**Introduction and Basics of JavaScript | Part 2 -** [Denis listiadi](https://denislistiadi.medium.com/?source=post_page-----772e7473aa4d--------------------------------) Mar 29, 2022

This post is a continuation of the previous post [JavaScript: Introduction and Basics of JavaScript | Part 1](https://denislistiadi.medium.com/javascript-introduction-and-basics-of-javascript-part-1-6c99792e0e25)

**Console**

JavaScript has a feature for logging called Console. Logging is a mechanism usually used by programmers to display information from a running application, without having to disrupt the application workflow and user interaction.

To do this, we can use the Console feature in JavaScript. To use the Console, we simply use the console command in our JavaScript code.

**Console Method**

Table

Description automatically generated

For example in the implementation of the code

Graphical user interface, application

Description automatically generated

Inspect element in Google Chrome

Graphical user interface, text, application

Description automatically generated

**String Template**

We already know that to add a string with other data, we can use the + (plus) operator. However, in certain cases, using the + (plus) operator is very difficult, especially if there are a lot of them.

JavaScript has a feature called String Template, where we can substitute data from outside the String into a String, such as retrieving variable data or even performing mathematical operations.

To use a String Template, the way to create a String must use ` (backtick), not ‘ (quote one) or “ (quote two).

Graphical user interface, text

Description automatically generated

**Expression in String Template**

Text

Description automatically generated

**Multiline String**

String templates can also be used to create multi-line strings. We just add enter in the text

Text

Description automatically generated

**Convert String and Number**

When creating an application, sometimes we input from the user always in the form of a String. While we want to manage the data in the form of Numbers. So it is highly recommended to do a data type conversion

**Problem If No Conversion**

Graphical user interface, text, application, chat or text message

Description automatically generated

From the code above, we get a value of 12, even though what we want is 3. That’s because the value of the value1 variable is a string, then JavaScript will automatically read value2 as well as a string.

Then how can we change from string to number? see below.

**Performing String and Number Conversions**

Table

Description automatically generated

For example in the implementation of the code

Text

Description automatically generated

**NaN (Not a Number)**

What if it turns out that the string data that we are trying to convert to a number is not valid? If the string data that we are trying to convert is not valid, then the result of the conversion is NaN (Not a Number).

NaN is a special number that says it’s not a number. If NaN is operated with another data number, then the result will be NaN again. For example in the implementation of the code

Text

Description automatically generated

**Operation on NaN**

If any of the data is NaN in the operation count, it will always return NaN. For example in the implementation of the code

Text

Description automatically generated

**isNaN() Function**

Sometimes we want to check whether a number is NaN or not. To do this check, we can use the function isNaN(number). The result is boolean data, true if NaN, false if not.

**Array Data Type**

The array is a data type that contains a collection of data. Arrays in JavaScript are dynamic, meaning that the data can be added automatically when we enter data into the Array. For more details, see the example array below

Text

Description automatically generated

**Do Arrays Work?**

Each data in the Array will be stored in a sequential position, where the first sequence starts from the number 0. Every time we add data to the Array, the data will automatically be stored in the last order. The order in the Array, we call it index

**Adding an Array**

A screenshot of a computer

Description automatically generated with medium confidence

**Operation on Array**

Table

Description automatically generated

For example in the implementation of the code

Text

Description automatically generated

***Keep in mind:****There is no limit to the data in an Array. So we can put any data into Array. Even we can also insert Array into Array if we want.*

**Object Data Type**

**Associative Array**

In other programming languages such as PHP, we can use indexes with other data types besides numbers, for example, strings. This feature is usually called an associative array or hash.

In JavaScript associative arrays are not supported. If we force insert data that is not a number in the Array index, then JavaScript will change the data type of the Array to object, and this can be dangerous, because some operations on the array may change the result.

**Object Data Type**

The object data type is a data type similar to the Array data type. The difference is that the index on the object’s data type can use a string. Indexes in objects are usually called attributes or properties, not indexes

**Creating and Changing Objects**

Text

Description automatically generated

**Access object properties**

Text

Description automatically generated

**If Expression**

In JavaScript, if is one of the keywords used for branching.  
Branching means that we can execute certain program codes when a condition is met. Almost all programming languages support if expressions. For more details, see the example array below

Text

Description automatically generated with medium confidence

**Else Expression**

The if block will be executed when the if the condition evaluates to true  
Sometimes we want to execute certain programs if the condition evaluates to false. This can be done using an else expression. For example in the implementation of the code

Text

Description automatically generated

**Else If Expression**

Sometimes in If, we need to create some conditions. In cases like this, in JavaScript, we can use the Else If expression. For example in the implementation of the code

Text

Description automatically generated

**Popup (Alert, Prompt dan Confirm)**

JavaScript has a feature called alert, prompt, and confirm. Alert is used to give an alert in the form of popup text in the browser. Prompt is used to request string input from browser users in the form of text input popups.

While confirm is used to request boolean input from browser users in the form of a popup input option

**Alert**

Example of alert code below

Text

Description automatically generated with low confidence

Results in chrome browser

A picture containing text

Description automatically generated

**Prompt**

Using prompt in javascript

Text

Description automatically generated

Results in chrome browser

Graphical user interface

Description automatically generated

**Confirm**

The following is an example of using confirm

Text

Description automatically generated

**Undefined**

Undefined is a keyword in JavaScript, undefined is a data type. A variable that has not been added a value, means that the variable is of type undefined.

Sometimes for beginner JavaScript programmers, this undefined is a bit confusing. Undefined is different from null in other programming languages

Text

Description automatically generated

**Null**

Null is an empty data representation, null is different from undefined, null means that the variable has been added its value, it’s just that the value is null.

While undefined is a variable that has not been added any value. For more details about the difference between null and undefined, let’s look at the sample code below

Text

Description automatically generated

Maybe that’s my first post. For basic JavaScript, it will be posted later in part 3, in here [Introduction and Basics of JavaScript | Part 3](https://denislistiadi.medium.com/introduction-and-basics-of-javascript-part-3-8abf61f717f7)