OUTPUT

Program No:1

Date:

LOGIN FORM

AIM:Design a login form with username and password using linear layout and toast value credentials.

activity_main.xml

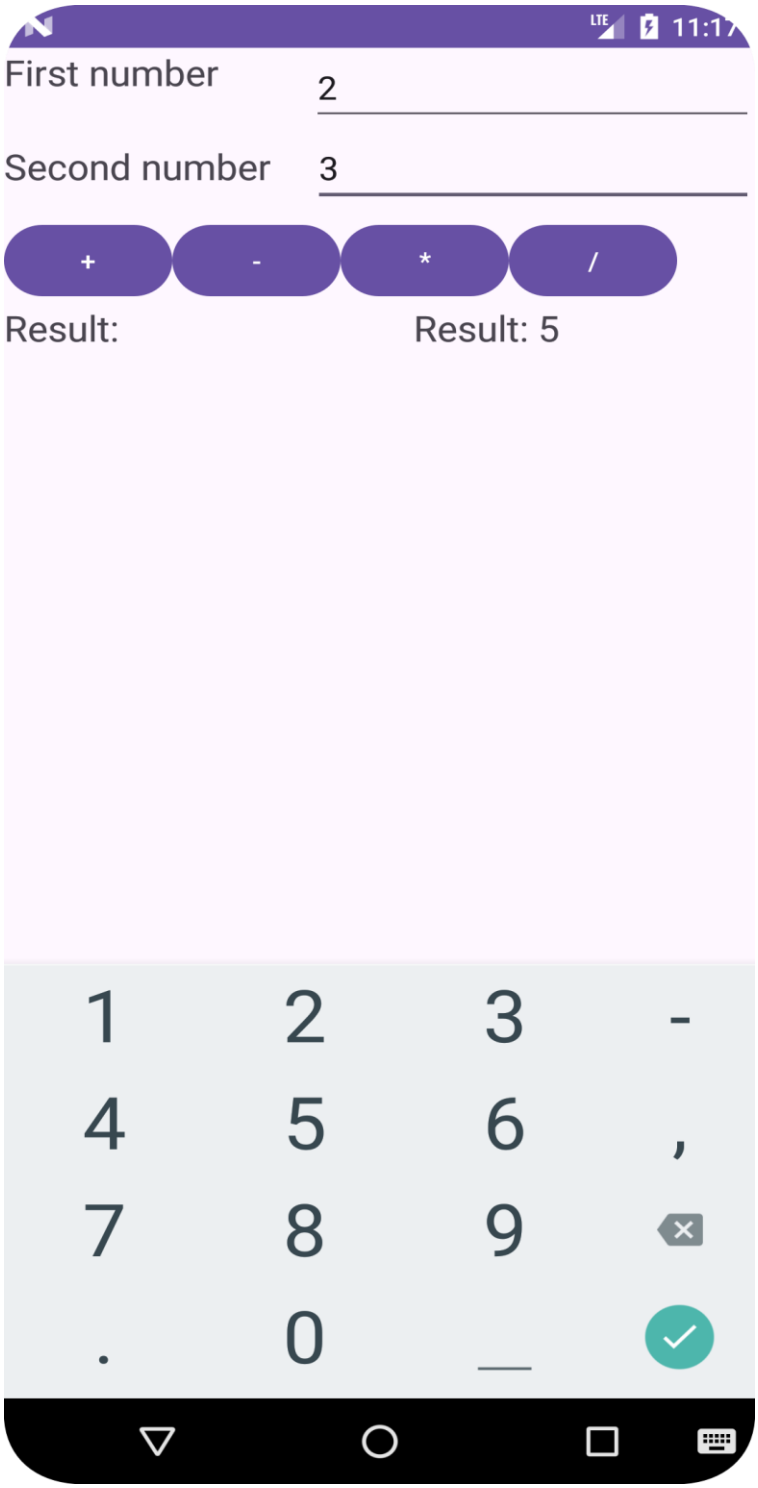
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/text"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:textAlignment="center"
    tools:context=".MainActivity">

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

        <TextView
            android:id="@+id/textView"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="LOGIN"
            android:textAlignment="center"
            android:textSize="20sp" />

        <EditText
            android:id="@+id/txt_uname"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:hint="Username"
            android:inputType="text" />

        <EditText
            android:id="@+id/txt_pwd"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:hint="password"
            android:inputType="textPassword" />

        <Button
            android:id="@+id/btn_login"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Button" />
```

```
   </LinearLayout>
</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.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    TextView textView;
    EditText txt_uname;
    EditText txt_pwd;
    Button btn_login;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        textView = findViewById(R.id.textView);
        txt_uname = findViewById(R.id.txt_uname);
        txt_pwd = findViewById(R.id.txt_pwd);
        btn_login = findViewById(R.id.btn_login);
        btn_login.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String username = txt_uname.getText().toString();
                String password = txt_pwd.getText().toString();
                if(username.equals("Fathima")&& password.equals("1234")){


                Toast.makeText(MainActivity.this, "Login successfully",
Toast.LENGTH_LONG).show();
            }
            else {
                    Toast.makeText(MainActivity.this, "Invalid Username or
password", Toast.LENGTH_LONG).show();}
            }
        });
    }
}
```

Output:


11:17
First number
2
Second number
3
+
-
*
/
Result:
Result: 5
1
2
3
-
4
5
6
,
7
8
9
.
0

Program No:2

SIMPLE CALCULATOR

AIM:Implementing basic arithematic operations of a simple calculator

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">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <TextView
            android:id="@+id/textview1"
            android:layout_width="138dp"
            android:layout_height="match_parent"
            android:layout_weight="1"
            android:text="First number"
            android:textSize="20sp" />

        <EditText
            android:id="@+id/ed_text1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:ems="10"
            android:inputType="number" />

    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <TextView
            android:id="@+id/textView2"
            android:layout_width="wrap_content"
            android:layout_height="50dp"
            android:layout_weight="1"
            android:text="Second number"
            android:textSize="20sp" />

        <EditText  android:id="@+id/ed_text2"
```

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

```
        android:layout_weight="1"
        android:ems="10"
        android:inputType="number" />

</LinearLayout>

<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:text="+" />

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="-" />

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="*" />

    <Button
        android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="/" />
</LinearLayout>

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

    <TextView
        android:id="@+id/textView3"
        android:layout_width="112dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:textSize="20sp" />

    <TextView
        android:id="@+id/textView4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="0"
```

```
 android:textSize="20sp" />
    </LinearLayout>

</LinearLayout>
```

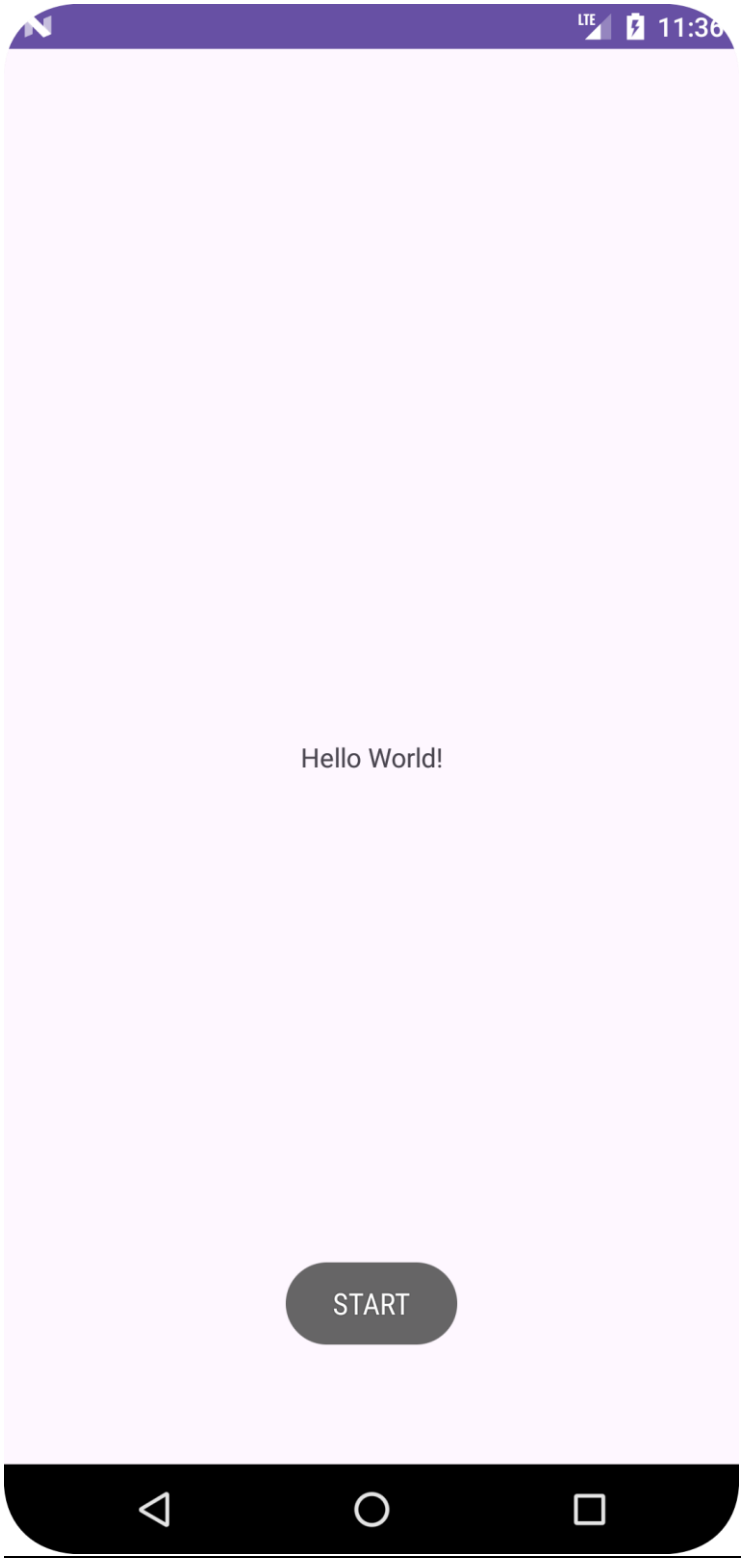
MainActivity.java

```
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.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText ed1;
    EditText ed2;
    Button b1;
    Button b2;
    Button b3;
    Button b4;
    Integer i1;
    Integer i2;
    Integer RES = 0;
    TextView n4;

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

        // Initialize EditTexts
        ed1 = findViewById(R.id.ed_text1);
        ed2 = findViewById(R.id.ed_text2);

        // Initialize Buttons
        b1 = findViewById(R.id.button1);
        b2 = findViewById(R.id.button2);
        b3 = findViewById(R.id.button3);
        b4 = findViewById(R.id.button4);

        // Initialize TextView
        n4 = findViewById(R.id.textView4);

        // Set onClickListeners for buttons
        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                performOperation("+");
            }
        });
```

```
b2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                performOperation("-");
            }
        });
        b3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                performOperation("*");
            }
        });
        b4.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                performOperation("/");
            }
        });
    }

    public void performOperation(String operation) {
        // Error handling for empty input fields
        if (ed1.getText().toString().isEmpty() ||
ed2.getText().toString().isEmpty()) {
            n4.setText("Error: Please enter both numbers");
            return;
        }

        // Parse the numbers
        try {
            i1 = Integer.parseInt(ed1.getText().toString());
            i2 = Integer.parseInt(ed2.getText().toString());
        } catch (NumberFormatException e) {
            n4.setText("Error: Invalid number format");
            return;
        }

        switch (operation) {
            case "+":
                RES = i1 + i2;
                break;
            case "-":
                RES = i1 - i2;
                break;
            case "*":
                RES = i1 * i2;
                break;
            case "/":
                if (i2 == 0) {
                    n4.setText("Error: Divide by zero");
                    return;
                }
                RES = i1 / i2;
                break;
            default:
                n4.setText("Error: Unknown operation");
                return;}
```

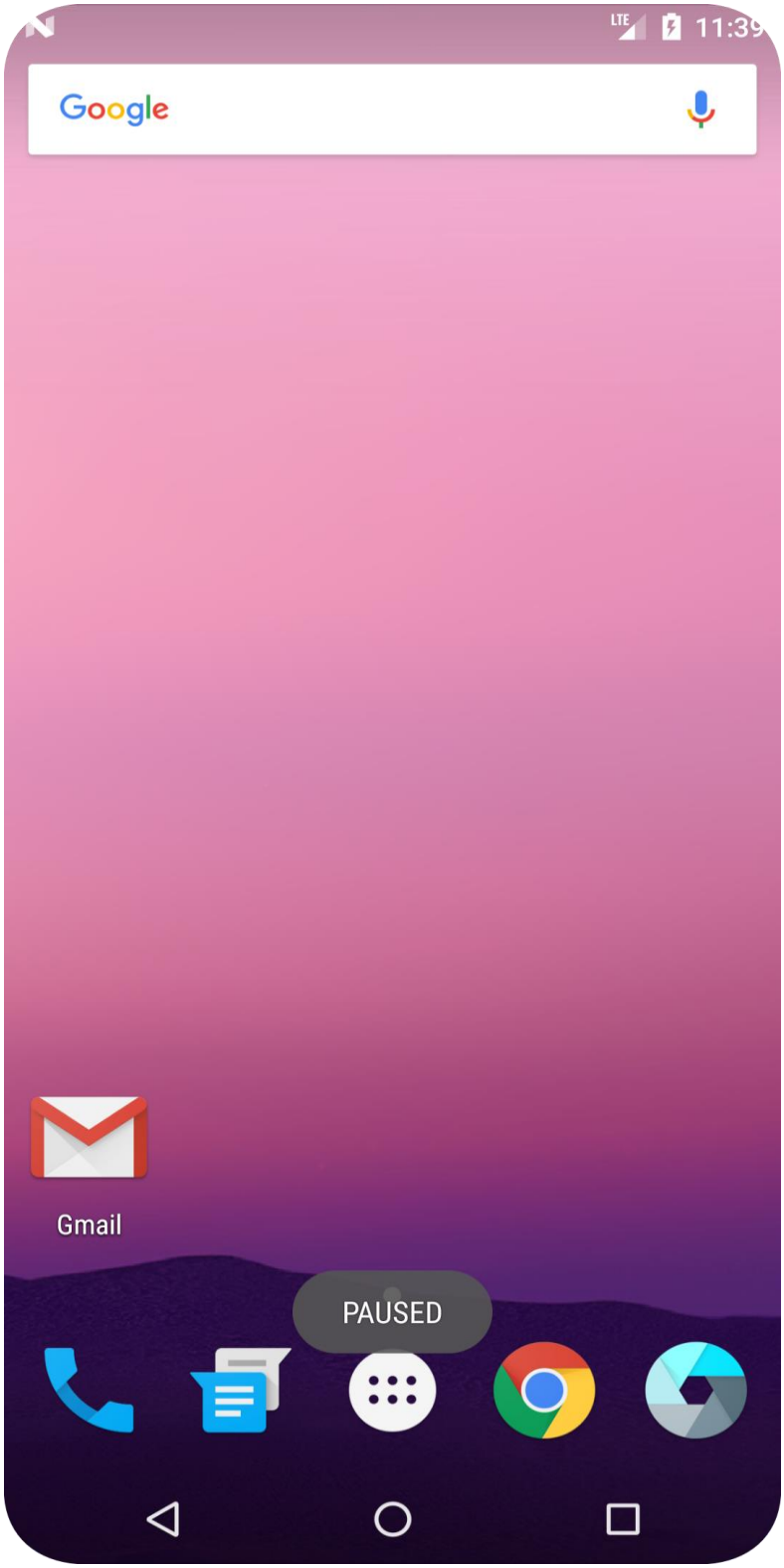
```
  n4.setText("Result: " + RES);
    }
}
```

OUTPUT




11:39
Hello World!
created


LTE
11:37
Hello World!
Resume


11:39
Google
Gmail
PAUSED

Program No:3

ACTIVITY LIFECYCLE

AIM:Write a program that demonstrates Activity Lifecycle.

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">

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

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

MainActivity.xml

```
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

```
super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Toast.makeText(this, "created", Toast.LENGTH_SHORT).show();

    }

    @Override
    protected void onStart() {
        super.onStart();
        Toast.makeText(this, "START", Toast.LENGTH_SHORT).show();
    }

    @Override
    protected void onPause() {
        super.onPause();
        Toast.makeText(this, "PAUSED", Toast.LENGTH_SHORT).show();
    }

    @Override
    protected void onResume() {
        super.onResume();
        Toast.makeText(this, "Resume", Toast.LENGTH_SHORT).show();
    }

    @Override
    protected void onStop() {
        super.onStop();
        Toast.makeText(this, "stopped", Toast.LENGTH_SHORT).show();
    }
}
```