JS

{ JavaScript }

CRAFT KNOWLEDGE

Objectives

JavaScript FUNCTIONS

- WHAT IS FUNCTIONS
- DECLARE A FUNCTION
- CALLING A FUNCTION
- PARAMETERS VS. ARGUMENTS
- RETURNING A VALUE
- FUNCTION & VARIABLE SCOPE
- ANONYMOUS FUNCTIONS
- ARROW FUNCTIONS

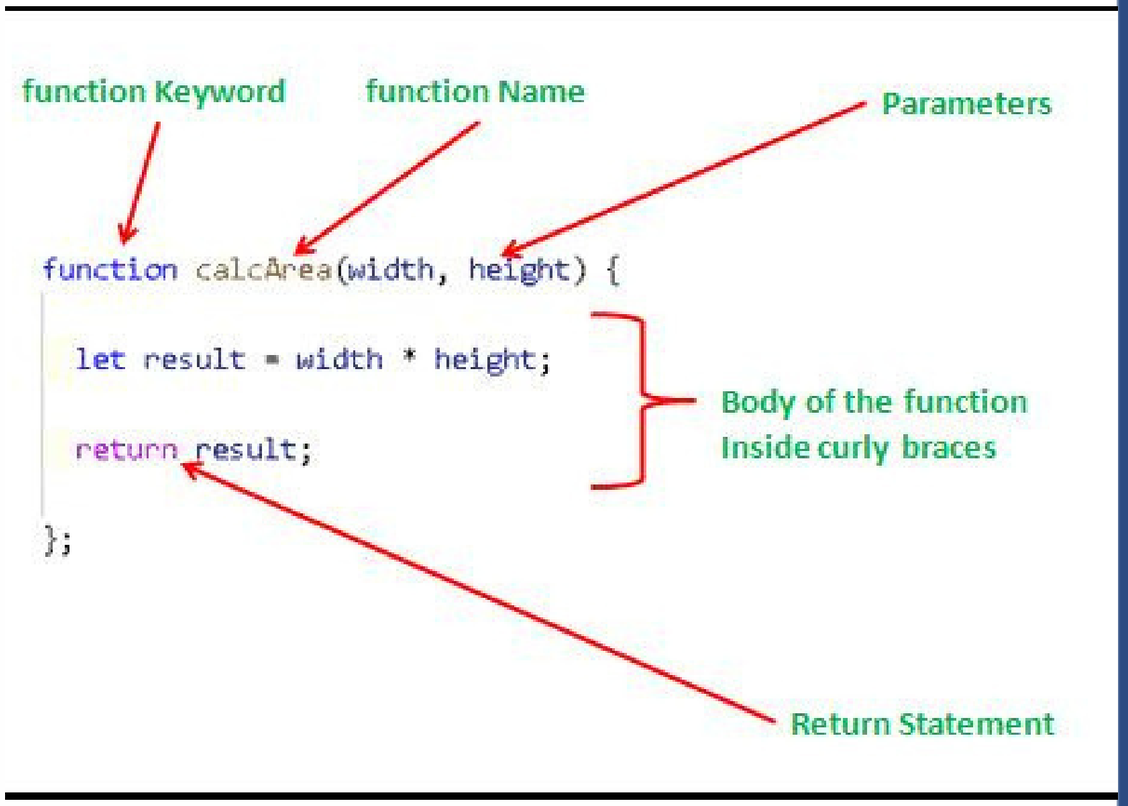
What is JavaScript functions

- A JavaScript function is a block of code designed to perform a particular task.
- When developing an application, we often need to perform the same action in many places. To avoid repeating the **same code all over places**, we can use a function to wrap that code and reuse it.
- JavaScript provides many built-in functions such as parseInt() and parseFloat()
- A JavaScript function is executed when invokes it (calls it).
- Functions also make code readable & maintainable.

Declare a function

- To declare a function, you use the function keyword, followed by the function name, a list of parameters, and the function body as follows and return value or espersione .

  Function keywored
  functionName
  Parameters
  function body
  return value

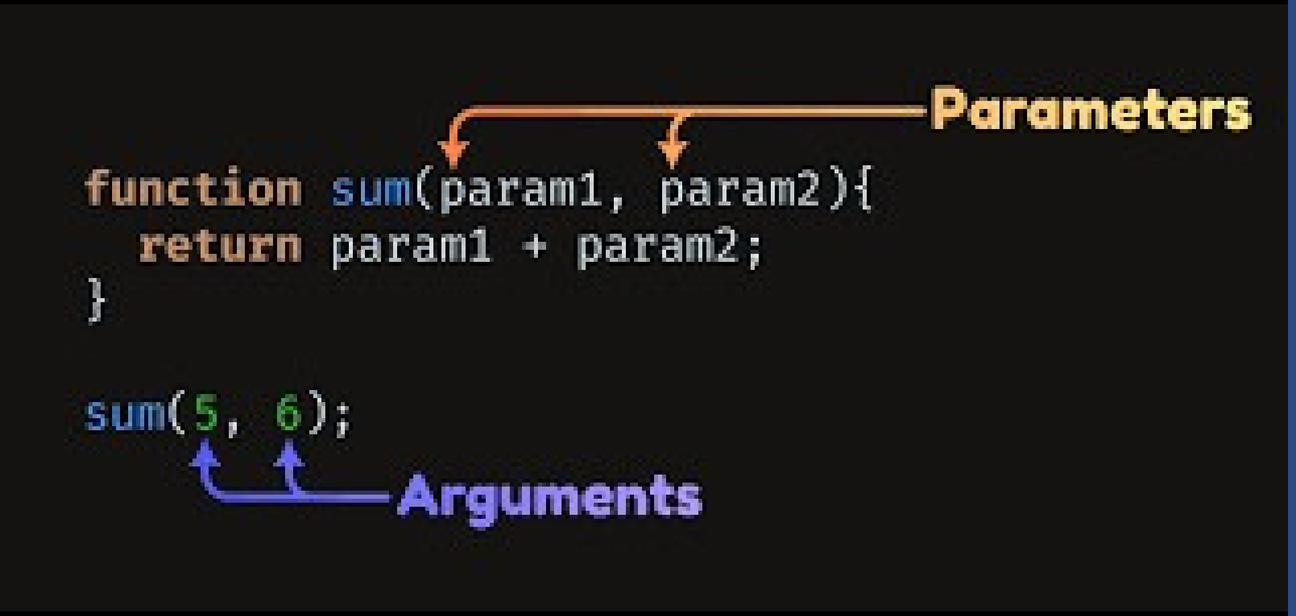


```
65
66    functionName()
67    functionName(argument)
68
69    hello()
70    hello(Efrem)
71
```

Calling a function

- To use a function, you need to call it.
- Calling a function is also known as invoking a function.
- To call a function, you use its name followed by arguments enclosing in parentheses.
- When calling a function, JavaScript executes the code inside the function body.

parameters vs. arguments



- The terms parameters and arguments are often used interchangeably. However, they are essentially different.
- When declaring a function, you specify the parameters.
- However, when calling a function, you pass the arguments that are corresponding to the parameters.

```
16
17    function add(a, b)
18    {
19        return a + b;
20    }
21
```

Returning a value

- Every function in JavaScript implicitly returns undefined unless you explicitly specify a return value.

- To specify a return value for a function, you use the return statement followed by an expression or a value, like this:

Function & Variable Scope

- Scope refers to the availability of variables and functions in certain parts of the code.
- In JavaScript, a variable has two types of scope:
  Global Scope
  Local Scope
- **Global Scope**
  - A variable declared at the top of a program or outside of a function is considered a global scope variable.

  can be used anywhere in the program.
  The value of a global variable can be changed inside a function
- **Local Scope**
  A variable can also have a local scope, i.e it can only be accessed within a function.
  can be accessed only inside the function

Anonymous Functions

```
( function () {
    console.log("hello")
}) ();
```

- An anonymous function is a function without a name.
  The following shows how to define an anonymous function:
- Note that if you don’t place the anonymous function inside the (), you’ll get a syntax error. The () makes the anonymous function an expression that returns a function object.
- An anonymous function is not accessible after its initial creation. Therefore, you often need to assign it to a variable.

Arrow functions

- ES6 introduced arrow function expressions that provide a shorthand for declaring anonymous functions:

```
63
64
65    let showagen = () => console.log('Anonymous function');
66
67
```