**Program No:4**

**Date:8/08/2024**

**REGISTRATION FORM**

**AIM**

Implement validation on various UI

**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"

android:textAlignment="textStart"

app:layoutDescription="@xml/activity\_main\_scene"

tools:context=".MainActivity">

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/textView3"

android:layout\_width="417dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Registartion form"

android:textAlignment="center"

android:textSize="20sp" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td"

android:layout\_width="wrap\_content"

android:layout\_height="31dp"

android:layout\_weight="1"

android:text="Name"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_name"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your name"

android:inputType="text"

android:onClick="enter your name" />

</LinearLayout>

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td1"

android:layout\_width="208dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Email"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_email"

android:layout\_width="377dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your email"

android:inputType="text" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="55dp"

android:orientation="horizontal"

android:textAlignment="gravity">

<TextView

android:id="@+id/td2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="password"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_pass"

android:layout\_width="251dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your password"

android:inputType="textPassword" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td3"

android:layout\_width="wrap\_content"

android:layout\_height="match\_parent"

android:layout\_weight="1"

android:text="Gender"

android:textAlignment="inherit"

android:textSize="16sp" />

<RadioGroup

android:id="@+id/rg\_gender"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:orientation="horizontal">

<RadioButton

android:id="@+id/r\_female"

android:layout\_width="93dp"

android:layout\_height="38dp"

android:text="male" />

<RadioButton

android:id="@+id/r\_male"

android:layout\_width="127dp"

android:layout\_height="wrap\_content"

android:text="Female" />

</RadioGroup>

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<CheckBox

android:id="@+id/c\_agree"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Agree" />

</LinearLayout>

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<LinearLayout

android:layout\_width="156dp"

android:layout\_height="match\_parent"

android:layout\_weight="1"

android:orientation="horizontal"></LinearLayout>

<Button

android:id="@+id/bn1"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:onClick="onclick"

android:text="Button"

android:textAlignment="center" />

</LinearLayout>

</LinearLayout>

**MainActivity.java**

package com.example.registrationform;

import static com.example.registrationform.R.id.ed\_email;

import androidx.appcompat.app.AppCompatActivity;

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 email;

EditText pass;

RadioGroup gender;

RadioButton r\_female;

CheckBox agree;

Button bn;

Boolean isAllFieldsChecked;

String setError;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

name=findViewById(R.id.ed\_name);

email=findViewById(ed\_email);

pass=findViewById(R.id.ed\_pass);

gender=findViewById(R.id.rg\_gender);

agree=findViewById(R.id.c\_agree);

bn=findViewById(R.id.bn1);

}

public void onclick(View view) {

isAllFieldsChecked=checkAllFields();

if(isAllFieldsChecked) {

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

}

}

private boolean checkAllFields(){

if (name.length() == 0) {

name.setError("name is required");

return false;

}

if (email.length() == 0) {

email.setError("email is required");

return false;

} else {

String email1 = email.getText().toString();

String checkEmail = "[a-zA-Z0-9.\_-]+@+[a-z]+.+[a-z]";

if (!email1.matches(checkEmail)) {

email.setError("select email");

return false;

}

}

if (pass.length() == 8) {

pass.setError("name is required");

return false;

}

if (gender.getCheckedRadioButtonId() == -1) {

r\_female.setError("select gender");

r\_female.requestFocus();

return false;

}

if (!agree.isChecked()) {

agree.setError("please agree");

agree.requestFocus();

return false;

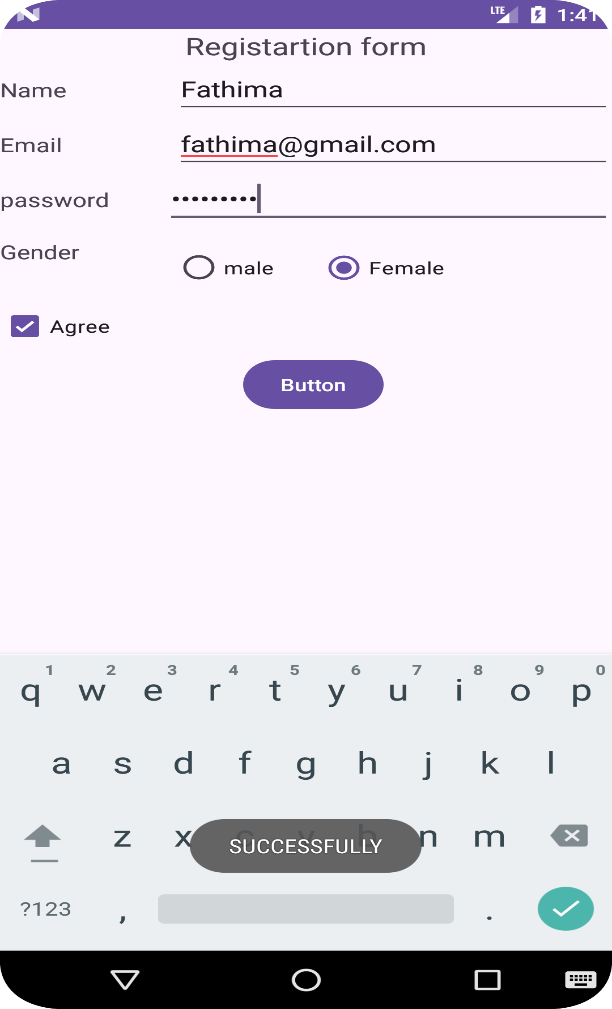
}

return true;

}

}

**OUTPUT**

****

**Program No:5**

**Date:30/09/2024**

**APPLICATION USING INTENT AND SHARED PREFERENCES**

**AIM**

Design a registration activity and stored in local memory of phone using intent and shared preferences.

**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"

android:textAlignment="textStart"

tools:context=".MainActivity">

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/textView3"

android:layout\_width="417dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Registartion form"

android:textAlignment="center"

android:textSize="20sp" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td"

android:layout\_width="wrap\_content"

android:layout\_height="31dp"

android:layout\_weight="1"

android:text="Name"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_name"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your name"

android:inputType="text"

android:onClick="enter your name" />

</LinearLayout>

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td1"

android:layout\_width="208dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Email"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_email"

android:layout\_width="377dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your email"

android:inputType="text" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="55dp"

android:orientation="horizontal"

android:textAlignment="gravity">

<TextView

android:id="@+id/td2"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="password"

android:textSize="16sp" />

<EditText

android:id="@+id/ed\_pass"

android:layout\_width="251dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="enter your password"

android:inputType="textPassword" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/td3"

android:layout\_width="wrap\_content"

android:layout\_height="match\_parent"

android:layout\_weight="1"

android:text="Gender"

android:textAlignment="inherit"

android:textSize="16sp" />

<RadioGroup

android:id="@+id/rg\_gender"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:orientation="horizontal">

<RadioButton

android:id="@+id/r\_female"

android:layout\_width="93dp"

android:layout\_height="38dp"

android:text="male" />

<RadioButton

android:id="@+id/r\_male"

android:layout\_width="127dp"

android:layout\_height="wrap\_content"

android:text="Female" />

</RadioGroup>

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<CheckBox

android:id="@+id/c\_agree"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:text="Agree" />

</LinearLayout>

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<LinearLayout

android:layout\_width="156dp"

android:layout\_height="match\_parent"

android:layout\_weight="1"

android:orientation="horizontal"></LinearLayout>

<Button

android:id="@+id/bn1"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:onClick="onclick"

android:text="Button"

android:textAlignment="center" />

</LinearLayout>

</LinearLayout>

**MainActivity.java**

package com.example.sharedpreferences;

import static com.example.sharedpreferences.R.id.ed\_email;

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.CheckBox;

import android.widget.EditText;

import android.widget.RadioButton;

import android.widget.RadioGroup;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

EditText name;

EditText email;

EditText pass;

RadioGroup gender;

RadioButton r\_female;

CheckBox agree;

Button bn;

Boolean isAllFieldsChecked;

SharedPreferences sp;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

name=findViewById(R.id.ed\_name);

email=findViewById(ed\_email);

pass=findViewById(R.id.ed\_pass);

gender=findViewById(R.id.rg\_gender);

agree=findViewById(R.id.c\_agree);

bn=findViewById(R.id.bn1);

sp=getSharedPreferences("Login",MODE\_PRIVATE);

}

public void onclick(View view) {

isAllFieldsChecked=checkAllFields();

if(isAllFieldsChecked) {

SharedPreferences.Editor ed=sp.edit();

ed.putString("name",name.getText().toString());

ed.putString("email",email.getText().toString());

ed.putString("gender",gender.getCheckedRadioButtonId()==R.id.rg\_gender?"male":"Female");

ed.commit();

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

Intent i=new Intent(MainActivity.this, MainActivity2.class);

startActivity(i);

}

};

private boolean checkAllFields(){

if (name.length() == 0) {

name.setError("name is required");

return false;

}

if (email.length() == 0) {

email.setError("email is required");

return false;

} else {

String email1 = email.getText().toString();

String checkEmail = "[a-zA-Z0-9.\_-]+@+[a-z]+.+[a-z]";

if (!email1.matches(checkEmail)) {

email.setError("select email");

return false;

}

}

if (pass.length() == 8) {

pass.setError("name is required");

return false;

}

if (gender.getCheckedRadioButtonId() == -1) {

r\_female.setError("select gender");

r\_female.requestFocus();

return false;

}

if (!agree.isChecked()) {

agree.setError("please agree");

agree.requestFocus();

return false;

}

return true;

}

}

**activity\_main2.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=".MainActivity2">

<TextView

android:id="@+id/textView"

android:layout\_width="match\_parent"

android:layout\_height="55dp"

android:text="Registration"

android:textAlignment="center"

android:textSize="20sp" />

<TextView

android:id="@+id/textView2"

android:layout\_width="match\_parent"

android:layout\_height="45dp"

android:text="name"

android:textSize="20sp" />

<TextView

android:id="@+id/textView4"

android:layout\_width="match\_parent"

android:layout\_height="61dp"

android:text="email"

android:textSize="20sp" />

<TextView

android:id="@+id/textView5"

android:layout\_width="match\_parent"

android:layout\_height="46dp"

android:text="gender"

android:textSize="20sp" />

</LinearLayout>

**MainActivity2.java**

package com.example.sharedpreferences;

import androidx.appcompat.app.AppCompatActivity;

import android.content.SharedPreferences;

import android.os.Bundle;

import android.widget.TextView;

import android.widget.Toast;

public class MainActivity2 extends AppCompatActivity {

TextView displayname,displaymail,displaygender;

SharedPreferences sp;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main2);

Toast.makeText(this, "LOGIN SUCCESSFULLY COMPLETED", Toast.LENGTH\_SHORT).show();

displayname=findViewById(R.id.textView2);

displaymail=findViewById(R.id.textView4);

displaygender=findViewById(R.id.textView5);

sp=getSharedPreferences("Login",MODE\_PRIVATE);

String name=sp.getString("name","fATHIMA");

String email=sp.getString("email","fathima1@gmail.com");

String gender=sp.getString("gender","female");

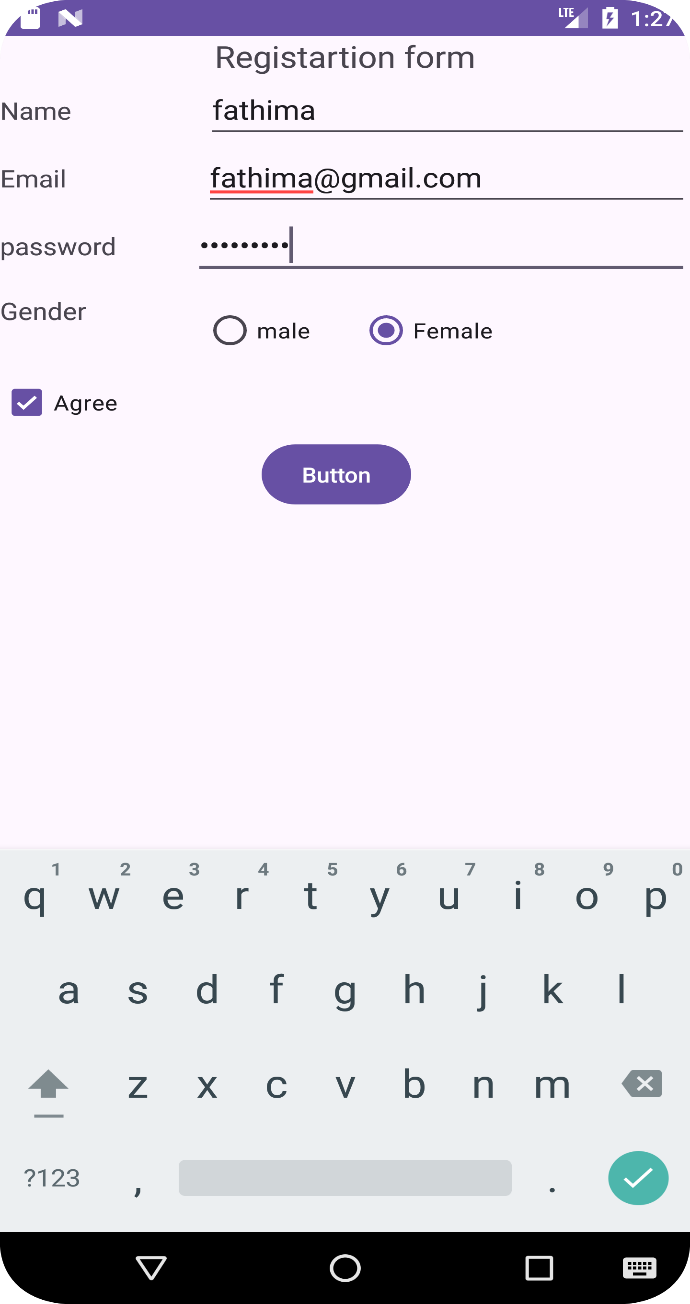
displayname.setText ("Name:"+name);

displaymail.setText ("Email:"+email);

displaygender.setText ("Gender:"+gender);

}}

**OUTPUT**

**Program No:6**

**Date:09/10/2024**

**GRID CALCULATOR**

**AIM**

Design a simple Calculator using Grid Layout and Cascaded Linear Layout

**activity\_main.xml**

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

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

android:padding="16dp">

<TextView

android:id="@+id/display"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textSize="32sp"

android:background="#E0E0E0"

android:padding="16dp"

android:gravity="end"

android:text="" />

<GridLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:rowCount="5"

android:columnCount="4">

<!-- Number Buttons -->

<Button android:text="1" android:onClick="onNumberClick"/>

<Button android:text="2" android:onClick="onNumberClick"/>

<Button android:text="3" android:onClick="onNumberClick"/>

<Button android:text="+" android:onClick="onOperationClick"/>

<Button android:text="4" android:onClick="onNumberClick"/>

<Button android:text="5" android:onClick="onNumberClick"/>

<Button android:text="6" android:onClick="onNumberClick"/>

<Button android:text="-" android:onClick="onOperationClick"/>

<Button android:text="7" android:onClick="onNumberClick"/>

<Button android:text="8" android:onClick="onNumberClick"/>

<Button android:text="9" android:onClick="onNumberClick"/>

<Button android:text="\*" android:onClick="onOperationClick"/>

<Button android:text="C" android:onClick="onClearClick"/>

<Button android:text="0" android:onClick="onNumberClick"/>

<Button android:text="=" android:onClick="onEqualClick"/>

<Button android:text="/" android:onClick="onOperationClick"/>

</GridLayout>

</LinearLayout>

**MainActivity.java**

package com.example.myapplication;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private TextView display;

private StringBuilder input;

private String operation;

private double firstOperand;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

display = findViewById(R.id.display);

input = new StringBuilder();

}

public void onNumberClick(View view) {

Button button = (Button) view;

input.append(button.getText());

display.setText(input.toString());

}

public void onOperationClick(View view) {

if (input.length() > 0) {

firstOperand = Double.parseDouble(input.toString());

operation = ((Button) view).getText().toString();

input.setLength(0); // Clear input

// Show the operation on the display

display.setText(operation); // Display only the operation

}

}

public void onEqualClick(View view) {

if (input.length() > 0 && operation != null) {

double secondOperand = Double.parseDouble(input.toString());

double result = 0;

// Perform the operation based on the selected operation

if (operation.equals("+")) {

result = firstOperand + secondOperand;

} else if (operation.equals("-")) {

result = firstOperand - secondOperand;

} else if (operation.equals("\*")) {

result = firstOperand \* secondOperand; // Multiplication

} else if (operation.equals("/")) {

if (secondOperand != 0) {

result = firstOperand / secondOperand; // Division

} else {

display.setText("Error"); // Handle division by zero

return;

}

}

// Display the result

display.setText(String.valueOf(result));

input.setLength(0); // Clear input after displaying result

operation = null; // Reset operation

}

}

public void onClearClick(View view) {

input.setLength(0);

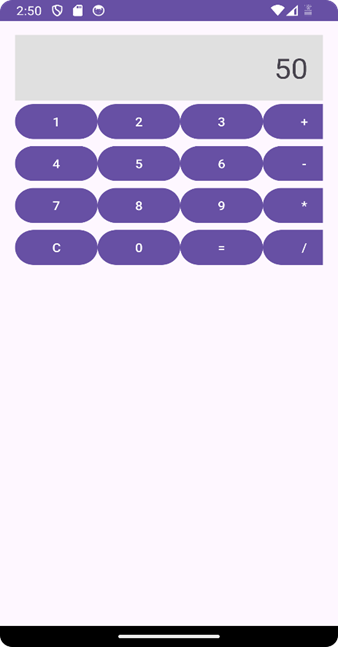
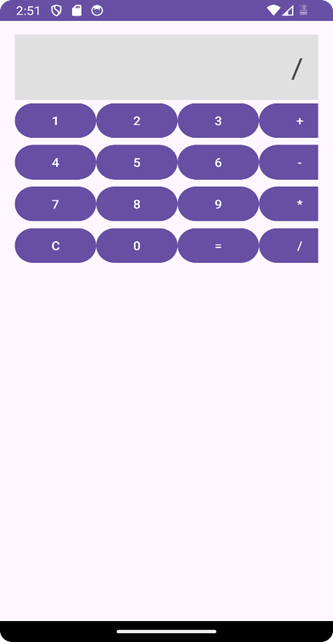
display.setText("");

operation = null; // Reset operation

}

}

**OUTPUT**

** **

**Program No:7**

**Date:16/10/2024**

**FACEBOOK LOGIN PAGE**

**AIM**

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

**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:id="@+id/relativeLayout"

style="square"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:background="#334AE3"

android:orientation="vertical"

tools:context=".MainActivity">

<RelativeLayout

android:layout\_width="match\_parent"

android:layout\_height="257dp">

<ImageView

android:id="@+id/imageView4"

android:layout\_width="match\_parent"

android:layout\_height="228dp"

android:layout\_alignParentBottom="true"

android:layout\_marginBottom="29dp"

app:srcCompat="@drawable/img1" />

</RelativeLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="46dp"

android:orientation="horizontal">

<EditText

android:id="@+id/editTextText12"

android:layout\_width="wrap\_content"

android:layout\_height="match\_parent"

android:layout\_weight="1"

android:ems="10"

android:hint="Username or Email"

android:inputType="text"

android:text="Name"

android:textColor="#BBDEFB" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="48dp"

android:orientation="horizontal">

<EditText

android:id="@+id/editTextTextPassword3"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:ems="10"

android:hint="Password"

android:inputType="textPassword"

android:textColor="#BBDEFB"

android:textColorHint="#BBDEFB" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="48dp"

android:orientation="horizontal">

<Button

android:id="@+id/button2"

style="@style/Widget.Material3.Button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:backgroundTint="#DA2A3AA5"

android:text="Button"

android:textSize="20sp" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="154dp"

android:orientation="horizontal" />

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="43dp"

android:orientation="horizontal">

<TextView

android:id="@+id/textView5"

android:layout\_width="wrap\_content"

android:layout\_height="42dp"

android:layout\_weight="1"

android:backgroundTint="#1414D1"

android:text="Sign Up for Facebook"

android:textAlignment="center"

android:textColor="#BBDEFB"

android:textSize="20sp" />

</LinearLayout>

<LinearLayout

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="horizontal">

<TextView

android:id="@+id/textView6"

android:layout\_width="wrap\_content"

android:layout\_height="37dp"

android:layout\_weight="1"

android:text="Forgot Password?"

android:textAlignment="center"

android:textColor="#BBDEFB"

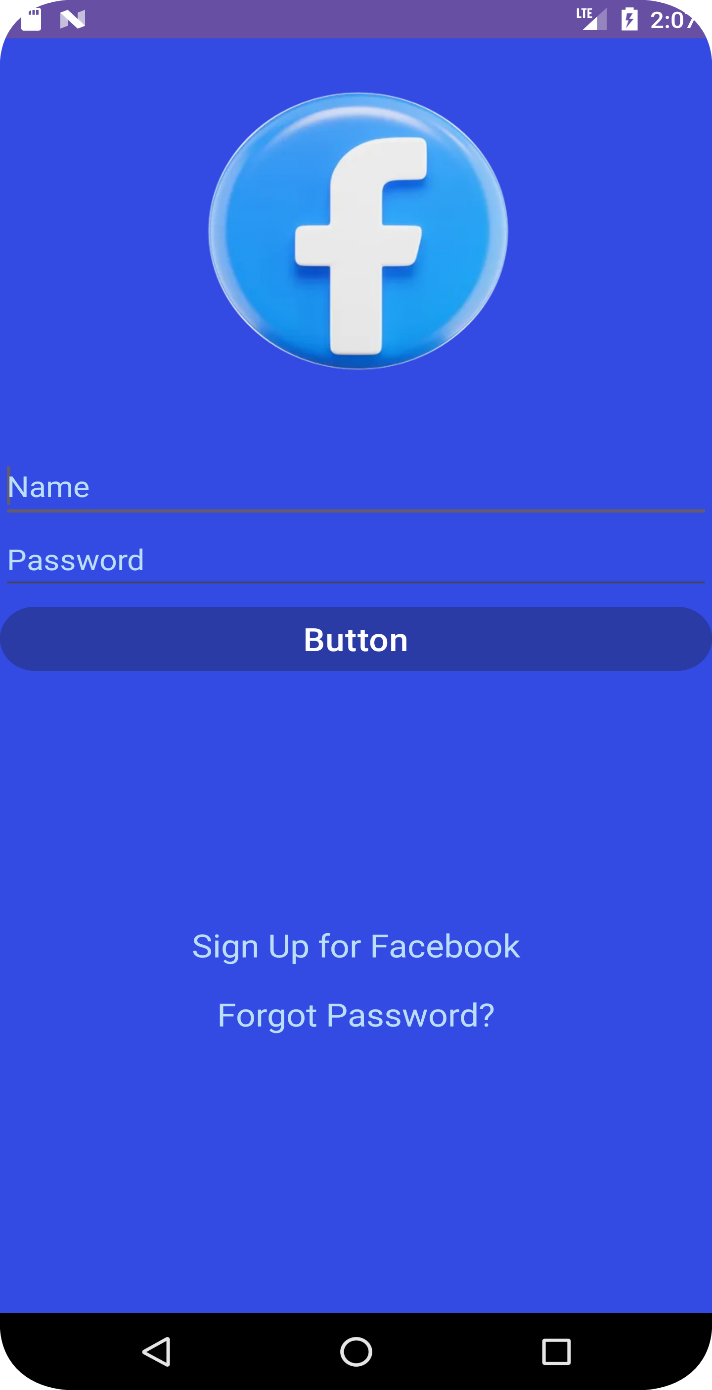
android:textColorHint="#BBDEFB"

android:textSize="20sp" />

</LinearLayout>

</LinearLayout>

**OUTPUT**

****

**Program No:8**

**Date:19/10/2024**

**TOGGLES IMAGE**

Develop an application that toggles image using Frame Layout.

**activity\_main.xml**

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

<FrameLayout 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:id="@+id/img1"

android:layout\_width="wrap\_content"

android:layout\_height="482dp"

android:onClick="onClick"

android:src="@drawable/img" />

<ImageView

android:id="@+id/img"

android:layout\_width="wrap\_content"

android:layout\_height="502dp"

android:src="@drawable/img1" />

</FrameLayout>

**MainActivity.java**

package com.example.toggle;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {

private View image;

private View image1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

image=findViewById(R.id.img);

image1=findViewById(R.id.img1);

image.setOnClickListener(this);

image1.setOnClickListener(this);

}

public void onClick(View view) {

if (view == image){

image.setVisibility(view.GONE);

image1.setVisibility(view.VISIBLE);

}

else {

image1.setVisibility(view.GONE);

image.setVisibility(view.VISIBLE);

}

}

@Override

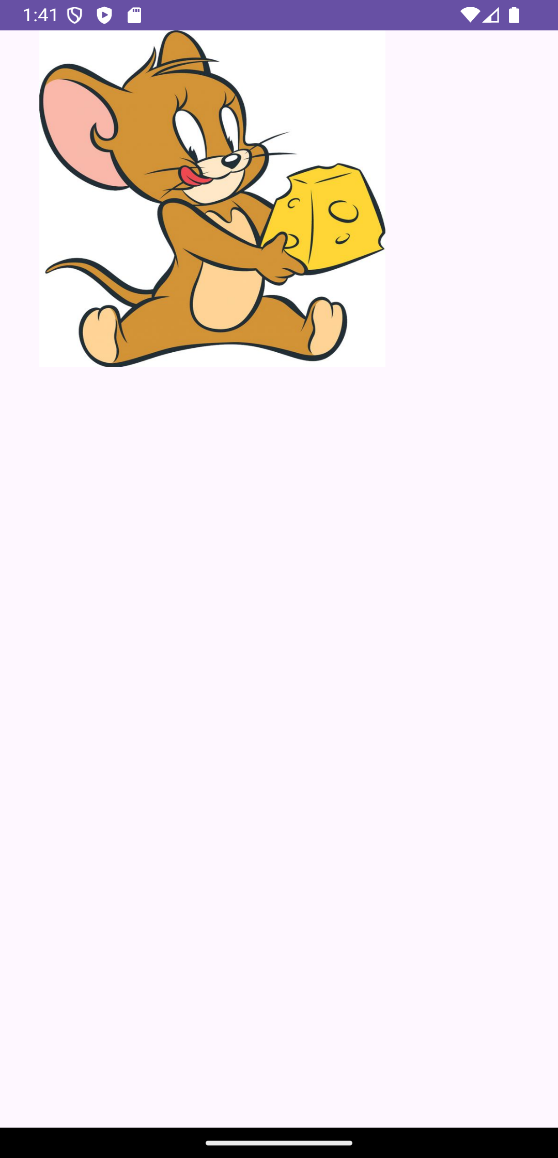
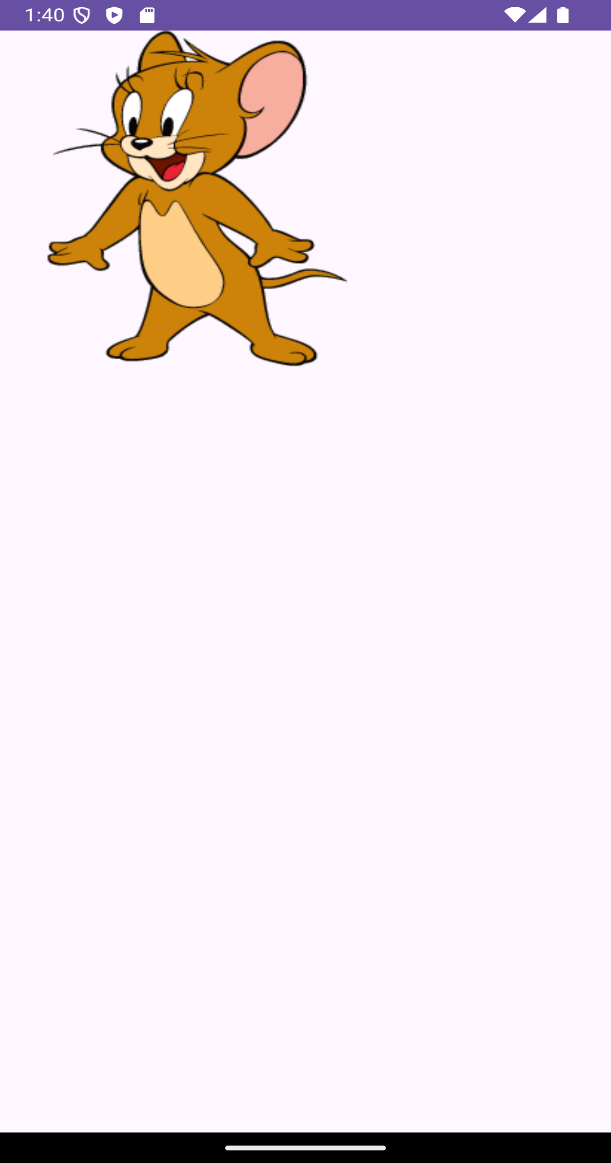
public void onPointerCaptureChanged(boolean hasCapture) {

super.onPointerCaptureChanged(hasCapture);

}

}

**OUTPUT**

** **