IIP

Test Units 2 and 3 - Possible solution

Year 2016-2017

Name:

1. (3 points) Write a Java program class that asks for your an integer number and for a `String` and writes `true` if the length of the `String` is equal to than number, and `false` otherwise.

```
import java.util.*;

public class ExactLength {
  public static void main(String [] args) {
    int l;
    String s;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

    System.out.print("Write an integer number: ");
    l=kbd.nextInt();
    kbd.nextLine();   // To avoid newline problem
    System.out.print("Write a string: ");
    s=kbd.nextLine();
    System.out.println(l==s.length());
  }
}
```

2. (3 points) Write a Java program that asks for an integer number and calculates and prints the integer part of its natural logarithm. In case that the number is negative, its absolute value must be used.

```
import java.util.*;

public class IntLog {
  public static void main(String [] args) {
    int n, l;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

    System.out.print("Write the number: ");
    n=kbd.nextInt();

    n=Math.abs(n);
    l=(int) Math.floor(Math.log(n));
    System.out.println("Integer part of logarithm of "+n+" is "+l);
  }
}
```

3. (4 points) Write a Java program class that reads a `String`; in case the first and last character of the `String` are the same, only the characters on the odd positions (1, 3, 5, ...) of the `String` would be printed. Otherwise, the reverse `String` must be printed.

```
import java.util.*;

public class ManageString {
  public static void main(String [] args) {
    Scanner kbd=new Scanner(System.in).useLocale(Locale.US);
    String s;
    int i;

    System.out.print("Give me a string: ");
```

```
    s=kbd.nextLine();

    if (s.charAt(0) == s.charAt(s.length()-1)) {
      i=1;
      while (i<s.length()) {
        System.out.print(s.charAt(i));
        i=i+2;
      }
    } else {
      i=s.length()-1;
      while (i>=0) {
        System.out.print(s.charAt(i));
        i--;
      }
    }
    System.out.println();
  }
}
```