

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.text_view);
        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:

The image shows a mobile application interface for a calculator. At the top, there is a status bar with a signal strength indicator, LTE, a battery icon, and the time 11:17. Below the status bar, the app has a light purple header. The main area is divided into two sections. The top section has two input fields: "First number" with the value "2" and "Second number" with the value "3". Below these fields are four buttons: "+", "-", "*", and "/". The bottom section has a large "Result:" label followed by the value "5". At the bottom of the app is a numeric keypad with buttons for digits 1-9, 0, a decimal point, and a minus sign. There is also a button with a checkmark icon. The entire app is displayed on a black background.

First number 2

Second number 3

+ - * /

Result: Result: 5

1 2 3 -

4 5 6 ,

7 8 9 ×

. 0 _ ✓

Program No:2

Date:

SIMPLE CALCULATOR

AIM:Implementing basic arithmetic 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;}
```

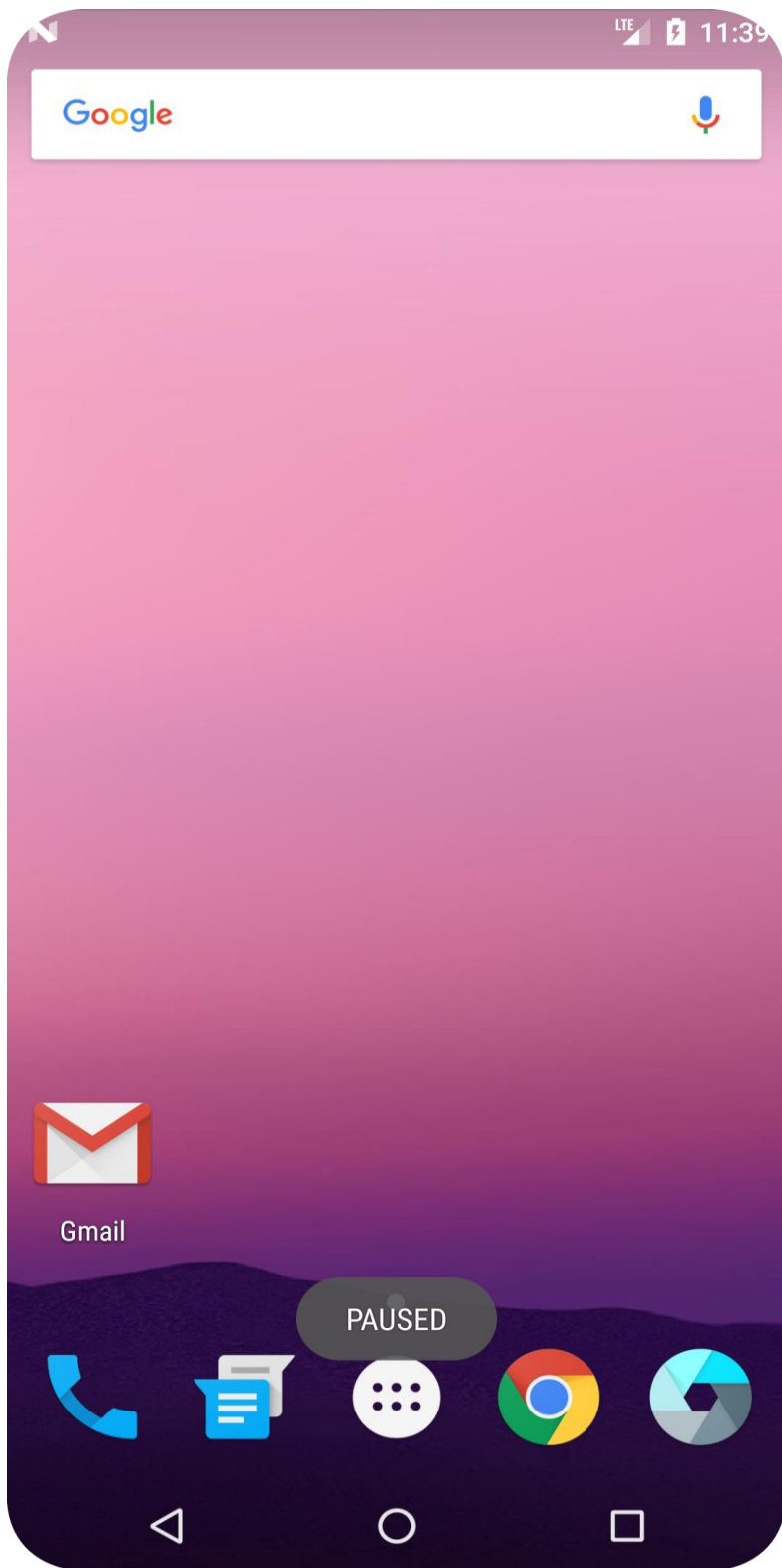
```
    n4.setText("Result: " + RES);  
  }  
}
```

OUTPUT









Program No:3

Date:

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();

}

}
```