

Namaste Node.js

Chapter - 02 - Javascript on the Server

Q1) What is a Server?

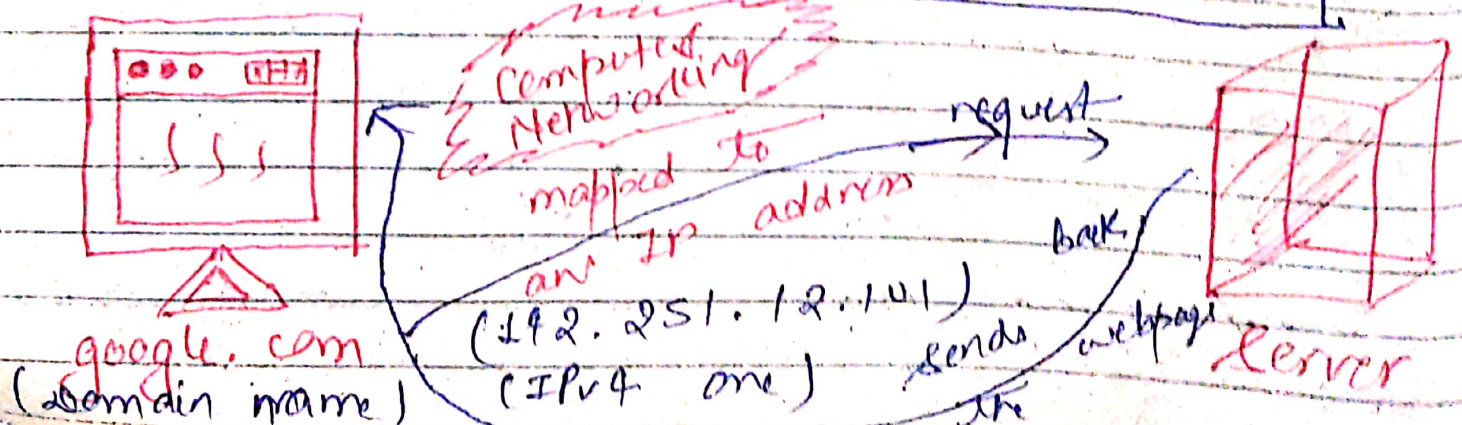
A) i) A server is a phone / computer or software system that provides services, data, or functionality to other computers (called clients) over a network.

ii) When we open a website, our phone / computer sends a request → the server receives it → processes it → sends back the web page or any service we requested.
e.g. API server, web server, database server.

Host → The machine / computer where the server is stored and run.
e.g. AWS EC2 instance.

Server → Service

Host = 'house where service lies'



→ on the both sides because of Node.js, only one programming language, Javascript getting used heavily.

Q1 What is V8?

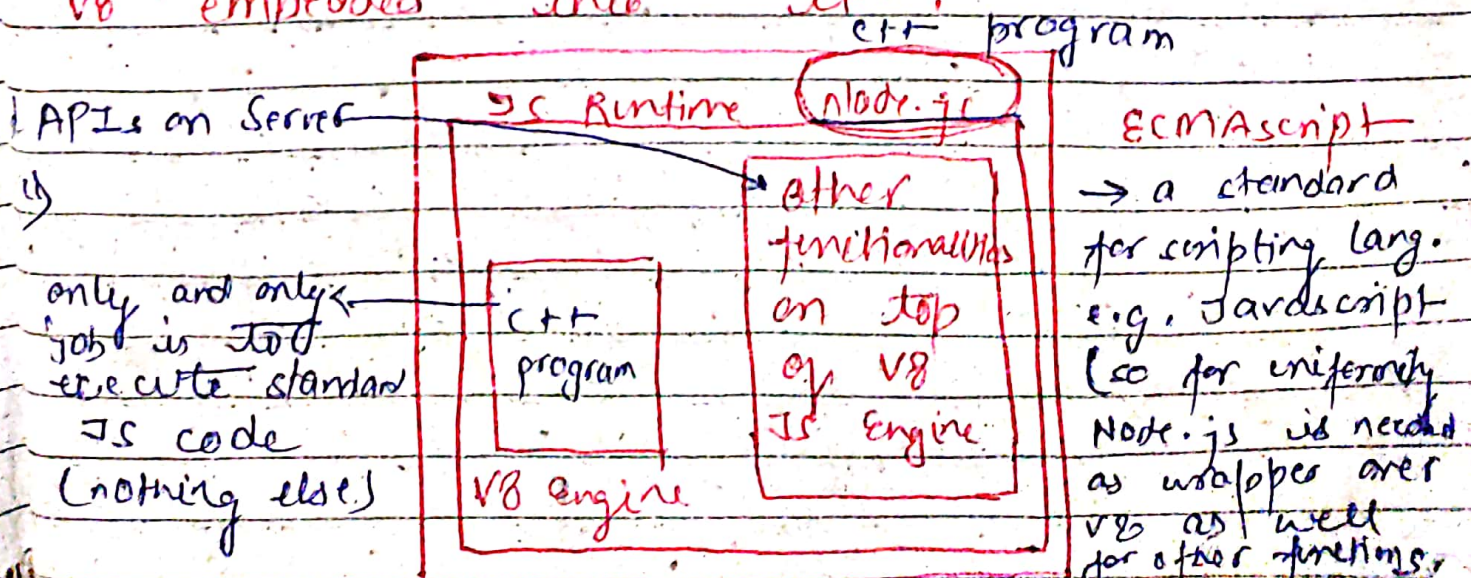
A) i) V8 is Google's open source high-performance Javascript and WebAssembly engine; written in C++.

ii) It is used in Chrome and Node.js among others.

iii) It is cross-platform.

iv) V8 can be embedded into any C++ application and it itself along with Node.js is written in C++ (mostly).

Node JS is an C++ application with V8 embedded into it.



→ ECMA script standards (managed by TC39)

i) sets the standard / rules for scripting languages including Javascript, JScript and ActionScript.

ii) JS engine and their Browsers or used in

- a) V8 → Chrome, Node.js, MS-Edge
- b) SpiderMonkey → Firefox
- c) JavaScriptCore → Safari
- d) Chakra → Internet Explorer (deprecated)

iii) these engines must follow these standards for uniformity among users, developers,

- Node.js at its very core a C++ (21%) program but also ~~re~~ heavily used Javascript (about 62%), Python (11%) as according to its Github Repo among others.

Program
(written by developer in JavaScript)
(High level language)

JS Engine (a C++ application)
(High level language)

machine code
(assembly language)
(Assembly)
(low level language)

Computer understands Binary
01...0111
(Binary)
(closer to machine)

A overview
(doesn't go in details)