

23 November 2021 16:00

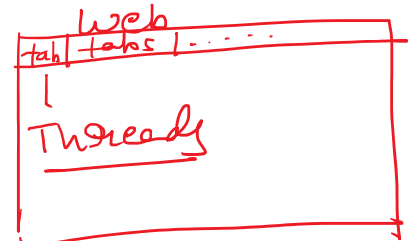
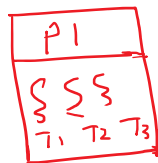
Note  
S/w  $\Rightarrow$  Software  
H/w  $\Rightarrow$  Hardware

group of SW that help to

interact with the  
H/W

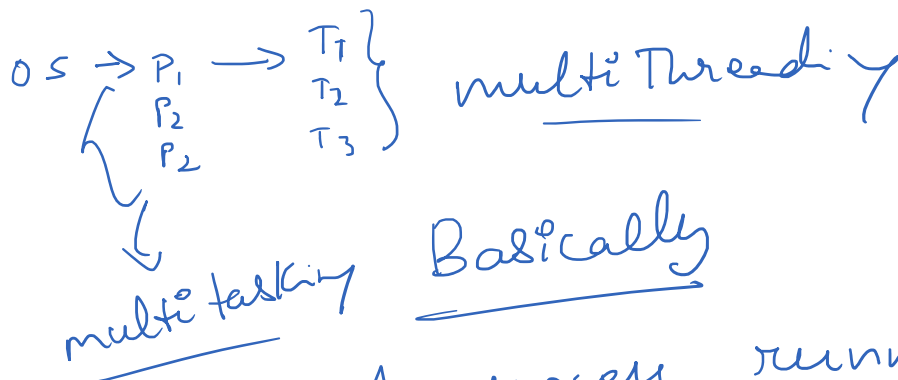
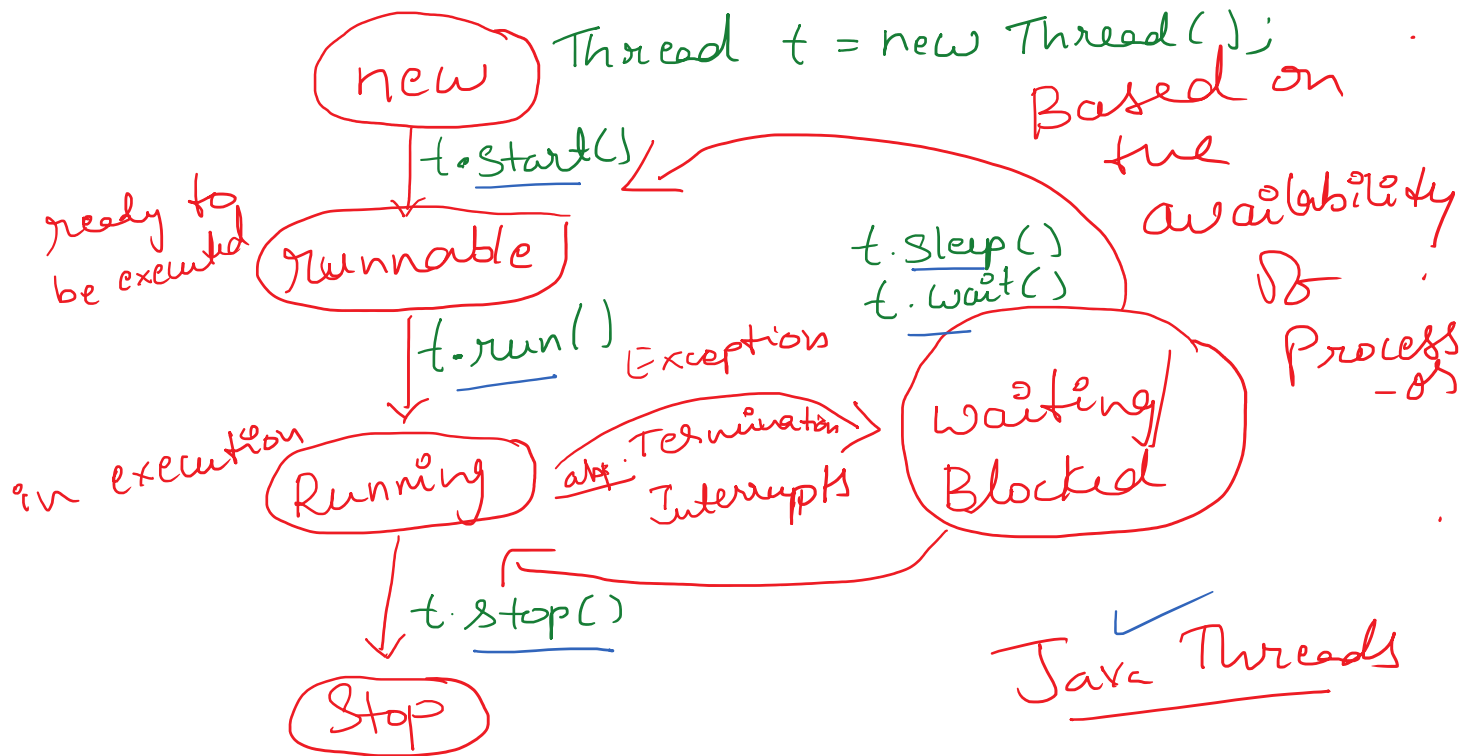
□ → run → optimize its work.

OS  $\rightarrow$   $P_1$  — Threads  
 $P_2$   
 $P_3$


$$P_1 \begin{bmatrix} T_1 \\ T_2 \\ T_3 \end{bmatrix} \leftarrow$$

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# Thread Cycle [Thread life cycle]



A process running multiple threads is called multi tasking

Running individual part of a psm/process is called multi-Threading

difference ↓

# Difference

## Multi-tasking

- Execution of multiple running psm (programs)
- Each psm has its own address space for execution.

→ Heavy weighted process

↓  
1 . . . 10

→ Context switching ↑  
(High)

↓  
Switching b/w diff process  
↓  
priority

0 0 0 0  
↑

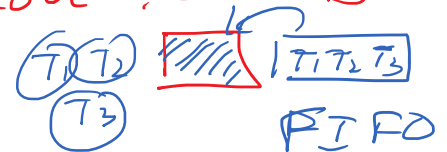
→ Interprocess Comm<sup>n</sup> expensive

→ Java has no control of multi-tasking

## Multi-Threading

Execution of individual part of the program

May/May not share a common address space.



→ lightweight process.

T<sub>1</sub> → Task 1

Low

→ less expensive

Java has complete control

↓  
JVM

Thread is small part of a program → dedicated to do work

program is dedicated to do some task.

→ lightweight ←

