

Program no:1**Date:20/9/24****LOGIN FORM**

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

MainActivity.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_username;
    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_username = findViewById(R.id.txt_username);
        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_username.getText().toString();
                String password = txt_pwd.getText().toString();
                if(username.equals("doniya") && password.equals("456")){

                    Toast.makeText(MainActivity.this, "Login successfully",
Toast.LENGTH_LONG).show();

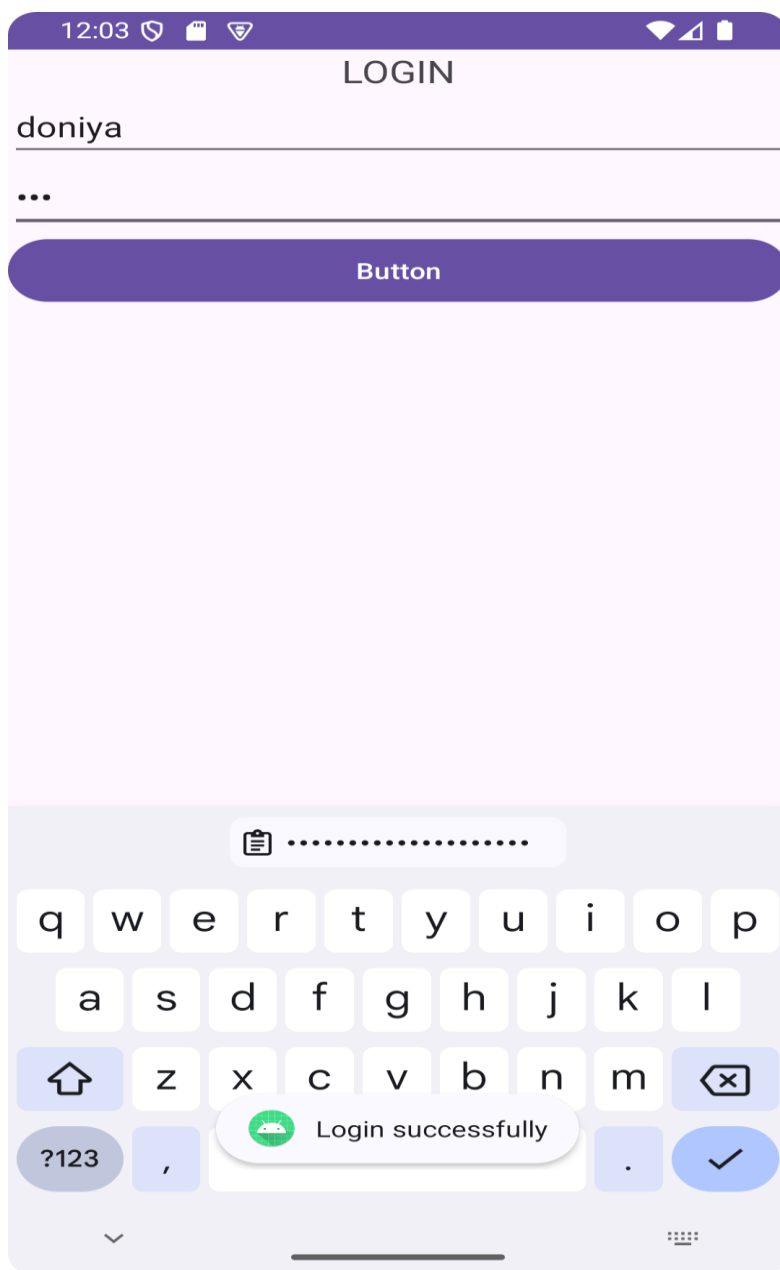
```

```

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

```

OUTPUT



Program no:2

Date:20/9/24

SIMPLE CALCULATOR

Aim:Implementing basic arithmetic operations of a simple calculator

MainActivity.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
```

```
<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

