Functions and String

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What is Block

Piece of code written inside { }

What is Function?

A block of code designed to perform a particular task.

Why Function?

- To improve readability of code
- It helps for reusability of code

Function type

- Already defined function
- User defined function

1. Function with no argument and no return type

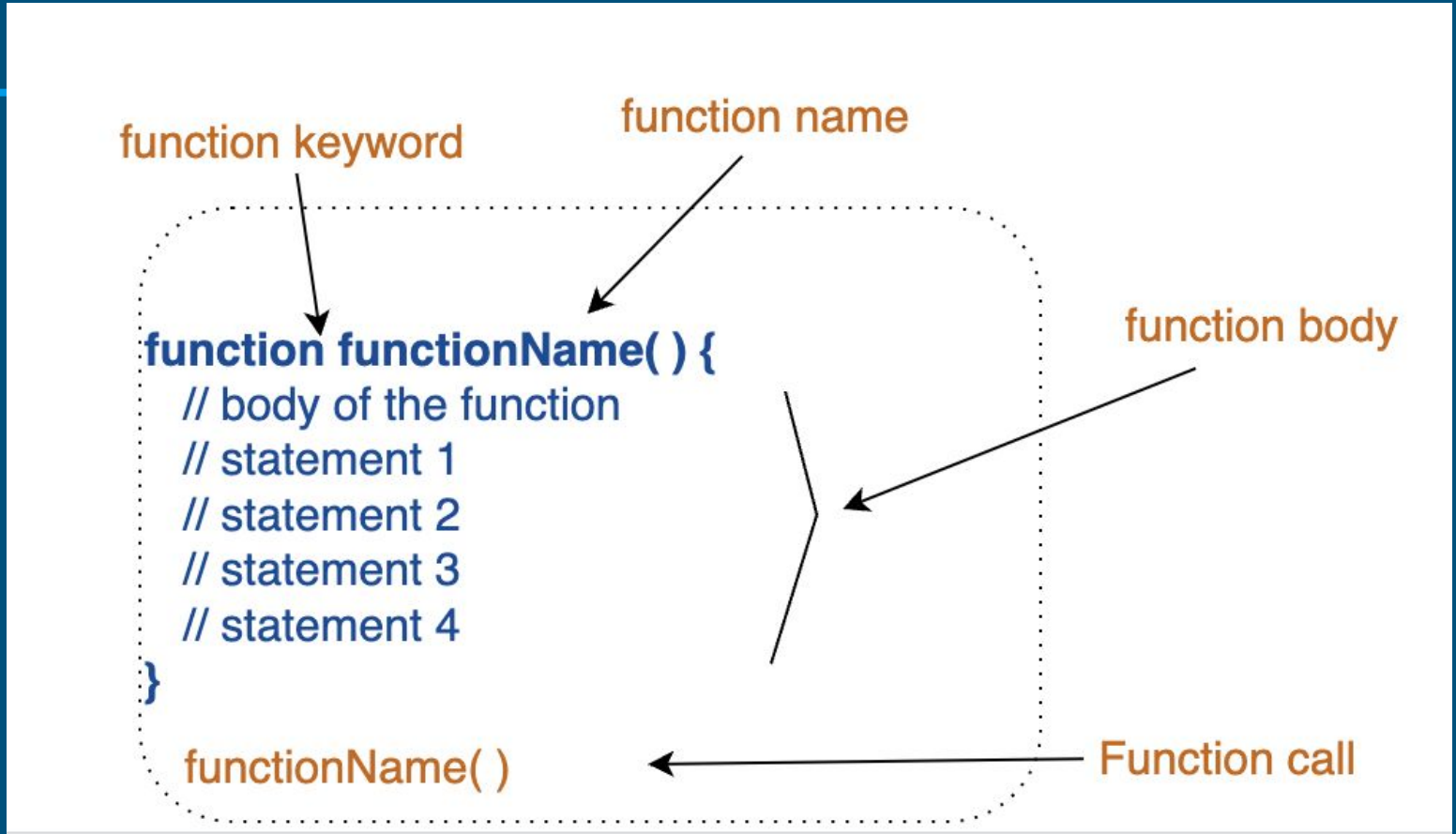
- Keyword ‘function’ is used to define function
- A Function is executed when we call or invoke it

Function body: Anything that is return inside { } → curly braces

Rule:

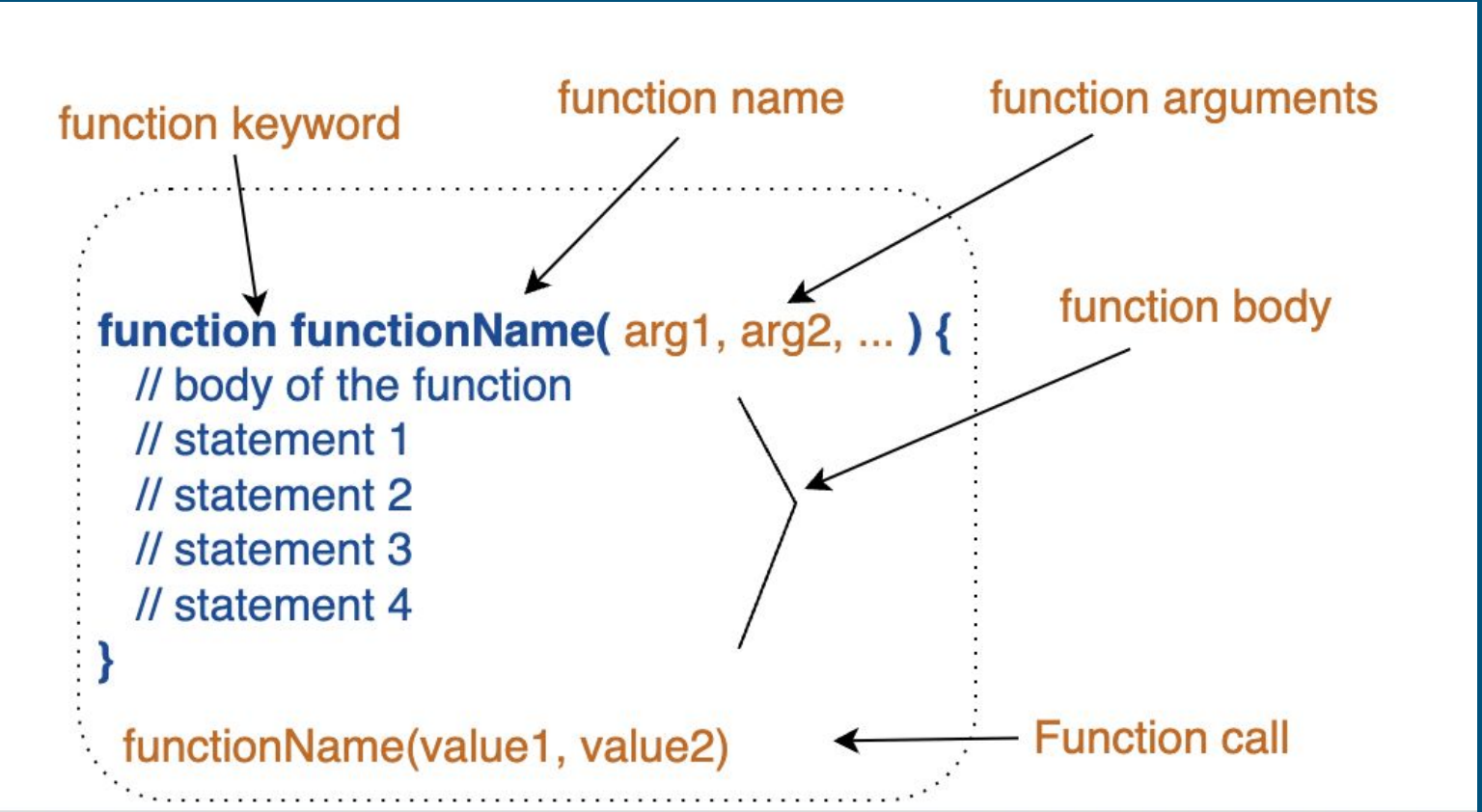
- Function name - Camel case
- Function arguments: Should not have more than 6 to 7
- Total number of lines inside function: should not have more than screen size

1. Function with no argument and no return type



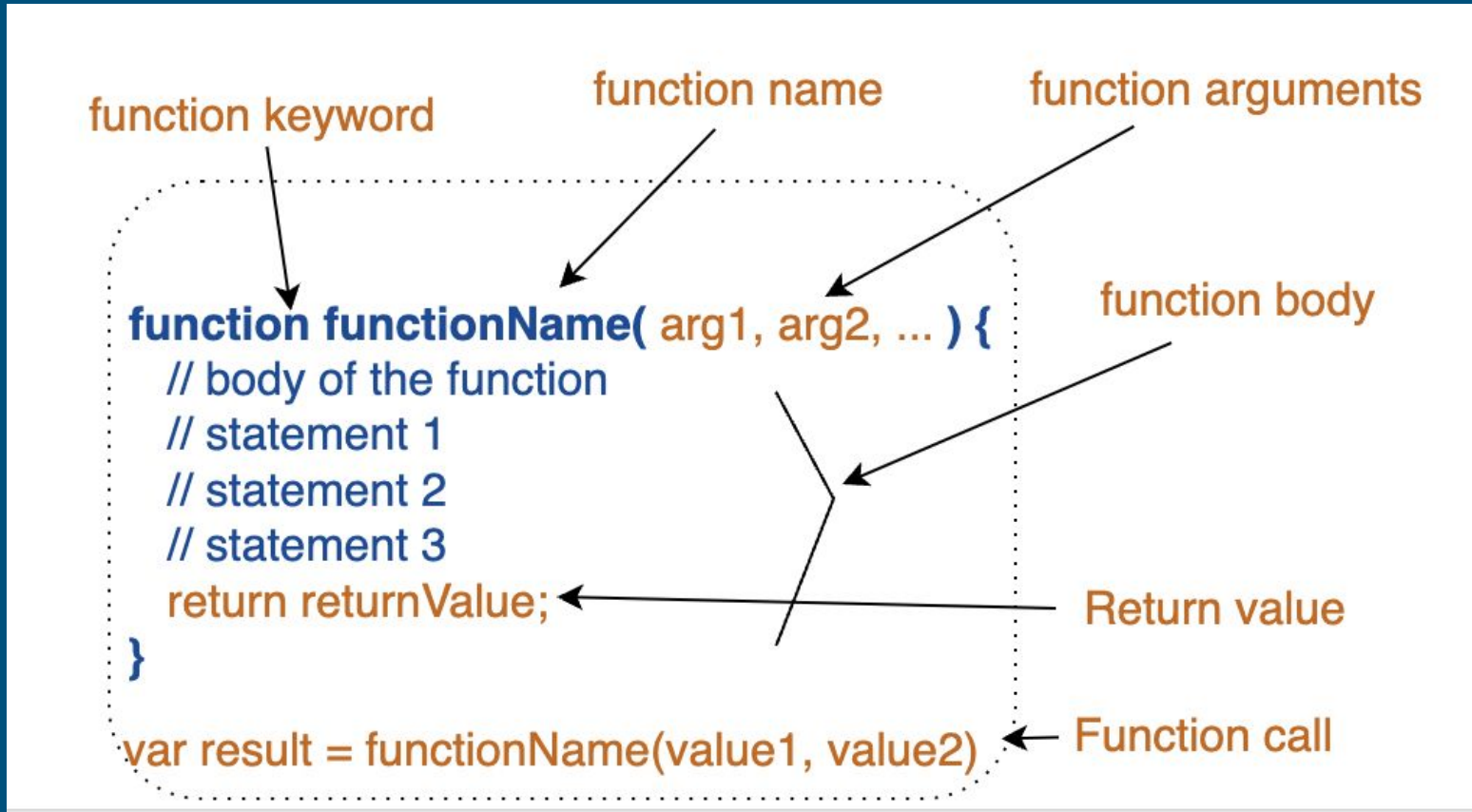
2. Function with arguments and no return value

Function arguments are mentioned inside ( ) parenthesis



3. Function with arguments and return type

‘return’ keyword is used to return value



4 Function

A function is simply a bunch of code bundled in a section. This bunch of code ONLY runs when the function is called. Functions allow for organizing code into sections and code reusability.

Using a function has ONLY two parts. (1) Declaring/defining a function, and (2) using/running a function.

Parameters / Arguments (optional)
A function can optionally take parameters (a.k.a arguments). The function can then use this information within the code it has.

Name of function
Thats it, its just a name you give to your function. Tip: Make your function names descriptive to what the function does.

```
// Function declaration / Function statement
function someName(param1, param2){

    // bunch of code as needed...
    var a = param1 + "love" +  param2;
    return a;
}

// Invoke (run / call) a function
someName("Me", "You")
```

Code block
Any code within the curly braces { ... } is called a "block of code", "code block" or simply "block". This concept is not just limited to functions. "if statements", "for loops" and other statements use code blocks as well.

Return (optional)
A function can optionally spit-out or "return" a value once its invoked. Once a function returns, no further lines of code within the function run.

Invoke a function
Invoking, calling or running a function all mean the same thing. When we write the function name, in this case someName, followed by the brackets symbol () like this someName(), the code inside the function gets executed.

Passing parameter(s) to a function (optional)
At the time of invoking a function, parameter(s) may be passed to the function code.

Possible combination

1. Function with no arguments and return value
2. Function with arguments and no return value
3. Function with arguments and return value

Assignments: Please use meaningful message while logging on console

1. Write any two functions with no arguments and no return type as per your choice & log message on console
2. Write a function → personalDetails with arguments namely firstName, lastName, collegeName arguments and log on console inside a function.
3. Write A functions with two args and should swap the passed values and log on console before swap and after swap values inside function itself.
   - 3.1. Function name: swapValuesDude( )
   - 3.2. Invoke or call the function swapValuesDude( ) with values “Virat” and “Anushka”;
   - 3.3. Invoke or call the same function swapValuesDude( ) with values 1000 and 2000;
4. WAF with 3 parameters or arguments and it should return the addition.
   - 4.1. Function name: addThreeValues()
   - 4.2. Call the function for values → 10.23, 600, 40
   - 4.3. Invoke the same function for values “Hello”, “ Good”, “ Morning”

What is String ?

String is a sequence of characters

Index is a position of an element and index always start from 0

Var num1 = 100;

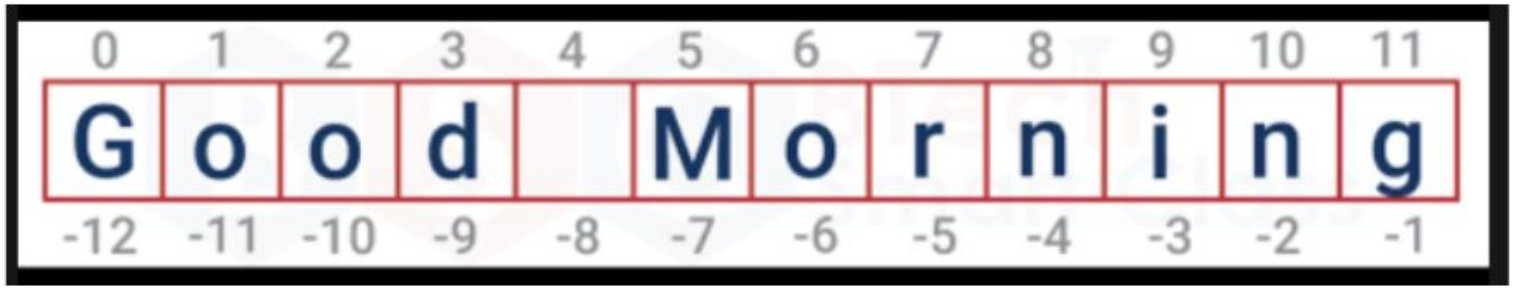
Var num2 = “100” + “200”

What is String ?

String is a sequence of characters

Index is a position of an element and index always start from 0

```
var greet = "Good Morning";
```



charAt()

```
var txt = "Hello World";
console.log(txt.charAt(0))
//prints 'H'
```

concat()

```
var str1 = "Hello ";
var str2 = "codingtute!";
console.log(str1.concat(str2))
//prints "Hello codingtute!"
```

indexOf()

```
var txt = "Lets find where 'pen'
occurs!";
console.log(txt.indexOf("pen"))
// prints 17
```

lastIndexOf()

```
var str = "A dev knows a dev";
var pos = str.lastIndexOf("dev");
//prints 14
```

replace()

```
var str = "Hello Dev!";
console.log(str.replace("Dev", "World"))
//prints "Hello World"
```

toUpperCase()

```
var sentence = "CodingTute";
console.log(sentence.toUpperCase());
//prints "CODINGTUTE"
```

valueOf()

```
const s = new String('test');
typeof s; // 'object'
s.valueOf(); // 'test'
typeof s.valueOf(); // 'string'
```

trim()

```
var str = "   Trim Both Side   ";
console.log(str.trim())
//prints "Trim Both Side"
```

toString()

```
var num = 15;
console.log(num.toString())
//prints "15"
```

includes()

```
var str = "My name is codingtute.";
console.log(str.includes("name"))
//prints true
```

search()

```
var str = "hello dev!";
console.log(str.search("dev"))
//prints 6
```

slice(start, end)

```
var str = "Developers world!";
console.log(str.slice(0, 10))
//prints "Developers"
```

substr(start, length)

```
var s = "JavaScript";
console.log(s.substr(4, 6))
//prints "Script"
```

substring(start, end)

```
var str = "Hello dev!";
console.log(str.substring(1, 4))
//prints ell
```

charCodeAt()

```
var str = "TEST";
str.charCodeAt(0) // returns 84
```

match()

```
var str = "lopersum lopersum lopersum
lopersum.";
console.log(str.match(/sum/g))
//prints ["sum", "sum", "sum", "sum"]
```

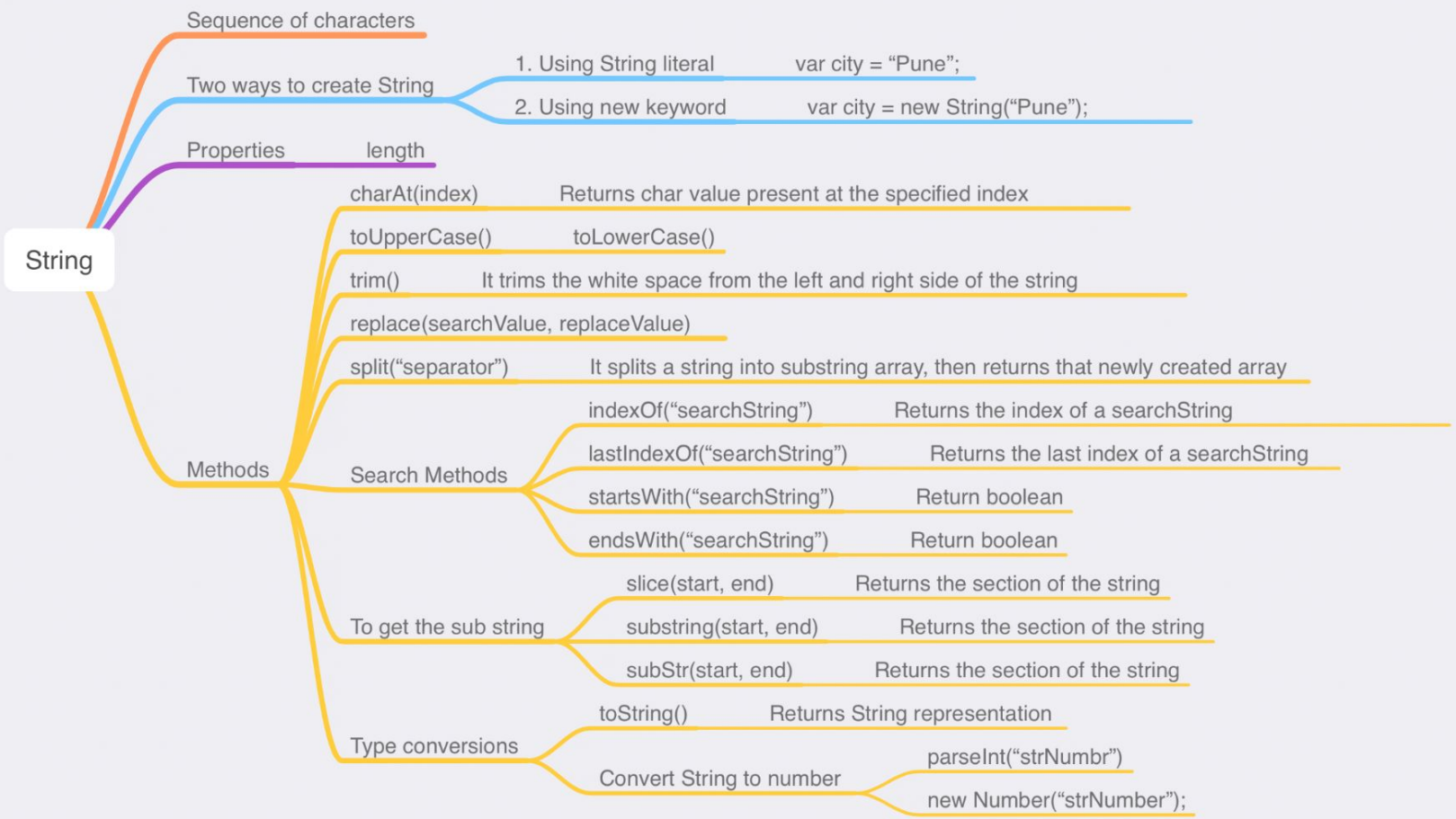
split()

```
var str = "1,2,3,4,5";
console.log(str.split(","))
//prints  ["1", "2", "3", "4", "5"]
```

toLowerCase()

```
var sentence = "CodingTute";
console.log(sentence.toLowerCase());
//prints "codingtute"
```

String: A sequence of characters



Assignment 01: String basic assignments

Please have the function with name → stringBasics( ), No arguments and no return is required

1. ‘My dream company is “your dream company name” ’ log on console
2. Create 3 variables for My Hobbies are: , “Your hobby1”, “Your hobby2”, “Your hobby3”
    2.1. Log all hobbies on console on same line
    2.2. Sum the total number of characters that is available in hobby1, hobby2 and hobby3 and log on console

Assignment 01: To log output on console only use string template

1. ‘My dream company is “your dream company name” ’ log on console
2. Create 3 variables for My Hobbies are: , “Your hobby1”, “Your hobby2”, “Your hobby3”
    2.1. Log all hobbies on console on same line use the variable substitution
    2.2. Concat your hobbies in one string and log on console using string template

Note: Please have the function with name → stringTemplateAssig( ), No arguments and no return is required

Assignments 02: string hands-on with, Use string template to log output on console

Given a String : “ Hey you are doing good, keep it up ”;

Steps: please create a function ‘stringHandsOn’ with no arguments, no return value, pls don’t forget to invoke this function

1. Print the string as it is on console
2. Calculate length of the String
3. Remove the leading and trailing extra spaces and log string on console with it’s length
4. Print the total number extra spaces count that is removed in step 3.
5. Print the first and last character on the same line after trim()
6. Print the count of total words available in the string after step 3
7. Print the index of word “good” from the given string
8. Print the substring starting from index 22, using substring() and slice()
9. Check, is string ends with word “up” after step 3?
10. Check is string starts with word “Hey” after trimming → i.e after step 3 output string value

Note: Log the result on console with meaningful message like - “Length of string is: 45”