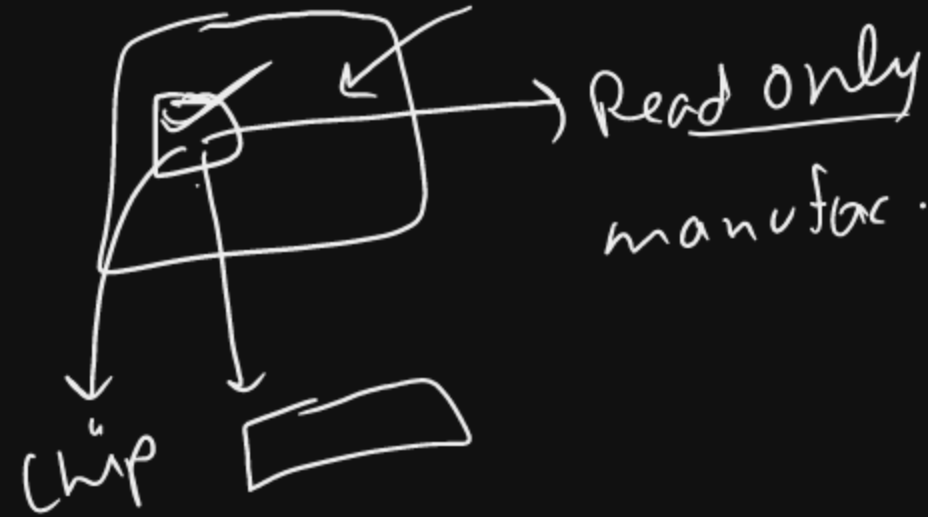


- how computer works
- > booting up firmware
  - > kernel and user space
  - > VM, process, thread
  - > cpu & instruction
  - > system calls
  - > switching context
  - > memory blocks
  - > program storage
  - > stack and heap
  - > source code
  - > runnable files
  - > version control
  - > git and github
  - > java sublime setup
  - > git repo setup

bug solve

①

Computer  $\xrightarrow{\text{start}}$



firmware

OS

[Boot loader]

Master Boot Record

disk

(Program)

Kernel

How to do ✓

(Utilities)

What to do ✓

Program

What to do (logic)  $\rightarrow$  Algo

[How to do]

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(How to do) ✓  
Algorithm

(what to do)

(interface) =  
(medium)

DVD Player



interface

(API)

(Admin)  
Kernel

↳ (Program)

Process

multithread

CPU m instr. kaiso jache h

User

↳ (Programs)

API interact



how computer works

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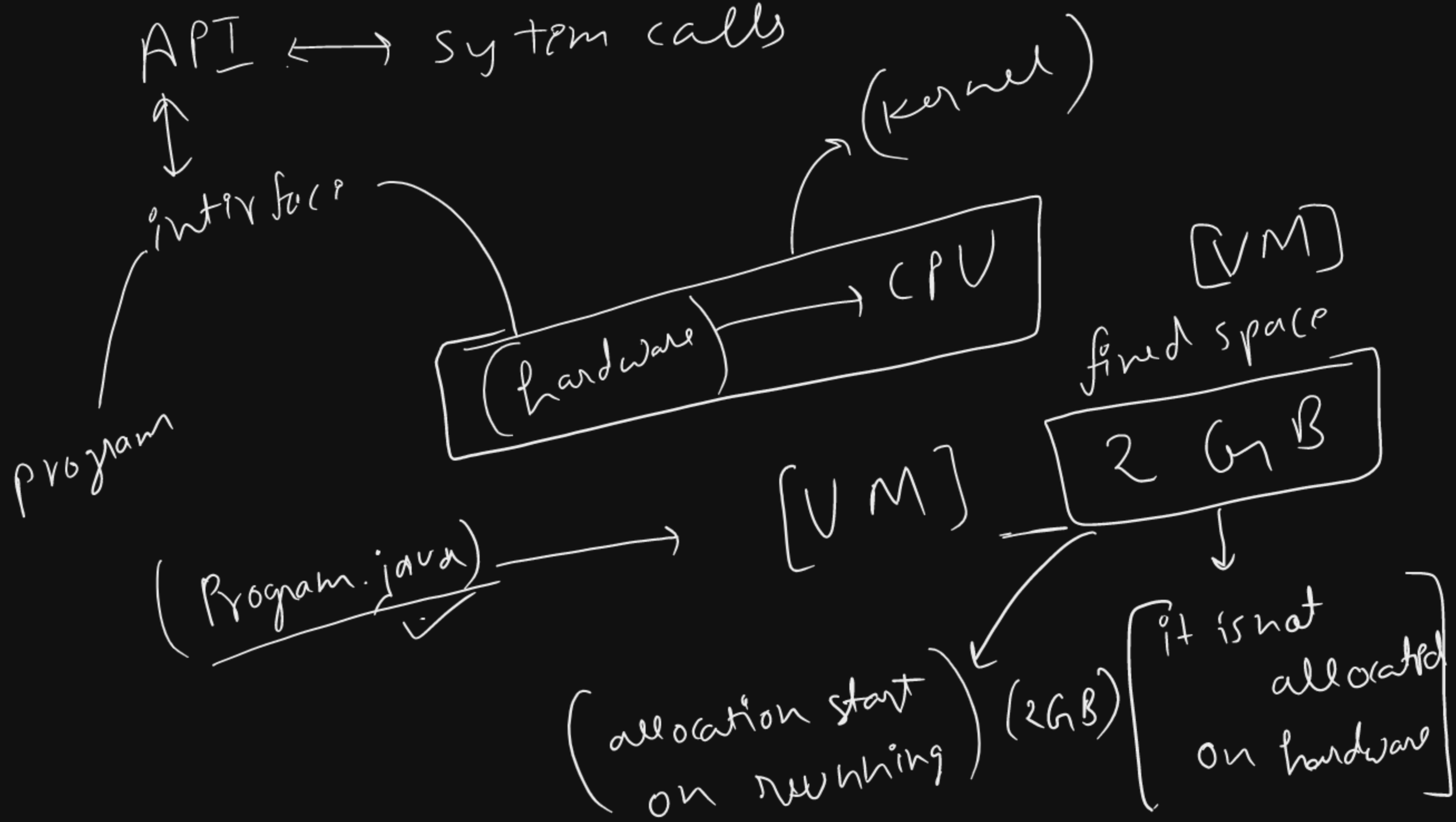
-> runnable files

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how computer works

- > booting up firmware
- > kernel and user space ✓
- > VM, process, thread ✓
- > cpu & instruction ✓
- > system calls ✓
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Virtual Memory (actual program)

[PROCESS]

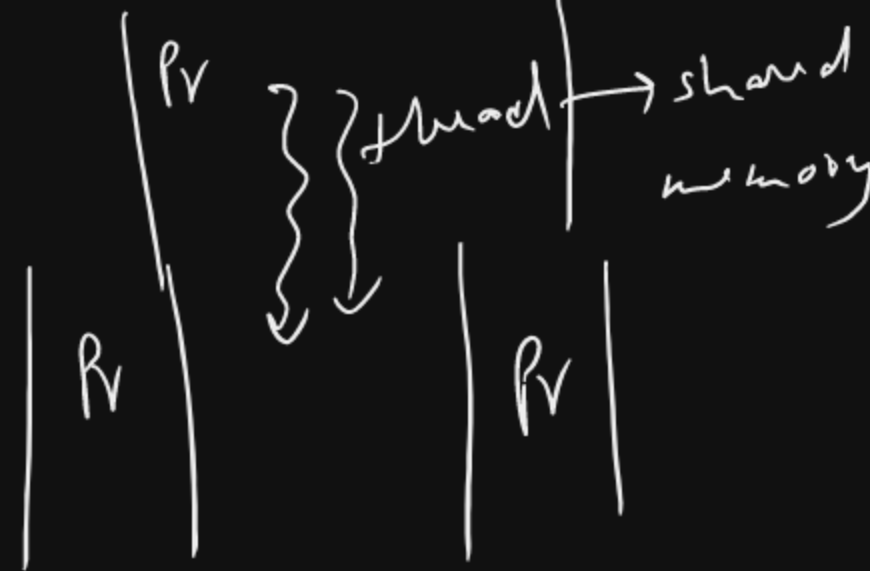
[thread]

(Smallest unit of program)

(multithreading)

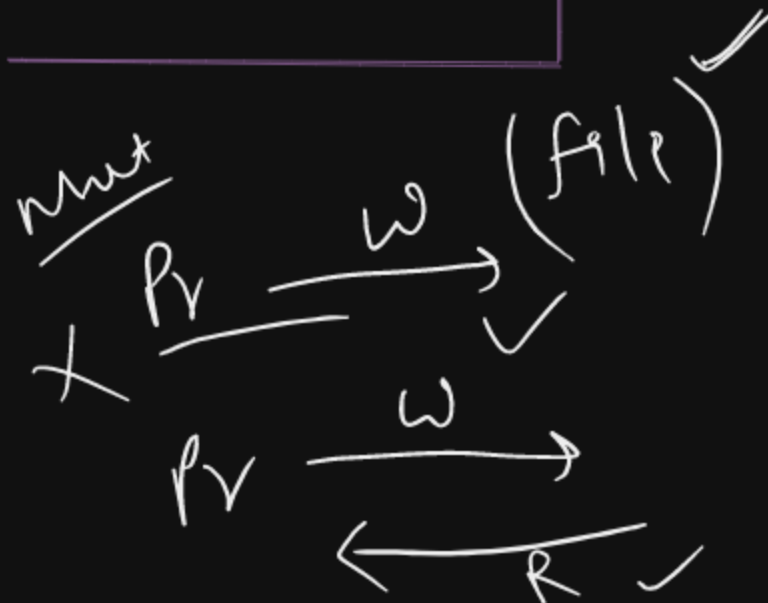
compiler

How threads will be made and how it will run



① Shared memory

② independent separate process





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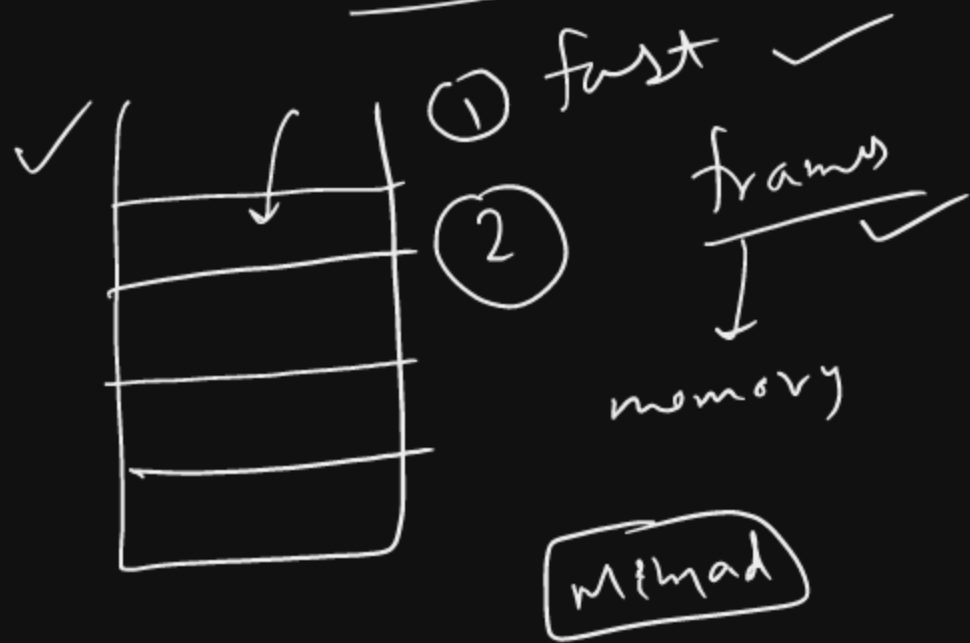
Program is stored

always in RAM



Page table  
hard

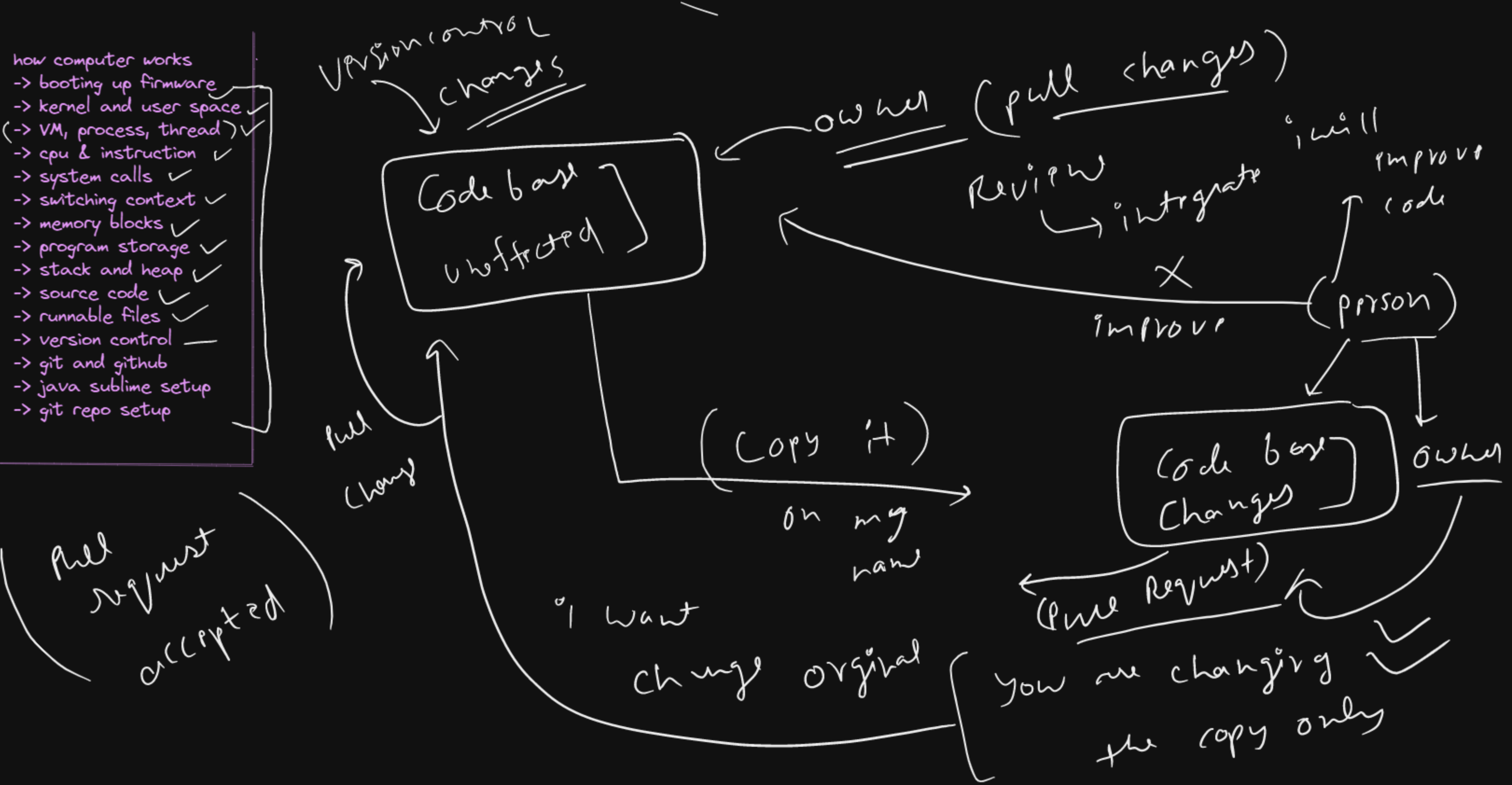
2 types memory (Virtually)  
stack



① Slow  
② Node  
(not inter related)  
monad



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how computer works

-> booting up firmware

-> kernel and user space ✓

(-> VM, process, thread) ✓

-> cpu & instruction ✓

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