IIP

Test Units 2-3 - Possible solution

Year 2014-2015

Name:

1. Write a Java assignment that transforms an angle in radians into degrees. You can suppose that the angle in radians is stored in a `double` variable `rads`, whose value is between 0 and 2π, and that the result will be stored in a `double` variable `degr`. Remember that 2π radians are 360^o. You can assume that $\pi = 3.14159$.

```
degr = (rads*360)/(2*3.14159);
```

2. Write a Java program class that asks for your an integer number and writes `true` if it is in the range $[-10, 10]$, and `false` otherwise.

```
import java.util.*;

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

    System.out.print("Write an integer number: ");
    n=kbd.nextInt();
    System.out.println(n>=-10 && n<=10);
  }
}
```

3. Write a Java program that asks for a word and writes on the screen the first and last character of the word. You can suppose that empty string is never entered.

```
import java.util.*;

public class FirstAndLast {
  public static void main(String [] args) {
    String w;
    Scanner kbd = new Scanner(System.in).useLocale(Locale.US);

    System.out.print("Write the word: ");
    w=kbd.next();
    System.out.print(w.charAt(0));
    System.out.println(w.charAt(w.length()-1));
  }
}
```

4. Write a Java program that asks for a positive integer number and prints out the number of digits of that number. Remember that number of digits of a number can be calculated as the integer part of the logarithm in base 10 of that number, plus 1.

```
import java.util.*;

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

    System.out.print("Write the number: ");
    n=kbd.nextInt();
    d=(int) Math.floor(Math.log10(n))+1;

    System.out.println("Number "+n+" with "+d+" digits");
  }
}
```