

Introduction to Programming

Workshop 5 – Functions

In this workshop you will practice the use of functions.

Follow the instructions given to complete small programming tasks.

5.1 Task 1 Letters and Numbers

Create a program with two methods:

1. `printLetters()`: prints letters from a-z
2. `printNumbers()`: prints numbers from 1-9

Call first `printLetters()` method, then `printNumbers()` and after that `printLetters()` again.

Hint! To print the letters you can use for example `Number.toString()` (https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Number/toString)

```
abcdefghijklmnopqrstuvwxyz  
0123456789  
abcdefghijklmnopqrstuvwxyz
```

5.2 Task 2 Lorem Ipsum

Create a method that prints out Lorem ipsum sentence ("Lorem Ipsum dolor sit amet, consectetur adipiscing elit.") ten times. Call this method.

```
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.  
Lorem Ipsum dolor sit amet, consectetur adipiscing elit.
```

5.3 Task 3 Sum of Numbers

Create a program that has a method `sum(firstNumber, secondNumber)` that returns the sum of the numbers passed to the method as input parameters. Call this method, save the return value in a variable and print it out. Do this three times with different variable values.

```
First sum is: 2  
Second sum is: 23  
First sum is: -10.211
```

5.4 Task 4 Circumference of a Circle

Create a program that calculates the circumference of a circle when radius is given ($\text{circumference} = 2 * \pi * \text{radius}$). Call this method three times with different parameters and print out the results.

```
Circumference of a circle with radius 5 is 31.41592653589793
Circumference of a circle with radius 15 is 94.24777960769379
Circumference of a circle with radius 50 is 314.1592653589793
```

5.5 Task 5 Smileys

Create a program that has the following functionality:

1. Ask the user for a string and store it in a variable.
2. `replaceSmileys(text)`: Finds smileys in text and replaces them with corresponding text as shown in the table below.
3. `replaceSmileysWithReplacer(text, replacer)`: Finds smileys in text and replaces them with `replacer`. You can use regular expression (https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/RegExp) for this.

Print out the text.

😊	*smiling*
😞	*sad*
😉	*winkwink*
<3	*love*

```
Please enter a string: Hi :) I miss you :( <3
Replaced text: Hi *smiling* I miss you *sad* *love*
Replaced text (*): Hi * I miss you * *
```