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/radioGroupOperation
s"        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);
        }
    }
}
```