Q.1] Create an application that allows the user to enter a number in the textbox named „getnum". Check whether the number in the textbox „getnum" is Palindrome or not. Print the message accordingly in the label when the user clicks on the button „Check".

First, define your layout in XML (**`activity_main.xml`**):

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp">

    <EditText
        android:id="@+id/editTextNumber"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter a number"
        android:inputType="number" />

    <Button
        android:id="@+id/buttonCheck"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/editTextNumber"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="Check" />

    <TextView
        android:id="@+id/textViewResult"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/buttonCheck"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="16dp"
        android:text="" />

</RelativeLayout>
```

Then, in your activity class (**`MainActivity.java`**), you can implement the logic:

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    EditText editTextNumber;
    Button buttonCheck;
    TextView textViewResult;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```
    editTextNumber = findViewById(R.id.editTextNumber);
    buttonCheck = findViewById(R.id.buttonCheck);
    textViewResult = findViewById(R.id.textViewResult);

    buttonCheck.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String inputNumber = editTextNumber.getText().toString().trim();
            if (isPalindrome(inputNumber)) {
                textViewResult.setText(inputNumber + " is a palindrome.");
            } else {
                textViewResult.setText(inputNumber + " is not a palindrome.");
            }
        }
    });
}

private boolean isPalindrome(String str) {
    int left = 0;
    int right = str.length() - 1;
    while (left < right) {
        if (str.charAt(left) != str.charAt(right)) {
            return false;
        }
        left++;
        right--;
    }
    return true;
}
```

```
}
```