

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

**// MainActivity.java**

**import android.os.Bundle;**

**import android.view.View;**

**import android.widget.Button;**

**import android.widget.EditText;**

**import android.widget.RadioButton;**

**import android.widget.TextView;**

**import androidx.appcompat.app.AppCompatActivity;**

**public class MainActivity extends AppCompatActivity {**

**private EditText inputEditText;**

**private Button operateButton;**

**private TextView resultTextView;**

**private RadioButton reverseRadioButton, uppercaseRadioButton, lowercaseRadioButton;**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.activity\_main);**

**inputEditText = findViewById(R.id.inputEditText);**

**operateButton = findViewById(R.id.operateButton);**

**resultTextView = findViewById(R.id.resultTextView);**

**reverseRadioButton = findViewById(R.id.reverseRadioButton);**

```

uppercaseRadioButton = findViewById(R.id.uppercaseRadioButton);
lowercaseRadioButton = findViewById(R.id.lowercaseRadioButton);

operateButton.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String input = inputEditText.getText().toString();
        String result = "";

        if (reverseRadioButton.isChecked()) {
            result = reverseString(input);
        } else if (uppercaseRadioButton.isChecked()) {
            result = input.toUpperCase();
        } else if (lowercaseRadioButton.isChecked()) {
            result = input.toLowerCase();
        }

        resultTextView.setText(result);
    }
});
}

private String reverseString(String input) {
    StringBuilder reversed = new StringBuilder();
    for (int i = input.length() - 1; i >= 0; i--) {
        reversed.append(input.charAt(i));
    }
}

```

```

        return reversed.toString();
    }
}

<!-- activity_main.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=".MainActivity">

    <EditText
        android:id="@+id/inputEditText"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter a string"
        android:layout_margin="16dp"/>

    <RadioButton
        android:id="@+id/reverseRadioButton"
        android:layout_below="@id/inputEditText"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Reverse"/>

    <RadioButton
        android:id="@+id/uppercaseRadioButton"

```

```
android:layout_below="@id/reverseRadioButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Uppercase"/>
```

<RadioButton

```
android:id="@+id/lowercaseRadioButton"
android:layout_below="@id/uppercaseRadioButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Lowercase"/>
```

<Button

```
android:id="@+id/operateButton"
android:layout_below="@id/lowercaseRadioButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Operate"
android:layout_marginTop="16dp"/>
```

<TextView

```
android:id="@+id/resultTextView"
android:layout_below="@id/operateButton"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:textSize="20sp"
android:textStyle="bold"
```

```
android:layout_marginTop="16dp"/>
```

```
</RelativeLayout>
```