

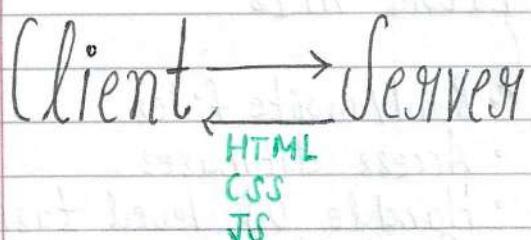
# JavaScript

## 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?

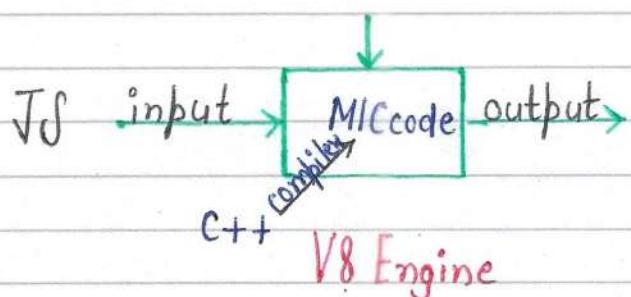
- Easy to learn
- Security Limitation
- Lightweight Design
- Automatic Garbage Collection

→ How does a browser (chrome) understand JavaScript?

Mozilla Firefox: 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.

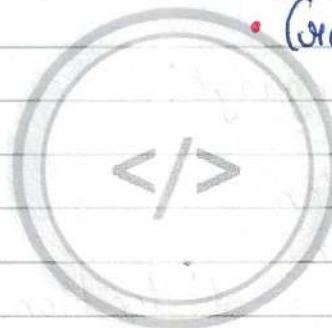
→ How to run JavaScript outside the Browser?  
To run JavaScript outside the browser, you need to install Node.js on your computer.

\* 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



# Yash Saini