**Q.1) Write an android program to show the use of UI controls and components.**

**Files**

**MainActivity.java:**

package com.example.uicomp;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {

Button loginbtn, registerbtn;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

EdgeToEdge.enable(this);

setContentView(R.layout.activity\_main);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

return insets;

});

loginbtn = findViewById(R.id.login\_button);

registerbtn = findViewById(R.id.register\_button);

loginbtn.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

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

startActivity(i);

}

});

registerbtn.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

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

startActivity(i);

}

});

}

}

**activity\_main.xml:**

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

<RelativeLayout 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/main"

android:layout\_width="match\_parent"

android:orientation="vertical"

android:background="@drawable/img"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<TextView

android:id="@+id/someText"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:fontFamily="@font/antic\_didone"

android:text="Login here"

android:textColor="#fff"

android:textSize="50sp"

/>

<Button

android:id="@+id/login\_button"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/someText"

android:layout\_margin="20dp"

android:text="Login"

android:textAllCaps="true"

android:textSize="20sp"

/>

<Button

android:id="@+id/register\_button"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@+id/login\_button"

android:layout\_margin="20dp"

android:text="Register"

android:textAllCaps="true"

android:textSize="20sp"

/>

</RelativeLayout>

**LoginActivity.java:**

package com.example.uicomp;

import android.os.Bundle;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class LoginActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

EdgeToEdge.enable(this);

setContentView(R.layout.activity\_login);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

return insets;

});

}

}

**activity\_login.xml:**

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

<RelativeLayout

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/main"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".LoginActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:text="Login page here"

android:textAllCaps="true"

android:textSize="30sp"

android:fontFamily="@font/antic\_didone"

/>

</RelativeLayout>

**RegisterActivity.java:**

package com.example.uicomp;

import android.os.Bundle;

import androidx.activity.EdgeToEdge;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.graphics.Insets;

import androidx.core.view.ViewCompat;

import androidx.core.view.WindowInsetsCompat;

public class RegisterActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

EdgeToEdge.enable(this);

setContentView(R.layout.activity\_register);

ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v, insets) -> {

Insets systemBars = insets.getInsets(WindowInsetsCompat.Type.systemBars());

v.setPadding(systemBars.left, systemBars.top, systemBars.right, systemBars.bottom);

return insets;

});

}

}

**activity\_register.xml:**

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

<RelativeLayout 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/main"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".RegisterActivity">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_centerInParent="true"

android:text="Register page here"

android:textAllCaps="true"

android:textSize="30sp"

android:fontFamily="@font/antic\_didone"

/>

</RelativeLayout>

**Output:**

**A screenshot of a login screen

Description automatically generated**

**A screen shot of a cell phone

Description automatically generated A screen shot of a cell phone

Description automatically generated**