**Program No:1**

**Date:8/08/2024**

**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**



**Program No:2**

**Date:22/08/2024**

**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() {

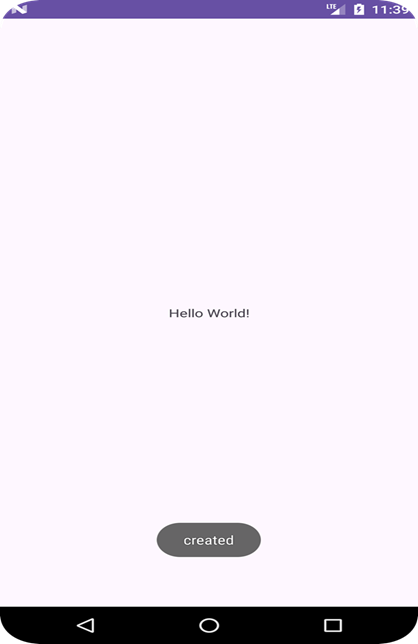
super.onStop();

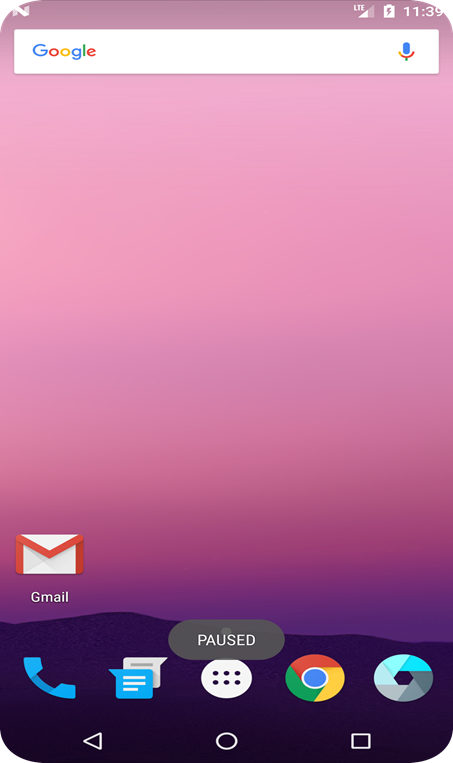
Toast.makeText(this, "stopped", Toast.LENGTH\_SHORT).show();

}

}

**OUTPUT**

**Program No:3**

**Date:29/08/2024**

**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:l 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**

