Programmer Name: Sahil Amrutkar
Batch: N7

Problem Statement: Develop an RMI application which accepts a string or a number and checks that string or number is palindrome or not.

Interface File

```
package ajp_exp5;
import java.rmi.*;

public interface PrintI extends Remote {
   void show() throws RemoteException;
}
```

Class file

```
import java.rmi.*;
import java.util.*;
import java.rmi.server.*;
import ajp_exp5.PrintI;

public class PrintC extends UnicastRemoteObject implements PrintI {
   public PrintC() throws RemoteException {
      super();
   }

   public void show() {
      Scanner sc = new Scanner(System.in);
      int option = 1;
      while (option == 1) {
         int ch;
         System.out.println("Choose 1 ");
         System.out.println("1.) String");
         System.out.println("2.) Number");
         ch = sc.nextInt();
         sc.nextLine();
         switch (ch) {
```

```java
        case 1:
          String str;
          System.out.println("Enter the string");
          str = sc.nextLine();
          str = str.replaceAll("\\s", "").toLowerCase();
          String reversed = new StringBuilder(str).reverse().toString();
          if (str.equals(reversed)) {
            System.out.println("Entered String is Palindrome");
          } else {
            System.out.println("Entered String is not a Palindrome");
          }
          break;
        case 2:
          int num;
          System.out.println("Enter A number");
          num = sc.nextInt();
          int original = num, reversedn = 0;
          while (num > 0) {
            int digit = num % 10;
            reversedn = reversedn * 10 + digit;
            num /= 10;
          }
          if (original == reversedn) {
            System.out.println("Entered Number is Palindrome");
          } else {
            System.out.println("Entered Number is not Palindrome");
          }
          break;
        default:
          System.out.println("Wrong Option Please Try again");
      }
      System.out.println("Do you wish to continue(1/0)");
      option = sc.nextInt();
    }
  }
}
```

Server File

```java
package ajp_exp5;
import java.rmi.*;
import java.rmi.registry.*;
import java.rmi.server.*;
import ajp_exp5.PrintC;

public class Server {
    public static void main(String[] args) throws RemoteException, AlreadyBoundException {
        PrintC obj = new PrintC();
        Registry registry = LocateRegistry.createRegistry(5000);
        try {
            registry.bind("DISPLAY", obj);
        } catch (AlreadyBoundException e) {
            e.printStackTrace();
        }
    }
}
```

Client File

```java
package ajp_exp5;
import java.rmi.*;
import java.net.MalformedURLException;

public class Client {
    public static void main(String args[]) throws RemoteException, MalformedURLException {
        try {
            PrintI obj1 = (PrintI) Naming.lookup("rmi://localhost:5000/DISPLAY");
            obj1.show();
        } catch (NotBoundException e) {
            e.printStackTrace();
        }
    }
}
```

OUTPUT

Choose 1
1.) String
2.) Number
1
Enter the string
tomato
Entered String is not Palindrome
Do yo wish to continue(1/0)
1
Choose 1
1.) String
2.) Number
10433401
Wrong Option Please Try again
Do yo wish to continue(1/0)
1
Choose 1
1.) String
2.) Number
2
Enter A number
10433401
Entered Number is a Palindrome
Do yo wish to continue(1/0)
1
Choose 1
1.) String
2.) Number
2
Enter A number
123320
Entered Number is not a Palindrome
Do yo wish to continue(1/0)
0
`