**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:hint="Enter Number
android:layout margin="16dp"
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 {
               protected void onCreate(Bundle
  @Override
                          super.onCreate(savedInstanceState);
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:textStyle="bold" />
android:textSize="24sp"
</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" />
  < Radio Group
                    android:id="@+id/radioGroupOperations"
android:layout width="match parent"
android:layout height="wrap content"
android:layout below="@id/editTextString"
android:orientation="vertical">
    < Radio Button
      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;
               protected void onCreate(Bundle
  @Override
                         super.onCreate(savedInstanceState);
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();
                case "Lowercase":
break;
            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);
     }
  }
```