Lecture-01: Variables in JavaScript (var, let, const)

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# Introduction to Variables:

* Variables are containers that store values in programming.
* In JavaScript, these containers are referred to as variables.

# Types of Variables:

1. var
2. let
3. const

**Important Note:** Avoid using numbers as variable names.

# Variable Declaration and Initialization:

* Declare: Defining a variable without assigning a value.
* Initialization: Assigning a value to a variable.

# Examples:

1. **var studentname;** (Declared)
2. **var studentname = "Sana Kiran";** (Initialized)
3. **var name = "Khuzaima Ahmed";** (Declared & Initialized)

# Data Types in JavaScript:

* Data types are used to handle data in JavaScript.

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| --- | --- | --- |
| **Data Types** | **Description** | **Example** |
| String | represents textual data | 'hello', "hello world!" etc |
| Number | an integer or a floating-point number | 3, 3.234, 3e-2 etc. |
| BigInt | an integer with arbitrary precision | 900719925124740999n 1n etc. |
| Boolean | Any of two values: true or false | true and false |
| undefined | a data type whose variable is not initialized | let a; |
| null | denotes a null value | let a = null; |
| Symbol | data type whose instances are unique and immutable | let value = Symbol('hello'); |
| Object | key-value pairs of collection of data | let student = { }; |

**For more details on data types: programiz.com/javascript/data-types/**

# Printing Variables in JavaScript:

    <script>

        // Variable declaration and assignment

        var studentname = "Sana Kiran";

        var name = "Khuzaima Ahmed";

        // Printing the variables

        document.write(name);    // Output: Khuzaima Ahmed

        document.write(studentname);  // Output: Sana Kiran

        console.log(name);      // Output: Khuzaima Ahmed

        </script>

**Note:** To open the console, right-click on the structure of your HTML file, and select "Inspect."

# Operators:

For more details on JavaScript operators, refer to the following documentation:

**tutorialsteacher.com/javascript/javascript-operators/**