Training Day 19 Report

18 July 2025

Variables and Data Types in JavaScript

Q. What is a Variable?

A variable is like a container used to store data. You can access, update, and reuse that data later.

Types of Variables

1. var (Old way – Function scoped)

var age = 20;

age = 30; // Allowed

var age = 40; // Redeclaration allowed

console.log(age); // Output: 40

- Can change value.
- Can redeclare.
- Can lead to bugs due to function scope and hoisting.

2. let (Modern – Block scoped)

let score = 230;

score = 280; // Allowed

let score = 300; // Error: Cannot redeclare

console.log(score);

- Can change value.
- Cannot redeclare in same block.
- Best for dynamic values.

3. const (Constant – Block scoped)

const pi = 3.14;

pi = 3.15; // Error: Cannot reassign

console.log(pi); // Output: 3.14

- Cannot change value.
- Cannot redeclare.
- Best for values that never change.

Q. Why Use Variables?

Purpose	Description
Store values	Save data like name, age, scores, etc.
Update values	Change them when needed (like cart quantity)
Reuse data	Use same value multiple times

Concept	Description
JavaScript	Language for web interactivity and logic
Real-world Use	Shopping carts, form validation, weather, etc.
Variable Types	var, let, const
console.log()	Used to print/test/debug
Comment Types	// and /* ... */
Scripting Types	Inline, Internal