Slips 11

**Q.1]** Create an Android Application to accept two numbers to calculate it’s Power and Average. Create two buttons : Power and Average. Display the appropriate result on the next activity on Button click.

Ans.

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

<RelativeLayout

xmlns:android="http://schemas.android.com/apk/res/android" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent"

android:layout\_height="match\_parent" tools:context=".MainActivity">

<EditText android:id="@+id/editTextNumber1" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_margin="16dp" android:hint="Enter Number 1" android:inputType="numberDecimal" />

<EditText

android:id="@+id/editTextNumber2" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_below="@id/editTextNumber1" android:layout\_margin="16dp" android:hint="Enter Number 2" android:inputType="numberDecimal" />

<Button android:id="@+id/buttonPower" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_below="@id/editTextNumber2" android:layout\_marginTop="16dp" android:layout\_marginEnd="16dp" android:layout\_alignParentEnd="true" android:text="Power" android:onClick="calculatePower" />

<Button

android:id="@+id/buttonAverage" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_below="@id/editTextNumber2" android:layout\_marginTop="16dp" android:layout\_marginStart="16dp" android:layout\_alignParentStart="true" android:text="Average" android:onClick="calculateAverage" />

</RelativeLayout>

**MainActivity.java- package** com.example.myapplication;

import android.content.Intent; import android.os.Bundle; import android.view.View; import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity { private EditText editTextNumber1, editTextNumber2;

@Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

editTextNumber1 = findViewById(R.id.editTextNumber1); editTextNumber2 = findViewById(R.id.editTextNumber2);

}

public void calculatePower(View view) {

double number1 =

Double.parseDouble(editTextNumber1.getText().toString()); double number2 =

Double.parseDouble(editTextNumber2.getText().toString()); double result = Math.pow(number1, number2);

startResultActivity("Power", result);

}

public void calculateAverage(View view) {

double number1 =

Double.parseDouble(editTextNumber1.getText().toString()); double number2 =

Double.parseDouble(editTextNumber2.getText().toString()); double result = (number1 + number2) / 2; startResultActivity("Average", result);

}

private void startResultActivity(String calculationType, double result) {

Intent intent = new Intent(this, ResultActivity.class); intent.putExtra("CALCULATION\_TYPE", calculationType); intent.putExtra("RESULT", result);

startActivity(intent);

}

}

**ResultActivity.java-**

package com.example.myapplication;

import android.content.Intent; import android.os.Bundle; import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class ResultActivity extends AppCompatActivity {

@Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_result);

TextView textViewResult = findViewById(R.id.textViewResult);

Intent intent = getIntent();

String calculationType = intent.getStringExtra("CALCULATION\_TYPE"); double result = intent.getDoubleExtra("RESULT", 0);

String resultMessage = "Result of " + calculationType + ": " + result;

textViewResult.setText(resultMessage);

}

}

Activity\_result.xml-

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

<RelativeLayout

xmlns:android="http://schemas.android.com/apk/res/android" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".ResultActivity">

<TextView android:id="@+id/textViewResult" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content"

android:layout\_centerInParent="true" android:textSize="24sp" android:textStyle="bold" />

</RelativeLayout>

**Q.2]** Create an Android Application to perform following string operation according to user selection of radio button.

Ans.

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

<RelativeLayout

xmlns:android="http://schemas.android.com/apk/res/android" xmlns:tools="http://schemas.android.com/tools" android:layout\_width="match\_parent" android:layout\_height="match\_parent" tools:context=".MainActivity">

<EditText

android:id="@+id/editTextString" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_margin="16dp" android:hint="Enter String" android:inputType="text" />

<RadioGroup android:id="@+id/radioGroupOperations" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_below="@id/editTextString" android:orientation="vertical">

<RadioButton

android:id="@+id/radioButtonUppercase" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Uppercase" />

<RadioButton

android:id="@+id/radioButtonLowercase" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Lowercase" />

<RadioButton

android:id="@+id/radioButtonRight5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Right 5 Characters" />

<RadioButton android:id="@+id/radioButtonLeft5" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:text="Left 5 Characters" />

</RadioGroup>

<Button android:id="@+id/buttonClick" android:layout\_width="wrap\_content" android:layout\_height="wrap\_content" android:layout\_below="@id/radioGroupOperations" android:layout\_centerHorizontal="true" android:layout\_marginTop="16dp" android:text="Click" android:onClick="performOperation" />

<EditText

android:id="@+id/editTextOutput" android:layout\_width="match\_parent" android:layout\_height="wrap\_content" android:layout\_below="@id/buttonClick" android:layout\_margin="16dp" android:hint="Output" android:inputType="text" android:enabled="false" />

</RelativeLayout>

**MainActivity.java-**

package com.example.myapplication;

import android.os.Bundle; import android.view.View; import android.widget.EditText; import android.widget.RadioButton; import android.widget.RadioGroup;

import androidx.appcompat.app.AppCompatActivity; public class MainActivity extends AppCompatActivity {

private EditText editTextString, editTextOutput; private RadioGroup radioGroupOperations;

@Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_main);

editTextString = findViewById(R.id.editTextString); editTextOutput = findViewById(R.id.editTextOutput);

radioGroupOperations = findViewById(R.id.radioGroupOperations);

}

public void performOperation(View view) {

String inputString = editTextString.getText().toString();

int selectedRadioButtonId = radioGroupOperations.getCheckedRadioButtonId();

RadioButton selectedRadioButton = findViewById(selectedRadioButtonId);

if (selectedRadioButton != null) {

String operation = selectedRadioButton.getText().toString(); String result = ""; switch (operation) { case "Uppercase":

result = inputString.toUpperCase(); break; case "Lowercase":

result = inputString.toLowerCase();

break;

case "Right 5 Characters":

result =

inputString.substring(Math.max(inputString.length() - 5, 0));

break; case "Left 5 Characters":

result = inputString.substring(0, Math.min(inputString.length(), 5));

break;

}

editTextOutput.setText(result);

}

}

}