Programming With Rakib

Day-02 |Javascript Output & Variables

Java-script output

- Writing into an HTML element, using `innerHTML`.
- Writing into the HTML output using `document.write()`.
- Writing into an alert box, using `window.alert()`.
- Writing into the browser console, using `console.log()`.

Using innerHTML

```
document.getElementById("demo").innerHTML = 5 + 6;
```

- To access an HTML element, JavaScript can use the *`document.getElementById(id)`* method.
- The `innerHTML` property defines the HTML content

Using document.write()

```
<h1>My First Web Page</h1>
<p>My first paragraph.</p>

<script>
document.write(5 + 6);
</script>
```

Using document.write() after an HTML document is loaded, will **delete all existing HTML**:

```
<h1>My First Web Page</h1>
<p>My first paragraph.</p>

<button onclick="document.write(5 + 6)">Try it</button>
```

`The document.write() method should only be used for testing.`

Using window.alert()

You can use an alert box to display dat:

```
window.alert("Hello World");
```

You can skip the `window` keyword.

Using console.log()
For debugging purposes, you can call the `console.log()` method in the browser to display data.

```
console.log("Hello World")
```

Variables

- variable like container
- variable is machine of contain value
- Variables are Containers for Storing Data
- variable value must be a data type -> we discuss letter about this
- real life example: glass, box, bag, etc

JavaScript Variables can be declared in 4 ways:

- Automatically
- Using `var`
- Using `let`
- Using `const`

`Automatically`

```
x = 5;
y = 6;
z = x + y;
```

`using var`

```
var x = 5;
var y = 6;
var z = x + y;
```

- The `var` keyword was used in all JavaScript code from 1995 to 2015.
- The `var` keyword should only be used in code written for older browsers.

`Using let`

```
let x = 5;
let y = 6;
let z = x + y;
```

The `let` and `const` keywords were added to JavaScript in 2015.

`Using const`

```
const x = 5;
const y = 6;
const z = x + y;
```

When to Use var, let, or const?

1. Always declare variables
2. Always use `const` if the value should not be changed
3. Always use `const` if the type should not be changed (Arrays and Objects)
4. Only use `let` if you can't use `const`
5. Only use `var` if you MUST support old browsers.

JavaScript Identifiers

All JavaScript **variables** must be **identified** with **unique names**.

These unique names are called **identifiers**.

Identifiers can be short names (like x and y) or more descriptive names (age, sum, totalVolume).

The general rules for constructing names for variables (unique identifiers) are:

- Names can contain letters, digits, underscores, and dollar signs.
- Names must begin with a letter.
- Names can also begin with $ and _ (but we will not use it in this tutorial).
- Names are case sensitive (y and Y are different variables).
- Reserved words (like JavaScript keywords) cannot be used as names.

- JavaScript identifiers are case-sensitive.

Declaring Variable

```
let a; //just declare variable
a = 2 // assing value in a by (=) assingment operator

let a, b, c, d; // declaring multiple variable

let c = 12; //declaring variable & assign value at a
time
```