IIP

Test Unit 3 - Possible solution

Year 2015-2016

Name:

1. What is the output of the following code for values -20 and 10?

```
if (x>0)
  System.out.print("x is positive");
else if (x%10==0)
  System.out.print("x is multiple of 10");
else
  System.out.print(x);
```

For x==-20: `x is multiple of 10` For x==10: `x is positive`

2. Write a Java program class in whose `main` two `String` lines are read, and then shows the shortest one. In case they are the same length, the first inputted line must be printed.

```
import java.util.*;

public class OrderStrings {
  public static void main(String [] args) {
    String s1, s2;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

    System.out.print("Write first line: ");
    s1=kbd.nextLine();
    System.out.print("Write second line: ");
    s2=kbd.nextLine();

    if (s1.length()==s2.length()) System.out.println(s1);
    else if (s1.length()<s2.length()) System.out.println(s1);
    else System.out.println(s2);
  }
}
```

3. Write a Java program class that reads an integer number n and, after that, 10 integer numbers, counting how many are lower and how many are higher than n. After reading the 10 numbers, it must show the amount of lower and higher numbers inputed (numbers equal to n must not be counted).

```
import java.util.*;

public class HigherLower {
  public static void main(String [] args) {
    int n, num, higher=0, lower=0, i;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

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

    i=0;
    while (i<10) {
      System.out.print("Write number: ");
      num=kbd.nextInt();
      if (num<n) lower++;
      if (num>n) higher++;
      i++;
```

```
    }

    System.out.println("Higher: "+higher+" Lower: "+lower);
  }
}
```

4. Write a Java program class that reads a sentence and prints the sentence until a dot (.) is found; when no dot is found, the sentence will be entirely printed.

```
import java.util.*;

public class UntilDot {
  public static void main(String [] args) {
    String s;
    int l=0;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

    System.out.print("Write sentence: ");
    s=kbd.nextLine();

    while (l<s.length() && s.charAt(l)!='.') {
      System.out.print(s.charAt(l));
      l++;
    }

    System.out.println();

  }
}
```

Alternative solution without loops:

```
import java.util.*;

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

    System.out.print("Write sentence: ");
    s=kbd.nextLine();

    l=s.indexOf(".");
    if (l==-1) System.out.println(s);
    else System.out.println(s.substring(0,l));

  }
}
```