Department of Computer Science & Engineering, SDMCET, Dharwad-2

AOOP Assignment Submission Report

[Submitted as part of CTA Assignment No-1]

Course:	Advanced Object-Oriented Programming	Course Code:	18UCSE508
Semester:	V	Division:	B

Submitted by:

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1. Problem Definition 1:

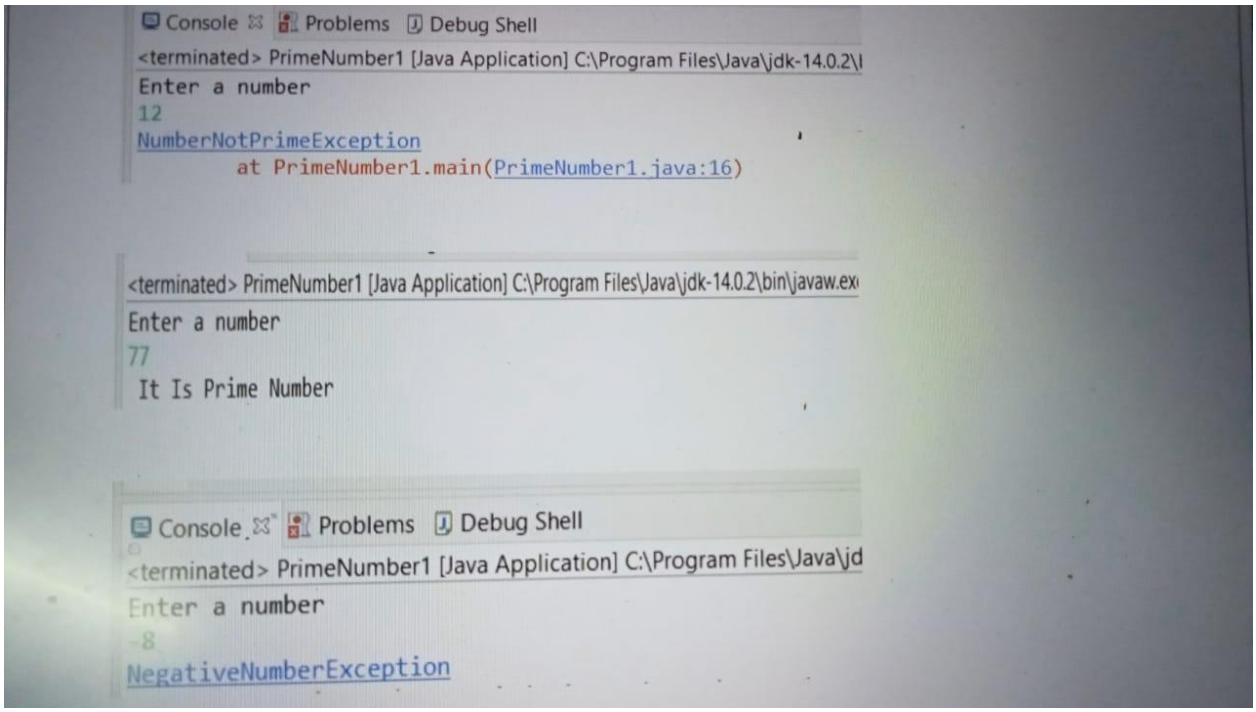
Write a Java program to generate and handle any three built-in exceptions and display appropriate error messages.

2. Java Program:

```
public class MultipleException {
public static void main(String args[]) {


   int a=0;     int
x[]= {1,2,3};


 try{    int
u=x[2]/a;
  }
   catch(ArithmeticException e1) {
      System.out.println("Arithmetic Exception: " +e1);
      }


try  {          String  s[]=null;
if(s.equals("Java oops")) {
    System.out.println("equal");


   }
```

```
}   catch(NullPointerException e2) {
    System.out.println("Null pointer Exception: " +e2);
}    try {
x[2] =5;
  }
  catch(ArrayIndexOutOfBoundsException e3) {         System.out.println("Array index out of bound Exception: " +e3);
        }
  }



   }
```

3. Screen Shots of Execution:



1.Problem Definition 2:

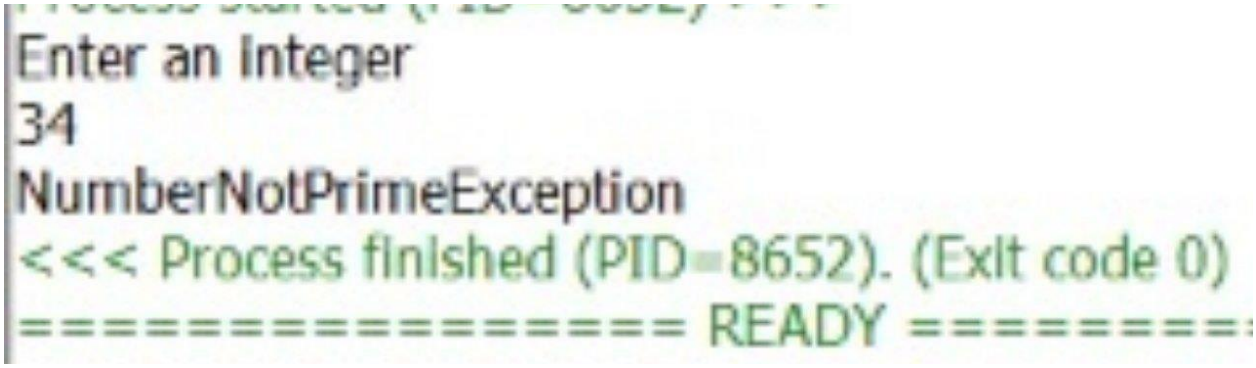
Write a Java program to read an integer and check whether the number is prime or not. If negative number is entered, throw an exception NegativeNumberNotAllowedException and if entered number is not prime, then throw NumberNotPrimeException.

2.Java Program:

```
   import java.util.scanner;


 public class Q2{      public static void main(string[]
args)throws numException{
        Scanner sc=new Scanner(System.im);
System.out.println("enter an integer");
        int  n=sc.nextInt();
        if(n<0){
          throw                                                    new
numExceotion("NegativeNumberNotAllowedException");
}
 for(int i=2;i<n;i++){
if(n%i==0)
    throw new numException("NumberNotPrimeException");
}
System.out.println("it's prime number");
}
}
```

```
Class numException extends Exception{
String msg;     public numException
(String msg){   this.msg=msg;
 }
 public String toString(){
return "Exception: "+msg;
  }
}
```

3.Execution:


Enter an Integer
34
NumberNotPrimeException
<<< Process finished (PID=8652). (Exit code 0)
========== READY ==========

1.Problem Definition 3:

Write a Java program to perform the following operations:

a) Read a line of text

b) Search for a sub-string SDMCET (case insensitive search)

c) If found, then print success message

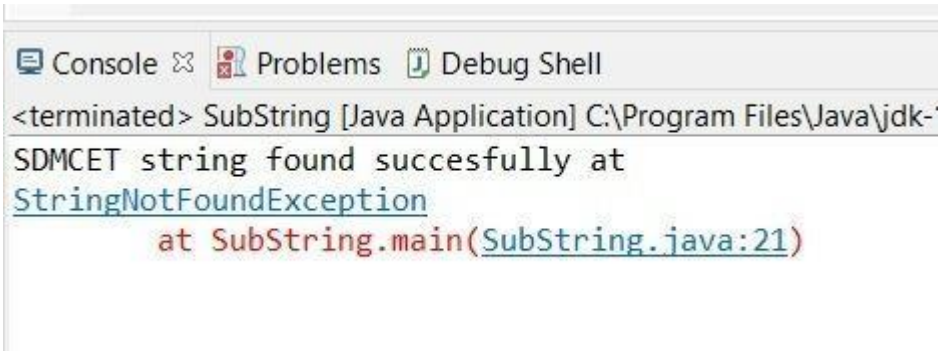
d) Otherwise throw an exception SubStringNotFoundException with appropriate message

2.Java Program:

```
    import java.io.BufferedReader;
import java.io.FileReader; import
java.io.IOException;



public class SubString {  public static void main(String
args[]) throws IOException {
 FileReader f=new FileReader("Sdmcet.txt");
 BufferedReader br= new BufferedReader(f);
 String s1="SDMCET";
 String s2="";

 while((s2=br.readLine())!=null) {
  try {


   if(s2.contains(s1)) {

    System.out.println("SDMCET  string       found       succesfully
at position:"+s2.indexOf(s1) );
   }
    else
     throw new StringNotFoundException("String not found");
```

```
   }catch(StringNotFoundException se) {
se.printStackTrace();
   }
  }

}
}
class StringNotFoundException extends Exception{
 private String se;
 StringNotFoundException(String s){
  this.se=s;
 }
}
```

3.Execution:


Console
Problems
Debug Shell
<terminated> SubString [Java Application] C:\Program Files\Java\jdk-
SDMCET string found succesfully at
StringNotFoundException
at SubString.main(SubString.java:21)

1.Problem Definition 4:

Write a Java program to perform the following operations:

a) Create a file named Alphabets.txt and insert appropriate data into it

b) Read the file and copy all the consonants into another file named Consonants.txt

c) If vowel is encountered, throw an exception VowelNotAllowedException and continue until

end of file

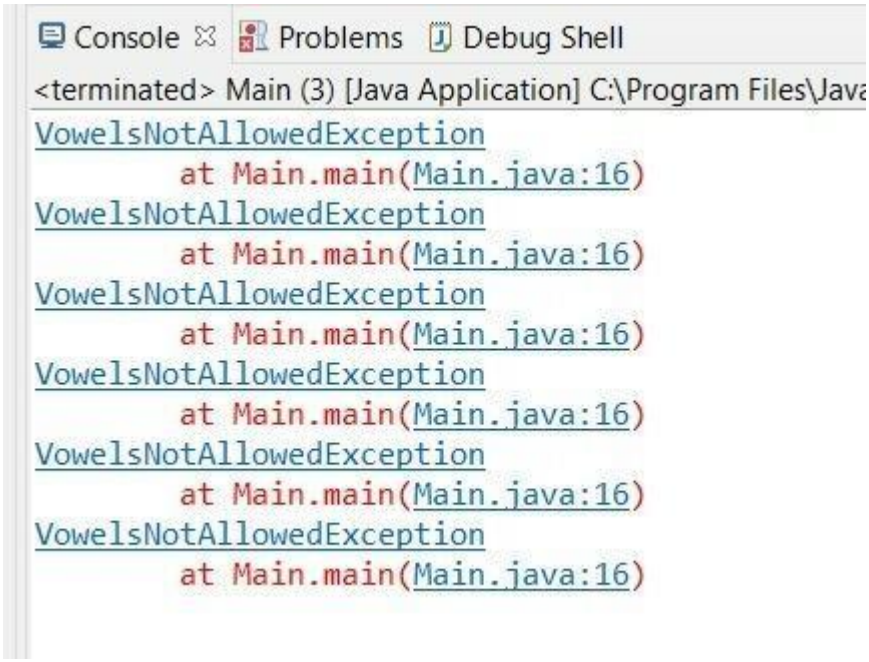
2.Java Program:

```
import java.io.*;
```

```
public class Main {  public static void main(String[]
args)throws IOException{

  FileInputStream fin=new
  //reading text from alphabet.txt file
  FileOutputStream fout=new
  //writing bytes to consonent.txt file

  int s;
  while((s=fin.read())!=-1) {
   try {
    if(s=='a'|| s=='A'|| s=='e'||s=='E'||s=='i'||
s=='I'||s=='o'||s=='O'||s=='u'||s=='U')
      throw new VowelsNotAllowedException("Vowels Not Allowed");
    else
fout.write(s);
   }catch(VowelsNotAllowedException e) {
    e.printStackTrace();
   }
}
   fin.close();
fout.close();
 }
}

class VowelsNotAllowedException extends Exception{
```

```
 private String se;
 VowelsNotAllowedException(String s){
  this.se=s;
 }
}
```

3.Execution:


Console
Problems
Debug Shell
<terminated> Main (3) [Java Application] C:\Program Files\Java
VowelsNotAllowedException
at Main.main(Main.java:16)
VowelsNotAllowedException
at Main.main(Main.java:16)
VowelsNotAllowedException
at Main.main(Main.java:16)
VowelsNotAllowedException
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VowelsNotAllowedException
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