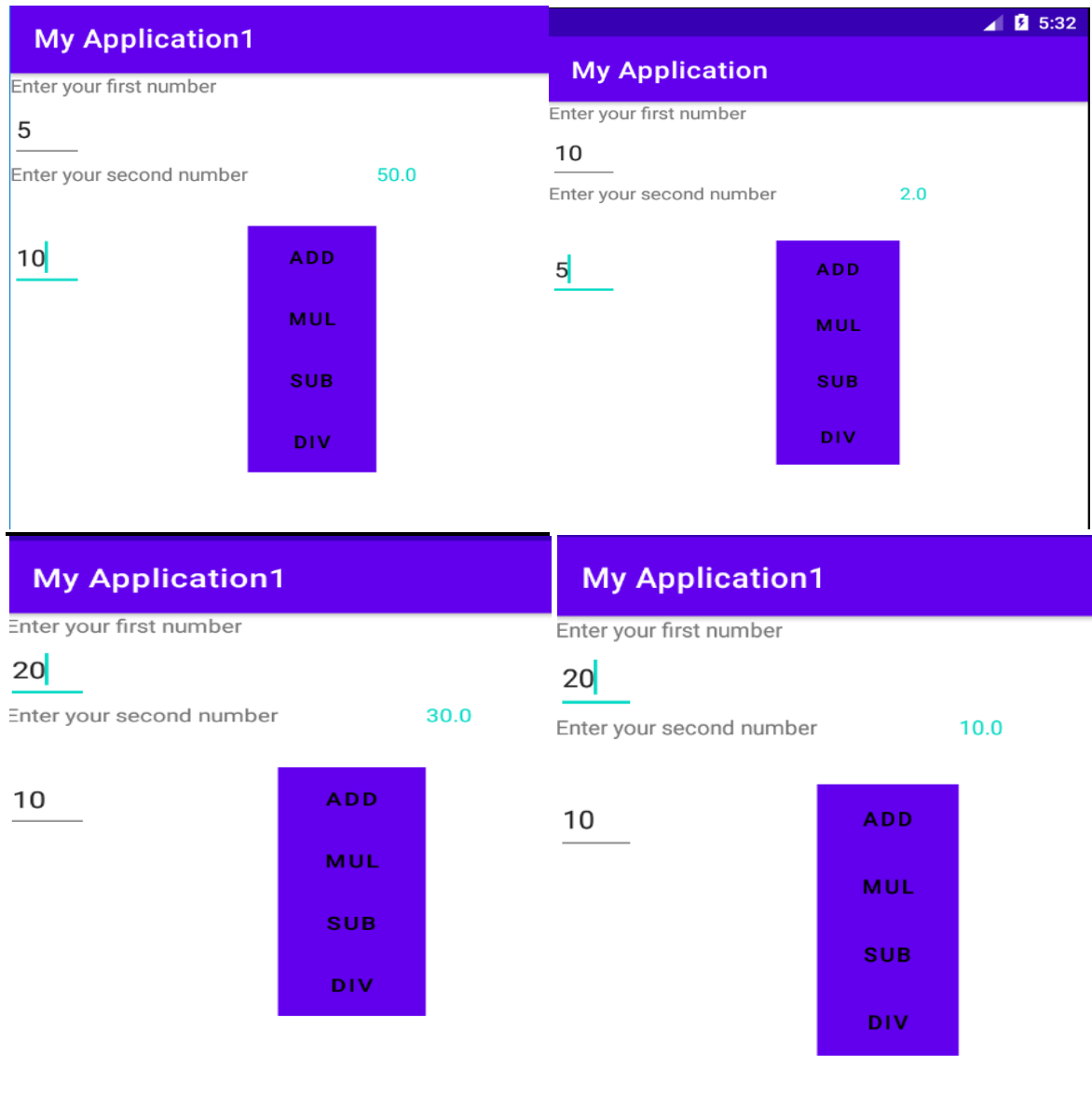
```

    public void onClick(View view) {
        Double n1=Double.parseDouble(a.getText().toString());
        Double n2=Double.parseDouble(b.getText().toString());
        Double r=n1*n2;
        result.setText(String.valueOf(r));
    }
});
div.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Double n1=Double.parseDouble(a.getText().toString());
        Double n2=Double.parseDouble(b.getText().toString());
        Double r=n1/n2;
        result.setText(String.valueOf(r));
    }
});
} }

```

Result : Program compiled successfully and output verified .

OUTPUT :



AIM: Create a Facebook page using Relative Layout ; set properties using .xml file.

Program Code:

Activity.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <RelativeLayout

        android:id="@+id/relativelayout"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <ImageView
            android:layout_width="match_parent"
            android:layout_height="250dp"
            android:id="@+id/banner"
            android:src="@drawable/images1"
            android:scaleType="centerCrop"/>
        <ImageView
            android:layout_marginLeft="15dp"
            android:layout_width="100dp"
            android:layout_height="150dp"
            android:id="@+id/profilepic"
            android:src="@drawable/images2"
            android:layout_alignBottom="@+id/linearLayout"/>

        <LinearLayout
            android:layout_toRightOf="@+id/profilepic"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_below="@+id/banner"
            android:orientation="horizontal"
            android:weightSum="100"
            android:id="@+id/linearLayout">
            <Button
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
```

```

        android:text="Timeline"
        android:textSize="5dp"
        android:layout_weight="10"/>

<Button
    android:layout_weight="10"
    android:textSize="5dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="About"/>
<Button
    android:layout_weight="10"
    android:textSize="5dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Friends"/>
<Button
    android:layout_weight="10"
    android:textSize="5dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="photos"/>
<Button
    android:layout_weight="10"
    android:textSize="5dp"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="More"/>
</LinearLayout>

<EditText
    android:textColor="@color/white"
    android:textStyle="bold"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:inputType="textPersonName"
    android:text="Thasni"
    android:ems="10"
    android:layout_alignParentEnd="true"
    android:layout_marginEnd="55dp"
    android:id="@+id/textName"
    android:layout_alignBottom="@+id/banner"/>

</RelativeLayout>

```

```

<RelativeLayout
    android:paddingRight="15dp"
    android:paddingLeft="15dp"
    android:paddingTop="15dp"
    android:paddingBottom="15dp"
    android:layout_below="@+id/relativeLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:id="@+id/linearLayout2">

        <ImageView
            android:layout_marginLeft="5dp"
            android:layout_marginTop="15dp"
            android:layout_width="25dp"
            android:layout_height="25dp"
            android:src="@drawable/images2"/>

        <EditText
            android:id="@+id/etPost"
            android:layout_marginLeft="10dp"
            android:textSize="15sp"
            android:layout_width="match_parent"
            android:layout_height="60dp"
            android:hint="What's on your mind?"/>
    </LinearLayout>
    <Button
        android:textSize="10sp"
        android:text="Post"
        android:layout_width="70dp"
        android:layout_height="30dp"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/linearLayout2"/>
</RelativeLayout>

```

Mainactivity.java

```

package com.example.myapplication1;

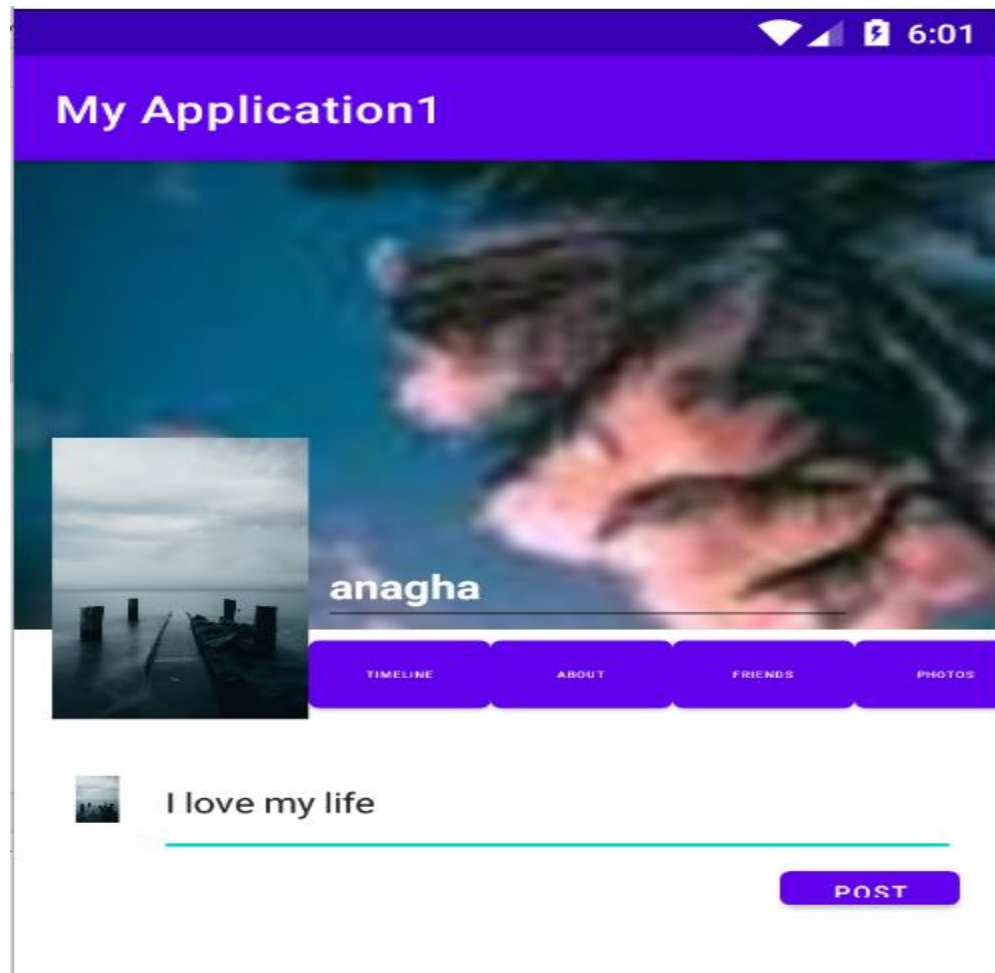
import androidx.appcompat.app.AppCompatActivity;

```

```
import android.os.Bundle;
public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

Result : Program compiled successfully and output verified .

OUTPUT :



AIM: Develop an application that toggle image using frame Layout.

Program Code:

Activity.xml :

```
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/frameLayout"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent">
    <ImageView
        android:id="@+id/image1"
        android:layout_width="match_parent"
        android:layout_height="239dp"
        android:scaleType="centerCrop"
        android:src="@drawable/images1" /><!--Change image as per your name of image saved
in drawable-->
    <ImageView
        android:id="@+id/image2"
        android:layout_width="match_parent"
        android:layout_height="239dp"
        android:scaleType="centerCrop"
        android:src="@drawable/image2" />
</FrameLayout>
```

Mainactivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
public class MainActivity extends AppCompatActivity {
    ImageView i1,i2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        i1=findViewById(R.id.image1);
        i2=findViewById(R.id.image2);
        i2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
```

```

        i2.setVisibility(View.GONE);
        i1.setVisibility(View.VISIBLE);

    }
});
i1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        i1.setVisibility(View.GONE);
        i2.setVisibility(View.VISIBLE);

    }
});
}

}

```

Result : Program compiled successfully and output verified .

OUTPUT :



AIM: Develop application that works with Implicit intents .

Program Code:

Activity.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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/t1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="http://www.google.co.in" />
    <Button
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="click" />
</LinearLayout>
```

Mainactivity.java

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText et1;
    Button b1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

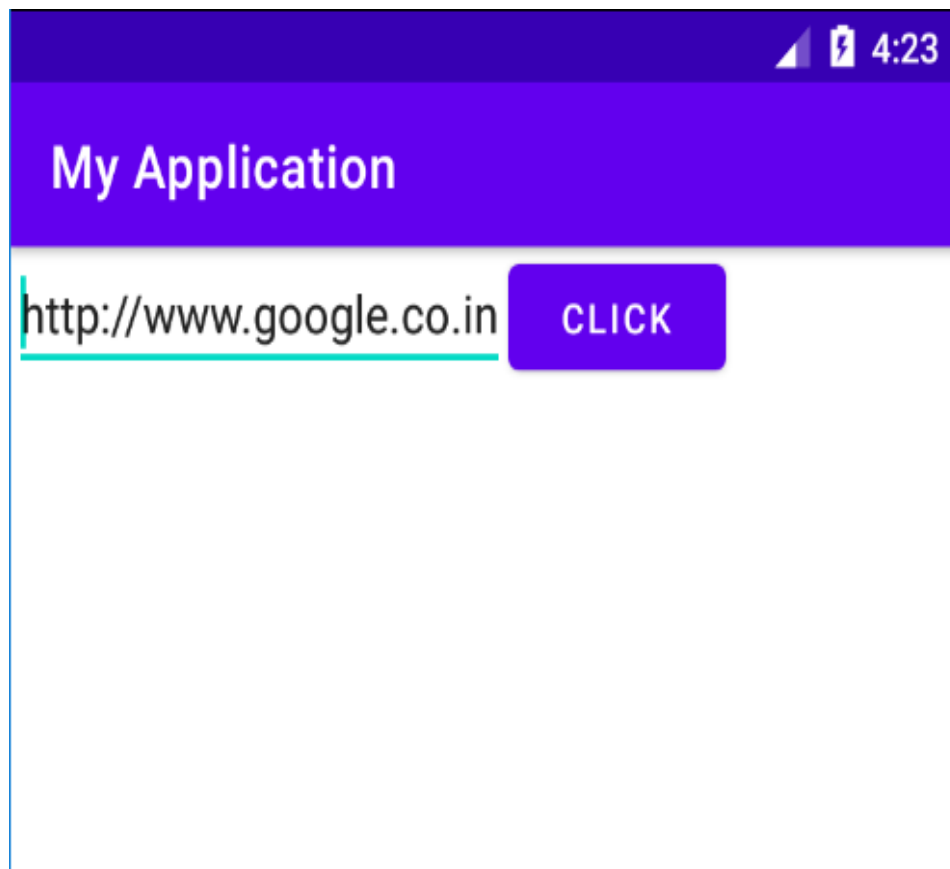
```

et1=findViewById(R.id.t1);
b1=findViewById(R.id.btn1);
b1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        String url=et1.getText().toString();
        Intent i=new Intent(Intent.ACTION_VIEW, Uri.parse(url));
        startActivity(i);
    }
});
}
}

```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM NO:10

Date:20-09-2022

AIM: Implement option Menu to navigate to activities.

Program code:

Activitymain.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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

Mainactivity.java

```
package com.example.myapplication;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.widget.Toast;

import com.example.myapplication.R;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```

    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
}

```

@Override

```

public boolean onCreateOptionsMenu(Menu menu) {
    getMenuInflater().inflate(R.menu.menu, menu);
    return true;
}

```

@Override

```

public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    switch(item.getItemId()){
        case R.id.item1:
            Toast.makeText(getApplicationContext(), "File Selected",
Toast.LENGTH_SHORT).show();
            break;
        case R.id.item2:
            Toast.makeText(getApplicationContext(), "Edit Selected",
Toast.LENGTH_SHORT).show();
            break;

        case R.id.sitem1:
            Toast.makeText(getApplicationContext(), "Cut Selected",
Toast.LENGTH_SHORT).show();
            break;
        case R.id.sitem2:
            Toast.makeText(getApplicationContext(), "Copy Selected",
Toast.LENGTH_SHORT).show();
            break;
        case R.id.sitem3:
            Toast.makeText(getApplicationContext(), "Paste Selected",
Toast.LENGTH_SHORT).show();
            break;
        case R.id.item3:
            Toast.makeText(getApplicationContext(), "View Selected",
Toast.LENGTH_SHORT).show();
            break;

    }
    return super.onOptionsItemSelected(item);
}
}

```

Menu.xml

```

<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">

```

```

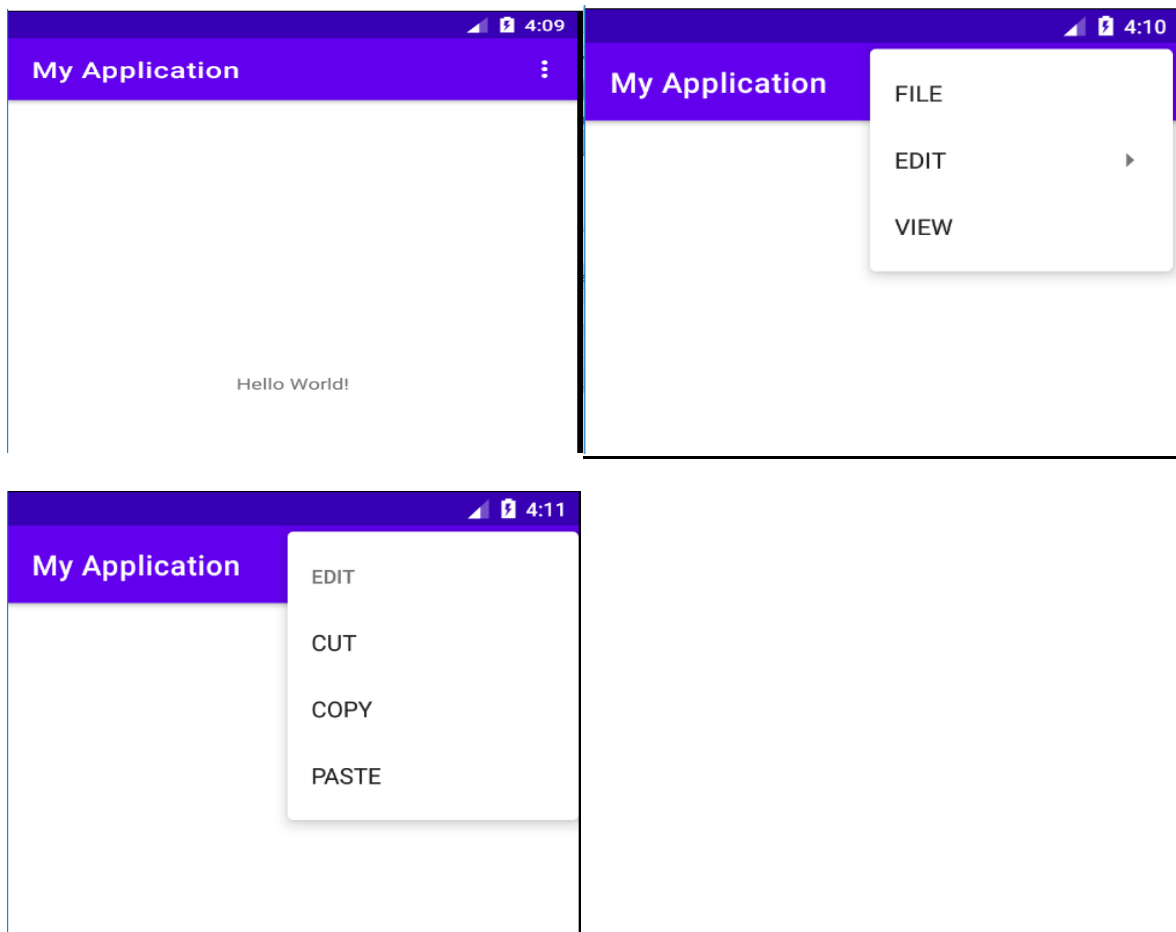
<item android:id="@+id/item1"
    android:title="FILE"/>
<item android:id="@+id/item2"
    android:title="EDIT">
    <menu>
        <item android:id="@+id/sitem1"
            android:title="CUT"/>
        <item android:id="@+id/sitem2"
            android:title="COPY"/>
        <item android:id="@+id/sitem3"
            android:title="PASTE"/>
    </menu>
</item>
<item android:id="@+id/item3"
    android:title="VIEW"/>

```

</menu>

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No: 11

Date:27-09-2022

AIM: Develop an application that users Array Adapter with List View .

Program Code:

Activity.xml :

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <ListView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/lv1" />
</RelativeLayout>
```

MainActivity.java

```
package com.example.myapplication10;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Adapter;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.ListView;

public class MainActivity extends AppCompatActivity {
    ListView l;
    String [] p={"Rajendra Prasad(1884-1963)","Radhakrishnan(1888-1993)","Zakir
Husain(1894-1980)"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        l=(ListView)findViewById(R.id.lv1);
```

```

        ArrayAdapter<String> adapter=new ArrayAdapter<String>(this,
android.R.layout.simple_list_item_1,p);
        l.setAdapter(adapter);
        l.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> adapterView, View view, int i, long l) {
                if(i==0){
                    startActivity(new Intent(MainActivity.this,MainActivity2.class));
                }
                else if(i==1){
                    startActivity(new Intent(MainActivity.this,MainActivity2.class));
                }
            }
        });
    }
}

```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:12

Date:12-10-2022

AIM: Implement and perform exception handling.

Program Code:

Activity.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"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/tv1" />

</RelativeLayout>
```

MainActivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    TextView tv1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        try {
            tv1.setText("WELCOME");
        }
        catch (Exception e){
            Toast.makeText(this,e.getMessage(),Toast.LENGTH_LONG).show();
        }
    }
}
```

```
}  
}  
}
```

Result : Program complied successfully and output verified .

OUTPUT



Attempt to invoke virtual method 'void android.widget.TextView.setText(java.lang.CharSequence)' on a null object reference

PROGRAM No:13

Date:25-10-2022

AIM: Develop an application that use GridLayout with images and display Alert box on selection.

Program Code:

Activity.xml

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

<GridLayout 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">

    <ImageView

        android:layout_width="400dp"

        android:layout_height="200dp"

        android:id="@+id/img1"

        android:src="@drawable/img1"

        android:scaleType="centerCrop"

        android:layout_row="0"

        android:layout_column="0" />

    <ImageView

        android:layout_width="wrap_content"

        android:layout_height="400dp"
```



```
    android:layout_column="0"

    android:scaleType="centerCrop"

    android:src="@drawable/img2"

    android:id="@+id/img2"

    android:layout_row="1"/>
```

```
</GridLayout>
```

MainActivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    ImageView im1,im2;

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);
```

```

im1=findViewById(R.id.img1);

im2=findViewById(R.id.img2);

im1.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        Toast.makeText(getApplicationContext(),"gitar",Toast.LENGTH_LONG).show();

    }

});

im2.setOnClickListener(new View.OnClickListener() {

    @Override

    public void onClick(View view) {

        Toast.makeText(getApplicationContext(),"nature",Toast.LENGTH_LONG).show();

    }

});

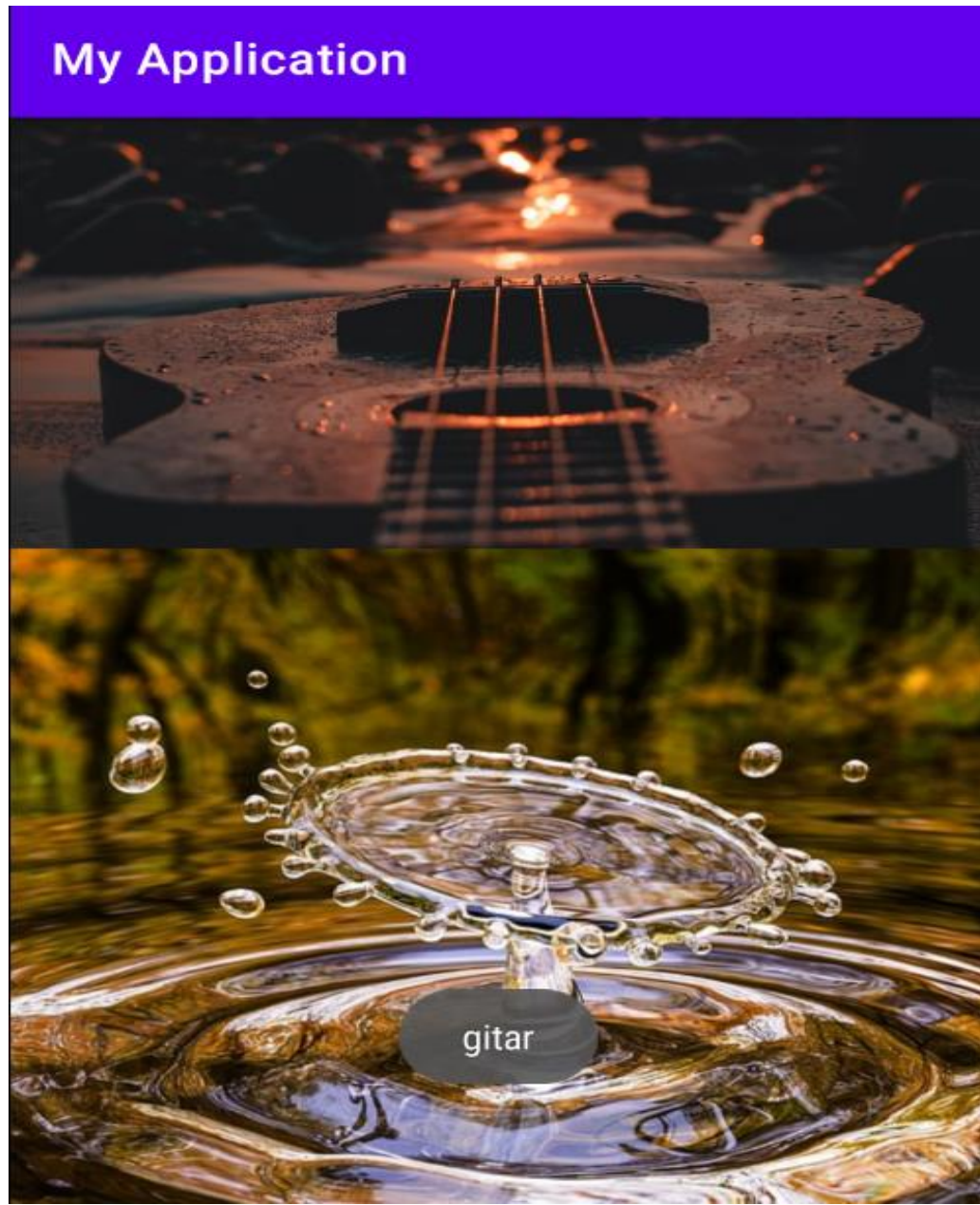
}

}

```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:14

Date:28-10-2022

AIM: Develop an application that implements Spinner component and perform event handling.

Program Code:

Activity.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">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="20dp"
        android:text="Select your navigation :"/>

    <Spinner
        android:id="@+id/spinner"
        android:layout_width="149dp"
        android:layout_height="40dp"
        android:layout_marginBottom="8dp"
        android:layout_marginEnd="8dp"
        android:layout_marginStart="8dp"
        android:layout_marginTop="8dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.502"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.498" />

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

MainActivity.java

```
package com.example.myapplication;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
```

```

import android.widget.ArrayAdapter;
import android.widget.Spinner;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity implements
AdapterView.OnItemSelectedListener {
    String[] country={"India","USA","China","other"};

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Spinner spin=(Spinner) findViewById(R.id.spinner);
        spin.setOnItemSelectedListener(this);

        ArrayAdapter aa = new ArrayAdapter(this,android.R.layout.simple_spinner_item,country);
        aa.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
        spin.setAdapter(aa);
    }
    @Override
    public void onItemSelected(AdapterView<?> arg0, View arg1, int position,long id)
    {
        Toast.makeText(getApplicationContext(),country[position],Toast.LENGTH_LONG).show();
    }
    @Override
    public void onNothingSelected(AdapterView<?> adapterView){
    }
}

```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:15

Date:04-11-2022

AIM: Implemet Navigation drawer.

Program Code:

Activity.xml

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

<!-- the root view must be the DrawerLayout -->

<androidx.drawerlayout.widget.DrawerLayout
    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:id="@+id/my_drawer_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity"
    tools:ignore="HardcodedText">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <TextView
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="128dp"
            android:gravity="center"
            android:text="Navigation"
            android:textSize="18sp" />
    </LinearLayout>

    <!-- this the navigation view which draws and shows the navigation drawer -->
    <!-- include the menu created in the menu folder -->
    <com.google.android.material.navigation.NavigationView
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_gravity="start"
        app:menu="@menu/navigation_menu" />

</androidx.drawerlayout.widget.DrawerLayout>
```

MainActivity.java

```
package com.example.myapplication;
import androidx.annotation.NonNull;
import androidx.appcompat.app.ActionBarDrawerToggle;
import androidx.appcompat.app.AppCompatActivity;
import androidx.drawerlayout.widget.DrawerLayout;

import android.os.Bundle;
import android.view.MenuItem;

public class MainActivity extends AppCompatActivity {

    public DrawerLayout drawerLayout;
    public ActionBarDrawerToggle actionBarDrawerToggle;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        drawerLayout = findViewById(R.id.my_drawer_layout);
        actionBarDrawerToggle = new ActionBarDrawerToggle(this, drawerLayout,
R.string.nav_open, R.string.nav_close);

        // pass the Open and Close toggle for the drawer layout listener
        // to toggle the button
        drawerLayout.addDrawerListener(actionBarDrawerToggle);
        actionBarDrawerToggle.syncState();

        // to make the Navigation drawer icon always appear on the action bar
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);
    }

    // override the onOptionsItemSelected()
    // function to implement
    // the item click listener callback
    // to open and close the navigation
    // drawer when the icon is clicked
    @Override
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {

        if (actionBarDrawerToggle.onOptionsItemSelected(item)) {
            return true;
        }
        return super.onOptionsItemSelected(item);
    }
}
```


String.xml

```
<resources>
  <string name="app_name">My Application</string>
  <!-- to toggle the open close button of the navigation drawer -->
  <string name="nav_open">Open</string>
  <string name="nav_close">Close</string>
</resources>
```

Navigation_menu

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">

  xmlns:tools="http://schemas.android.com/tools"
  tools:ignore="HardcodedText">

  <item
    android:id="@+id/nav_account"
    android:title="My Account" />

  <item
    android:id="@+id/nav_settings"
    android:title="Settings" />

  <item
    android:id="@+id/nav_logout"
    android:title="Logout" />

</menu>
```

Result : Program compiled successfully and output verified .

OUTPUT



PROGRAM No:16

Date:11-11-2022

AIM: Create database using SQLite and perform INSERT , SELECT , UPDATE , and Delete on SQLite database.

Program Code:

Activity.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"
    tools:context=".MainActivity"
    android:padding="10dp"
    >
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Please enter the details below:"
        android:textSize="24dp"
        android:id="@+id/title"
    />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt1"
        android:hint="Name"
        android:textSize="24dp"
        android:inputType="textPersonName"
        android:layout_below="@+id/title"
    />

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:id="@+id/edt2"
        android:hint="Contact"
        android:textSize="24dp"
        android:inputType="number"
        android:layout_below="@+id/edt1"
    />
```

```

<EditText
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:id="@+id/edt3"
    android:hint="DOB"
    android:textSize="24dp"
    android:inputType="number"
    android:layout_below="@+id/edt2"

/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b1"
    android:text="INSERT "
    android:textSize="24dp"
    android:layout_below="@+id/edt3"
/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b2"
    android:text="UPDATE "
    android:textSize="24dp"
    android:layout_below="@+id/b1"/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b3"
    android:text="DELETE "
    android:textSize="24dp"
    android:layout_below="@+id/b2"
/>
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/b4"
    android:text="VIEW "
    android:textSize="24dp"
    android:layout_below="@+id/b3"
/>

```

```

</RelativeLayout>

```

DBHelper.java

```
package com.example.myapplication;

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(@Nullable Context context){
        super(context, "userdata.db",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 i, int i1) {
        DB.execSQL("drop Table if exists userdetails");
    }
    public Boolean insertData(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 updateData(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;
    }
}

```

MainActivity.java

```
package com.example.myapplication;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.database.Cursor;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText edt1,edt2,edt3;
    Button Insert,Update,Delete,View;
    DBHelper db;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        edt1=findViewById(R.id.edt1);
        edt2=findViewById(R.id.edt2);
        edt3=findViewById(R.id.edt3);

        Insert=findViewById(R.id.b1);
        Update = findViewById(R.id.b2);
        Delete = findViewById(R.id.b3);
        View =findViewById(R.id.b4);
        db=new DBHelper(this);
        Insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(android.view.View view){
                String name= edt1.getText().toString();
                String contact=edt2.getText().toString();
                String dob= edt3.getText().toString();

                boolean checkInsertData=db.insertData(name,contact,dob);
                if (checkInsertData==true)
                    Toast.makeText(MainActivity.this,"New entry
inserted",Toast.LENGTH_LONG).show();
                else
                    Toast.makeText(MainActivity.this,"New entry Not
```

```

inserted",Toast.LENGTH_LONG).show();

    }
});
Update.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(android.view.View view) {
        String name= edt1.getText().toString();
        String contact=edt2.getText().toString();
        String dob= edt3.getText().toString();
        boolean checkUpdateData=db.updateData(name,contact,dob);
        if(checkUpdateData==true)
            Toast.makeText(MainActivity.this,"Entry updated",Toast.LENGTH_LONG).show();
        else
            Toast.makeText(MainActivity.this,"Entry Not
Updated",Toast.LENGTH_LONG).show();

    }
});
Delete.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(android.view.View view) {
        String name= edt1.getText().toString();

        boolean checkDeleteData= db.deleteData(name);
        if(checkDeleteData==true)
            Toast.makeText(MainActivity.this,"Entry deleted",Toast.LENGTH_LONG).show();
        else
            Toast.makeText(MainActivity.this,"Entry Not
deleted",Toast.LENGTH_LONG).show();

    }
});
View.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(android.view.View view) {
        Cursor res = db.getData();
        if (res.getCount() == 0) {
            Toast.makeText(MainActivity.this, "No entry exists",
Toast.LENGTH_LONG).show();
            return;
        }
        StringBuffer buffer = new StringBuffer();
        while (res.moveToNext()) {
            buffer.append("name:" + res.getString(0) + "\n");

```

```

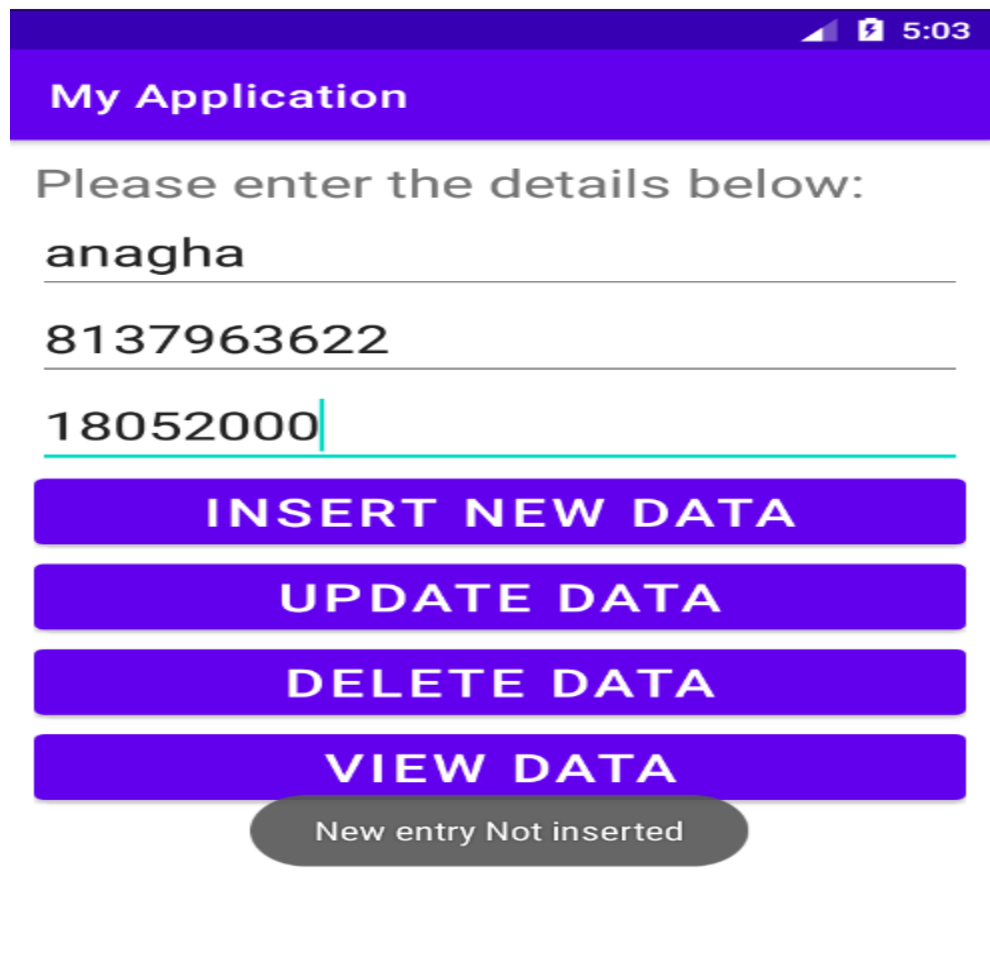
        buffer.append("contact:" + res.getString(1) + "\n");
        buffer.append("data of birth:" + res.getString(2) + "\n\n\n\n");
    }
    AlertDialog.Builder builder=new AlertDialog.Builder(MainActivity.this);
    builder.setCancelable(true);
    builder.setTitle("User Enteries");
    builder.setMessage(buffer.toString());
    builder.show();
}

});
}

```

Result : Program compiled successfully and output verified .

OUTPUT



My Application 5:04

Please enter the details below:

anagha

8137963622

18052000

INSERT NEW DATA

UPDATE DATA

DELETE DATA

VIEW DATA

Entry updated

My Application 5:06

Please enter the details below:

anagha

8137963622

18052000

INSERT NEW DATA

UPDATE DATA

DELETE DATA

VIEW DATA

No entry exists

My Application 5:05

Please enter the details below:

anagha

8137963622

18052000

INSERT NEW DATA

UPDATE DATA

DELETE DATA

VIEW DATA

Entry deleted