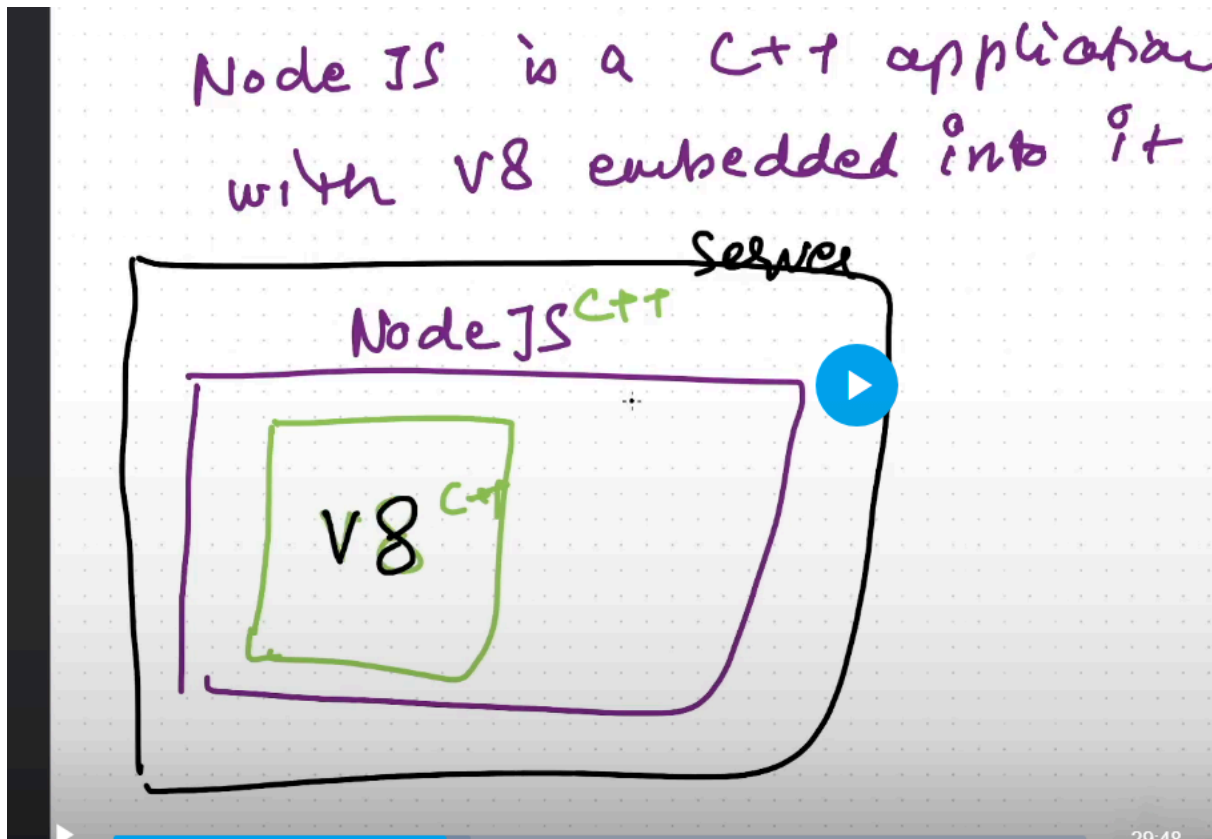


Episode-2-JS On Server

- Nodejs run outside the browser means primarily run on server
 - What is Server ?
 - a remotely working CPU which is receiving your request and working your website on that server or cloud
 - that receiving CPU is called server
 - When A Computer request Google.com that website have some IP and that IP connected to server
 - Now When a js run only in browser but after Nodejs it run on server side too. then a single developer can run and build the full stack system
 - MERN Popular because of Node Popular because of Developer Fav
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- Nodejs is built on C++
 - JS Engine V8 use JS Code executed but Written on C++
 - At End OF day JS Engine C++ Program
 - V8 is Google's open source high-performance JavaScript and Web Assembly engine, written in C++.
 - C++ 72% JS 25.7% Python 1.3% TS 0.3%
 - V8 can embedded any C++ Application. this is the main thing to lead Node Invention
 - v8 → Execute JS Code → JS CODE READ BY V8(A C++ PROGRAM)
→ Machine understand language
 - Nodejs is a c++ application with v8 embedded into it
 - V8(C++) → NodeJS(C++ With V8)



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If V8 Can Execute JS Code Then Why Need NodeJS?

- v8 Engine follows ECMAScript
- ECMAScript
 - is standard of writing js like how the variable define how assign any value
 - === to close check that rules define by ECMAScript
 - this standard follows v8 Engine
- SO NodeJS have v8 + extra super power with them Node can run on server .while v8 cant because he has to Follow ES Standard
- Super Power Like API on Server
- suppose you want to access on server which is SQL or Mango DB how can you do that v8 cant do that because he doesn't have access
- suppose you have to call HTTP call v8 cant do that . V8 Only Do Execute Core JS code in ES Standard

- v8 cant go to file system , v8 cant fetch image for that we need NodeJS
 - V8 + SUPERPOWER = NodeJS(JS Runtime)
 - Now This NodeJS Can run On Server Time
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V8 is c++ Code ? What is it he do Why he has C++ Code ? [T.S.=28]

- CPU understand binary
- top of that binary Code Have "Assembly Language Code" Top of that "Machine Code(Low Level Code)" → Top Of That "HLL & High Level-Code(C++)" & Top Of That a C++ Code → JS
- so what happen a C++ code or say JS Engine takes JS Code and Turns into Machine Level Code

