

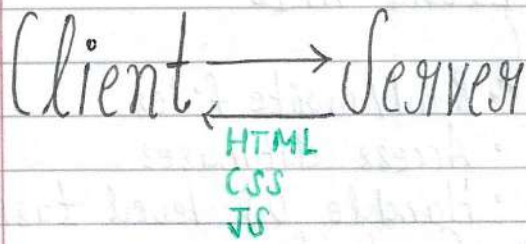
# JavaScript

## Lecture-1

### → Need of JavaScript:-

- To add interactivity
  - To update content dynamically.
- eg. Search functionality, Clickable Button

### → Client Server Interaction:-



Browser can read, understand and execute JavaScript.

### → Why a New Language?

- Easy to learn
- Security Limitation
- Lightweight Design
- Automatic Garbage Collection

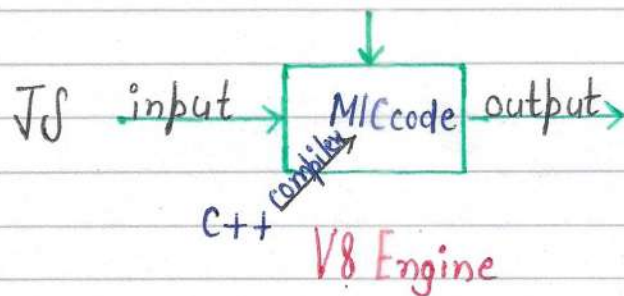
### → How does a browser (chrome) understand JavaScript?

Mozilla  
Firefox  
Spider  
Monkey

Google chrome understands and runs JavaScript using its built-in V8 JavaScript Engine.

### → What is V8 Engine?

The V8 Engine is a program written in C++ and primarily designed to execute JavaScript code.

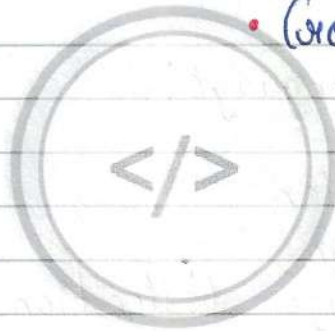


- Note • A system can understand machine code.
- Machine code is hardware - dependent, i.e., machine - dependent.

→ How to run JavaScript outside the browser?  
To run JavaScript outside the browser, you need to install Node.js on your computer.

\* What is Node.js?

- Node.js is a runtime environment that allows JavaScript to run outside the browser.
- Node.js = V8 Engine + Extra APIs
  - ↳ Execute JavaScript
  - ↳ Read/write files
  - Access databases
  - Handle OS level tasks
  - Create servers



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