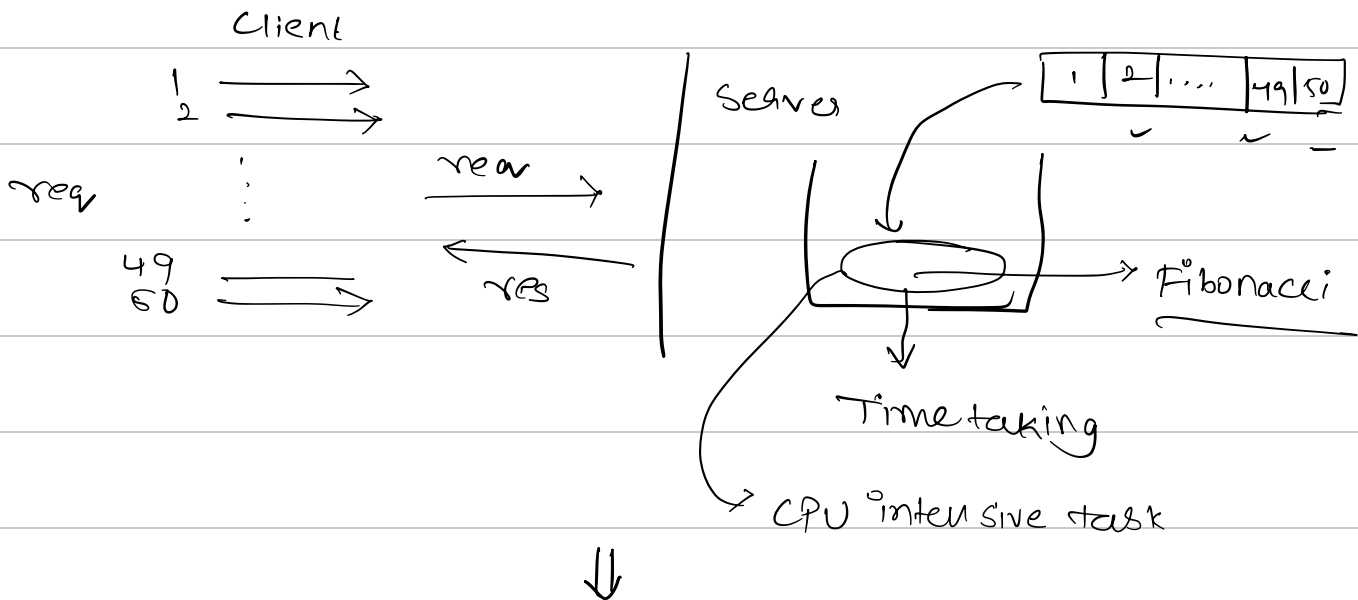
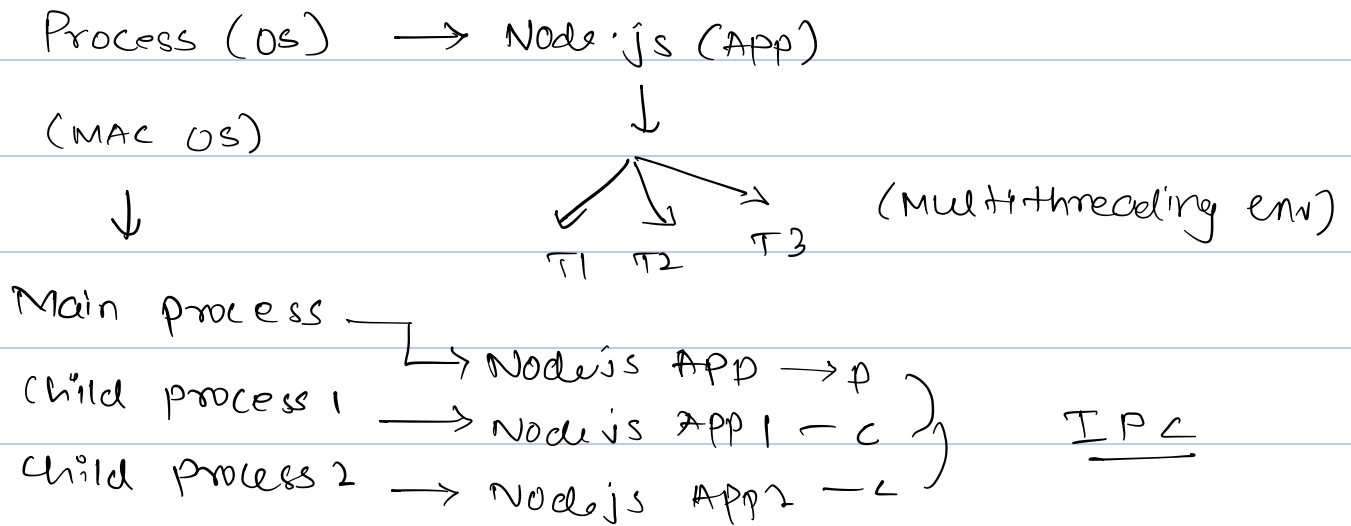


# MERN-16

Agenda :- (2) CPU intensive task



Node.js → JS → Single threaded XX



child process

exec

execFile

spawn

fork



Shell command  
from JS

Shell  
scripts

new process  
to execute  
some operation

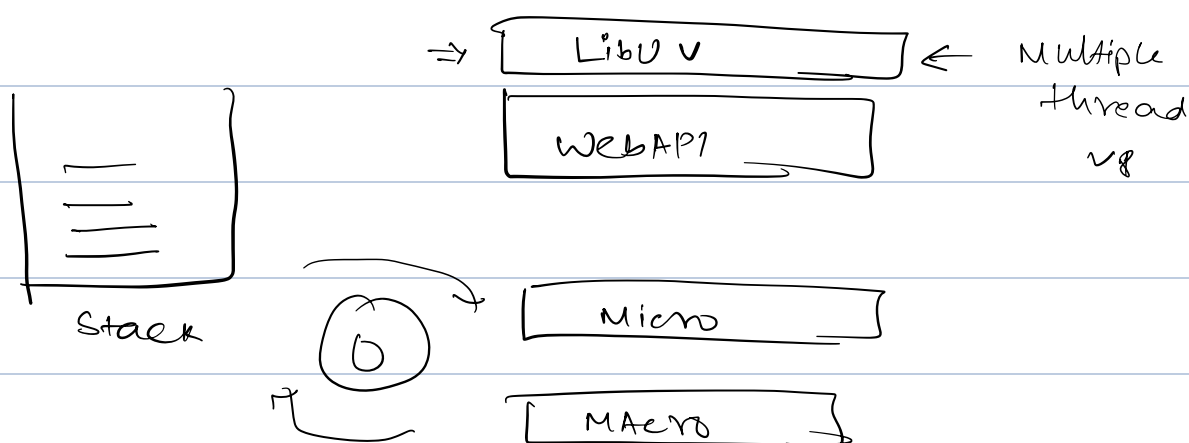
Creates  
new  
Node.js  
processes

IPC

Worker Threads

→ libuv → C++  
→ Multithreading

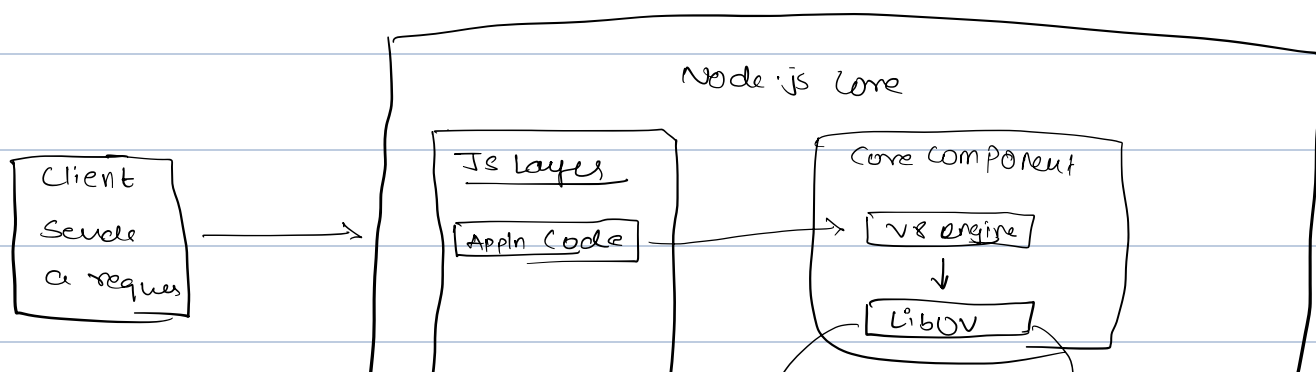
browser → web API

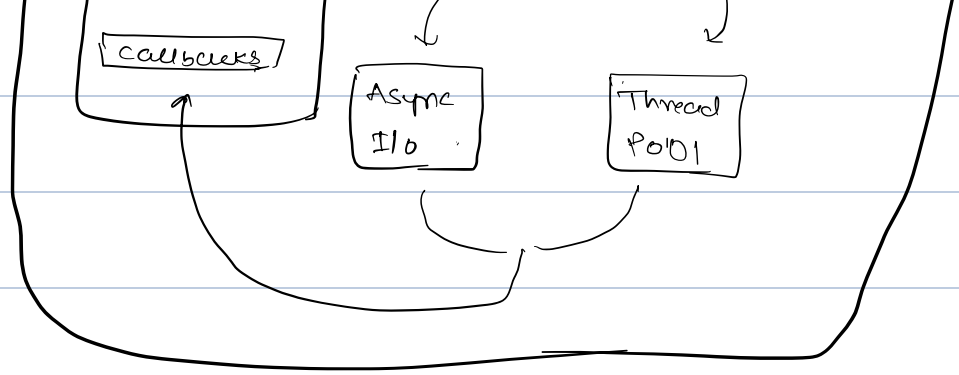


multiple Process → Multiple worker thread



Node.js → Event drive ✓  
→ Non-blocking I/O ✓





✓ V8 → JS - MC

Manage Memory  
garbage collection

✓ LibUV → cross-platform I/O operations

Thread pool management

↓

Default thread size 4

configurable (increase or decrease)

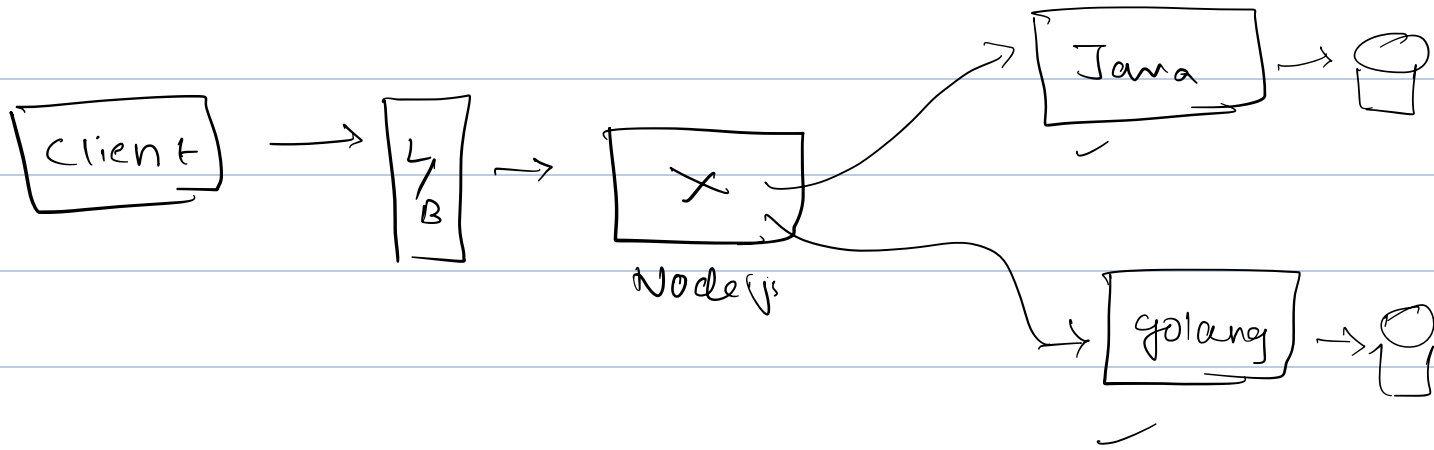
MERN →



→ Node should have more classes (4)

→ MongoDB

SQL → In depth  
Difference  
NOSQL → Time Series DB  
Columnar DB  
Key-value DB  
MongoDB ← Document DB

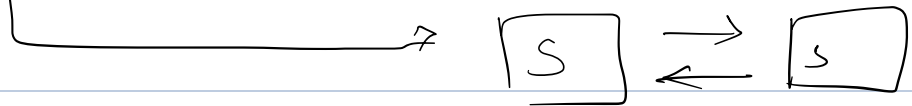
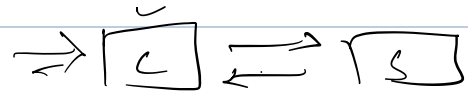


SH-SS classes

HTTP Protocol

→ Rest

GRPC



{ 100 projects → SQL ✓  
 ↓  
 NOSQL → 50%  
 cache → Redis  
 MS → Kafka brokers

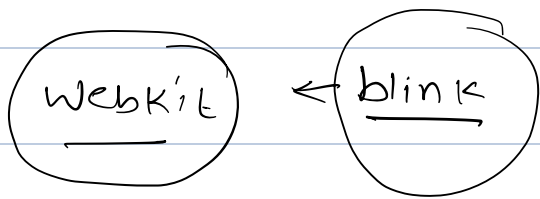
} → HLD

Client → Next.js

CSR ✓  
 +  
SSR ✓

§ -webkit -

[ -moz - ] → rendering engine



Critical rendering path