# Lab Exercise 6 CSE 1007 -Aishwarya S 19BCE1709

1.

```
CODE:
import java.util.*;
import java.lang.*;
class lab61
  String phone, regno;
  public void checkregno(String regno)
   { String error;
   try{
       if(regno.length()!=9)
         throw new IllegalArgumentException("Invalid\n");
       if (!regno.matches("^[0-9a-zA-Z]+$"))
            throw new NoSuchElementException(" Invalid\n");
       else
         {this.regno =regno;
               System.out.print("Valid\n");
   catch( NoSuchElementException ex)
   { System.out.println(ex);
  catch(IllegalArgumentException ex)
   { System.out.println(ex);
    }
public void checkphone(String phone)
{
try
if(phone.length()!=10)
         throw new IllegalArgumentException("Invalid");
  double a = Double.parseDouble(phone);
```

```
System.out.print("Valid\n");
}catch(NumberFormatException ex)
           System.out.println("Invalid "+ex);
       catch(IllegalArgumentException ex)
          System.out.println(ex) ;
}
       }
  public static void main(String args[])
    { Scanner s= new Scanner(System.in);
       lab61 inst = new lab61();
       System.out.print("Aishwarya S 19BCE1709 Lab 6 Program 1\n");
       System.out.print("Enter the register number: ");
         String r=s.nextLine();
       inst.checkregno(r);
        System.out.print("Enter the phone number: ");
         r=s.nextLine();
        inst.checkphone(r);
    }
}
```

# OUTPUT: TEST CASE 1:

```
Desktop — -zsh — 80×24

[(base) aishwarya@Aishwaryas-MacBook-Pro Desktop % javac lab61.java
[(base) aishwarya@Aishwaryas-MacBook-Pro Desktop % java lab61

Aishwarya S 19BCE1709 Lab 6 Program 1

Enter the register number: 19BCE1709

Valid
Enter the phone number: 9887712345

Valid
(base) aishwarya@Aishwaryas-MacBook-Pro Desktop %
```

#### TEST CASE 2:

```
Desktop — -zsh — 80×24

[(base) aishwarya@Aishwaryas—MacBook—Pro Desktop % javac lab61.java
[(base) aishwarya@Aishwaryas—MacBook—Pro Desktop % java lab61

Aishwarya S 19BCE1709 Lab 6 Program 1

Enter the register number: 19BC1212

java.lang.IllegalArgumentException: Invalid

Enter the phone number: 988771234

java.lang.IllegalArgumentException: Invalid
(base) aishwarya@Aishwaryas—MacBook—Pro Desktop %
```

#### TEST CASE 3:

# 2.

## APPROACH:

Scraping the data from wikipedia and loading it into a csv file. Loading the csv data into a hashmap in java CSV:

| A                                        | В    |
|------------------------------------------|------|
| State or Union Territory                 | Code |
| Andaman and Nicobar Islands              | AN   |
| Andhra Pradesh                           | AP   |
| Arunachal Pradesh                        | AR   |
| Assam                                    | AS   |
| Bihar                                    | BR   |
| Chandigarh                               | СН   |
| Chhattisgarh                             | CG   |
| Dadra and Nagar Haveli and Daman and Diu | DD   |
| Delhi                                    | DL   |
| Goa                                      | GA   |
| Gujarat                                  | GJ   |
| Haryana                                  | HR   |
| Himachal Pradesh                         | HP   |
| Jammu and Kashmir                        | JK   |
| Jharkhand                                | JH   |
| Karnataka                                | KA   |
| Kerala                                   | KL   |
| Ladakh                                   | LA   |
| Lakshadweep                              | LD   |
| Madhya Pradesh                           | MP   |
| Maharashtra                              | МН   |
| Manipur                                  | MN   |
| Meghalaya                                | ML   |
| Mizoram                                  | MZ   |
| Nagaland                                 | NL   |
| Odisha                                   | OD   |
| Puducherry                               | PY   |
| Punjab                                   | PB   |
| Rajasthan                                | RJ   |
| Sikkim                                   | SK   |
| Tamil Nadu                               | TN   |
| Telangana                                | TS   |
| Tripura                                  | TR   |
| Uttar Pradesh                            | UP   |
| Uttarakhand                              | UK   |
| West Bengal                              | WB   |

# CODE:

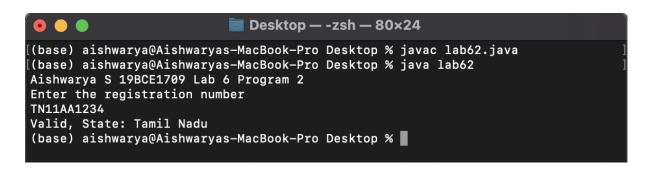
```
import java.util.*;
import java.lang.*;
import java.io.*;
import java.util.regex.Pattern;
import java.util.regex.Matcher;
class udexception extends Exception
```

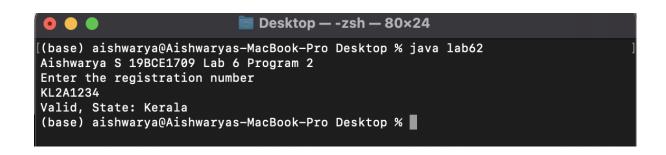
```
{
 String a;
 udexception(String b) {
   a=b;
 public String toString(){
   return (a);
}
class lab62
   public static void main(String args[]) throws FileNotFoundException,
IOException
  { Scanner s= new Scanner(System.in);
     HashMap<String, String> statec = new HashMap<String, String>();
   BufferedReader br = new BufferedReader(new FileReader("statecode.csv"));
   String bl=br.readLine();
   while(bl!=null)
    { String col[] = bl.split(",");
     statec.put(col[1], col[0]);
     bl=br.readLine();
     System.out.print("Aishwarya S 19BCE1709 Lab 6 Program 2\n");
   System.out.print("Enter the registration number\n");
  String regis= s.nextLine();
   final String regex =
"([A-Z]{2})(?!00)(?!0[A-Z])([0-9]{1,2})([A-Z]{1,2})([0-9]{4})";
   final String regex1="([0-9]*)([A-Z]*)";
  int f;
  try
          if(regis.length()>10|| regis.length()<8)</pre>
               throw new IllegalArgumentException("Boundary condition has
been violated\n");
           if(!regis.matches("^[0-9A-Z]*$"))
                    throw new IllegalArgumentException("Invalid, contains
special characters\n");
           if(regis.matches(regex))
             { if(statec.containsKey(regis.substring(0,2)))
```

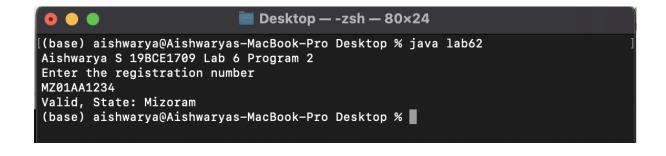
```
throw new udexception("Valid, State: "+
statec.get(regis.substring(0,2)));
               else
                   throw new udexception ("Invalid, State code does not
exist\n");
       f=regis.length()-6;
       if(!statec.containsKey(regis.substring(0,2)))
               throw new udexception ("Invalid, State code does not
exist\n");
       if(!regis.substring(2+f, regis.length()).matches("[0-9]{4}"))
                 throw new udexception ("Invalid, Deficiency in last four
digits\n");
       if(regis.substring(2,2+f).matches("^[A-Z]*$"))
              throw new udexception("Invalid, RTO code missing\n");
       if (regis.substring(2,2+f).matches("0[A-Z]+\$|00[A-Z]+"))
               throw new udexception ("Invalid, RTO number cannot be all
zeroes\n");
        if (regis.substring(2,2+f).matches("[0-9]+"))
               throw new udexception("Invalid, Series number missing\n");
}catch(udexception ex)
   { System.out.println(ex);
  catch(IllegalArgumentException ex)
     {System.out.println(ex);
     }
}
```

#### **OUTPUTS**:

## VALID TEST CASES







#### INVALID TEST CASES

## TOO MANY CHARACTERS:

```
Desktop — -zsh — 80×24

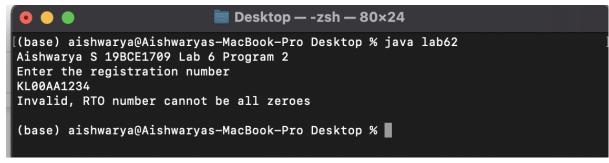
[(base) aishwarya@Aishwaryas-MacBook-Pro Desktop % java lab62
Aishwarya S 19BCE1709 Lab 6 Program 2
Enter the registration number
TN11AA12345
java.lang.IllegalArgumentException: Boundary condition has been violated

(base) aishwarya@Aishwaryas-MacBook-Pro Desktop %
```

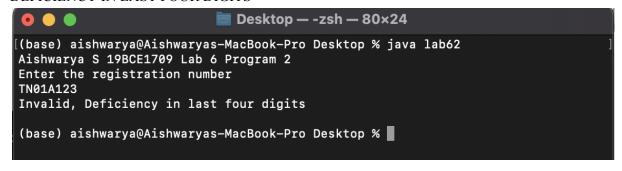
## INVALID STATE CODE



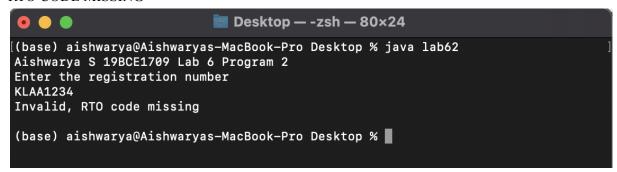
#### RTO NUMBER ALL ZEROS



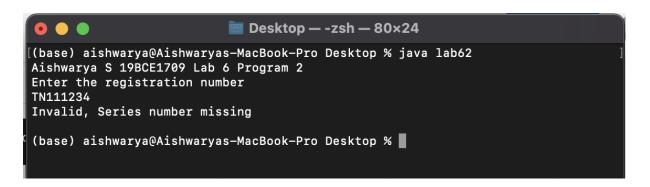
## **DEFICIENCY IN LAST FOUR DIGITS**



#### RTO CODE MISSING



#### SERIES NUMBER MISSING



#### CONTAINS SPECIAL CHARACTERS:

```
Desktop — -zsh — 80x24

[(base) aishwarya@Aishwaryas-MacBook-Pro Desktop % java lab62
Aishwarya S 19BCE1709 Lab 6 Program 2
Enter the registration number
**12AA1234
java.lang.IllegalArgumentException: Invalid, contains special characters

(base) aishwarya@Aishwaryas-MacBook-Pro Desktop %
```