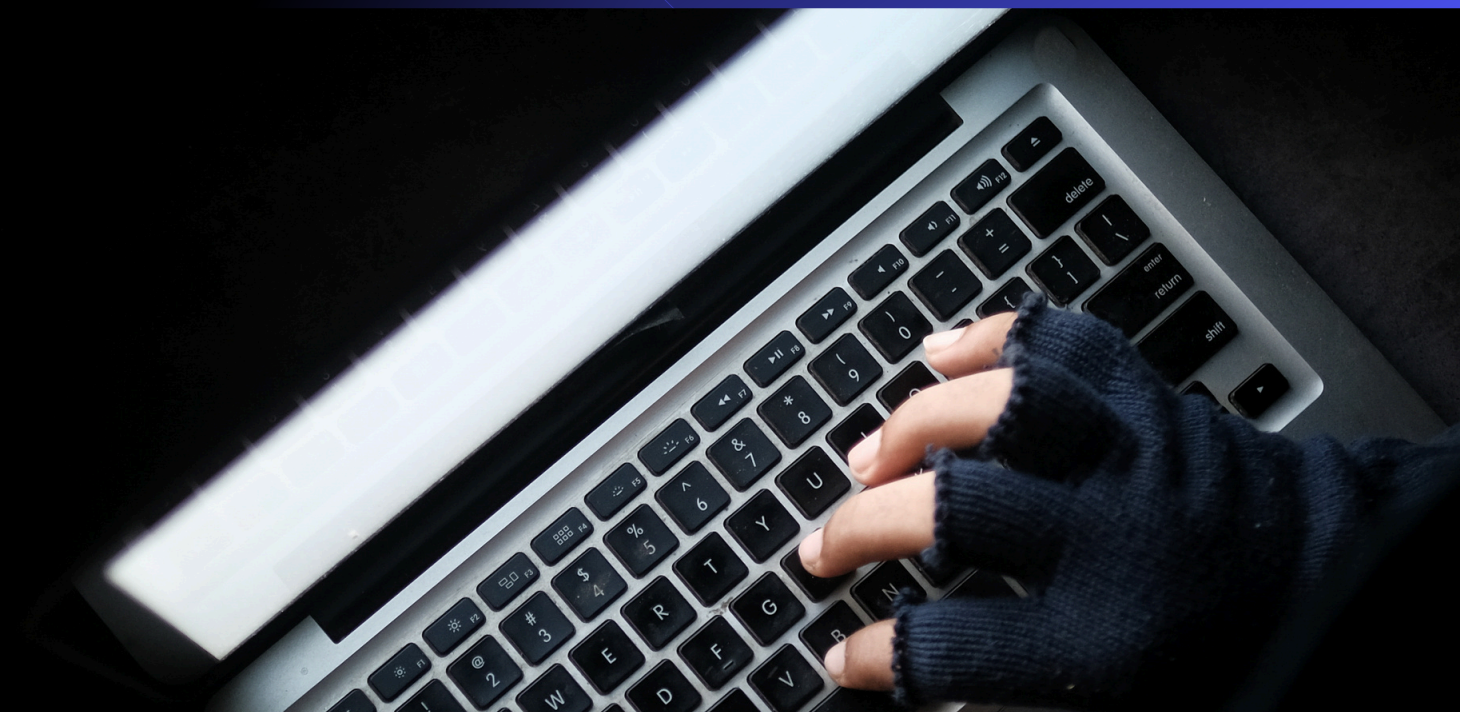# JavaScript Basics - Home Task 2

What are variables in JavaScript?

- Variables are used to store data in JavaScript.
- They can hold different types of values like numbers, strings, or objects.
- Example: let x = 10;

RULES FOR NAMING VARIABLES

- Must begin with a letter, $, or _.
- Cannot be a reserved JavaScript keyword.
- Case-sensitive (e.g., myVar and myvar are different).
- Should be meaningful and readable.

JAVASCRIPT DATA TYPES

Primitive Data Types:

- Number (e.g., 10, 3.14)
- String (e.g., 'Hello', "World")
- Boolean (e.g., true, false)
- Null
- Undefined
- Symbol
- BigInt

Non Primitive Data Types:

- Object (e.g., {name: 'John', age: 30})
- Array (e.g., [1, 2, 3])

DIFFERENCE BETWEEN == AND ===

== checks value only, allows type conversion.
Example:
5 == '5' → true

=== checks value and type, strict comparison.
Example:
5 === '5' → false

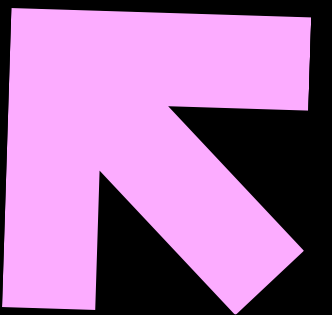# CONVERTING "10" TO A NUMBER

Use parseInt(), Number(), or + operator.

- **Example:**
  - **Number("10") // 10**
  - **parseInt("10") // 10**
  - **+"10" // 10**
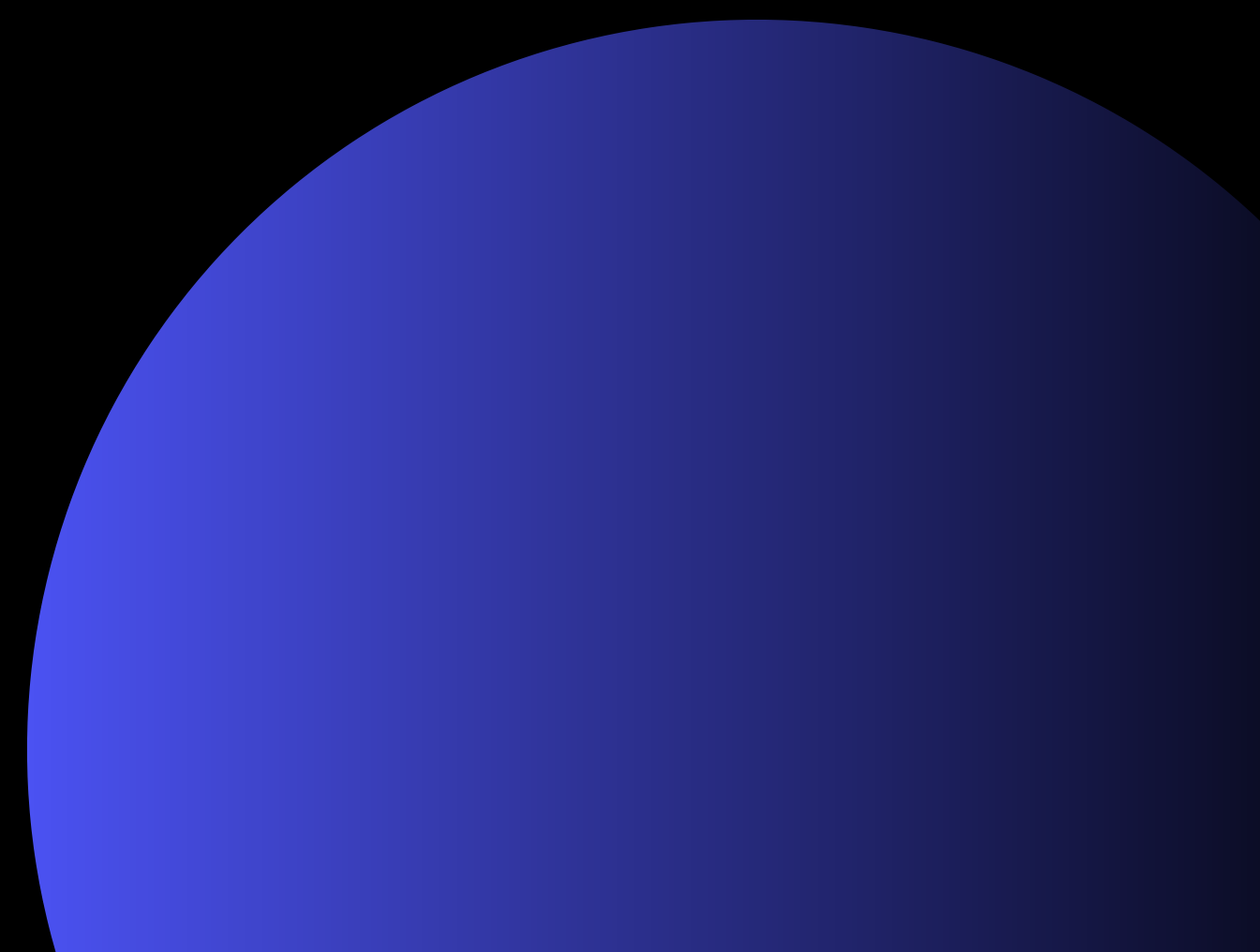
Output of 5 + "5"

- JAVASCRIPT TREATS "5" AS A STRING.
- 5 + "5" RESULTS IN "55" (STRING CONCATENATION).

Continuous Integration and Testing

LOGICAL AND (&&) RETURNS TRUE ONLY IF BOTH VALUES ARE TRUE.
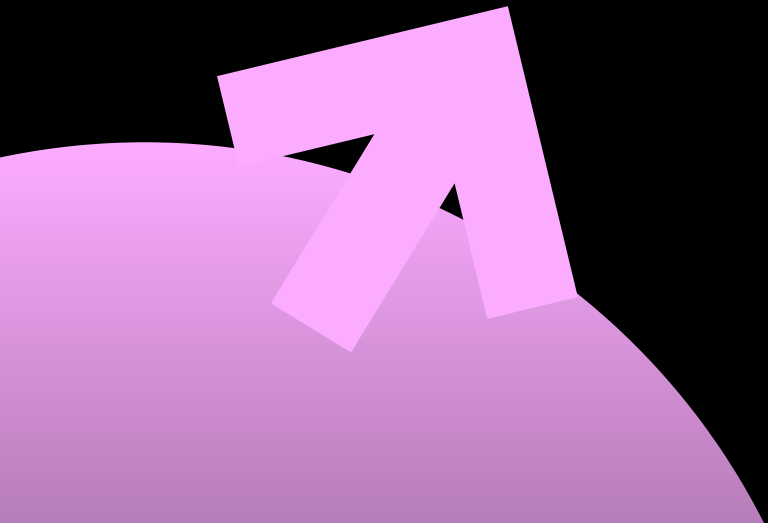
TRUE && FALSE → FALSE.

EXPLORING NEW TECHNOLOGIES

NULL : Intentional absence of a value.Example
let a = null; // a is null

undefined: Variable declared but not assigned a
value.Example
let b; // b is undefined

ALERT, PROMPT, AND CONFIRM

alert(): Displays a simple message box.
Example
alert("Hello!");

prompt(): Asks user for input and returns it.
Example
let name = prompt("What is your name?");

confirm(): Asks user for confirmation (OK/Cancel).
Example
let result = confirm("Are you sure?");

```javascript
    } else {
        console.log("You cannot enter the park. ❌");
    }


let a = 5, b = 10;


console.log("Before Swap: a =", a, ", b =", b);


// Swapping using a temporary variable
let temp = a;
a = b;
b = temp;


console.log("After Swap: a =", a, ", b =", b);


console.log("Task1");
let Name = "John";    // String (text)
let ages = 25;        // Number
let isStudent = true; // Boolean (true/false)


console.log(Name, ages, isStudent);



console.log("Task2");
let numb = Number("100");
console.log(numb); // Output: 10
```

```javascript
    } else {
        console.log("You cannot enter the park. ❌");
    }


let a = 5, b = 10;


console.log("Before Swap: a =", a, ", b =", b);


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let Name = "John";     // String (text)
let ages = 25;          // Number
let isStudent = true; // Boolean (true/false)


console.log(Name, ages, isStudent);



console.log("Task2");
let numb = Number("100");
console.log(numb); // Output: 10
```

```
Hello Java World!
10
55
Access denied!
You cannot enter the park. ❌
Before Swap: a = 5 , b = 10
After Swap: a = 10 , b = 5
Task1
John 25 true
Task2
100
```
> |

Thank You