CPU

MMU

$A_0$

$A_{31}$

Query →

P.C.

staring address "0"

phy mem

0

O S

MAX

PT BR

| P# | F# |

logical Addr

| P# | d |

→

physical address

| F# | d |

1) O.S. builds the translation map for each process during loading

△ user's process request on How much memory will be needed.

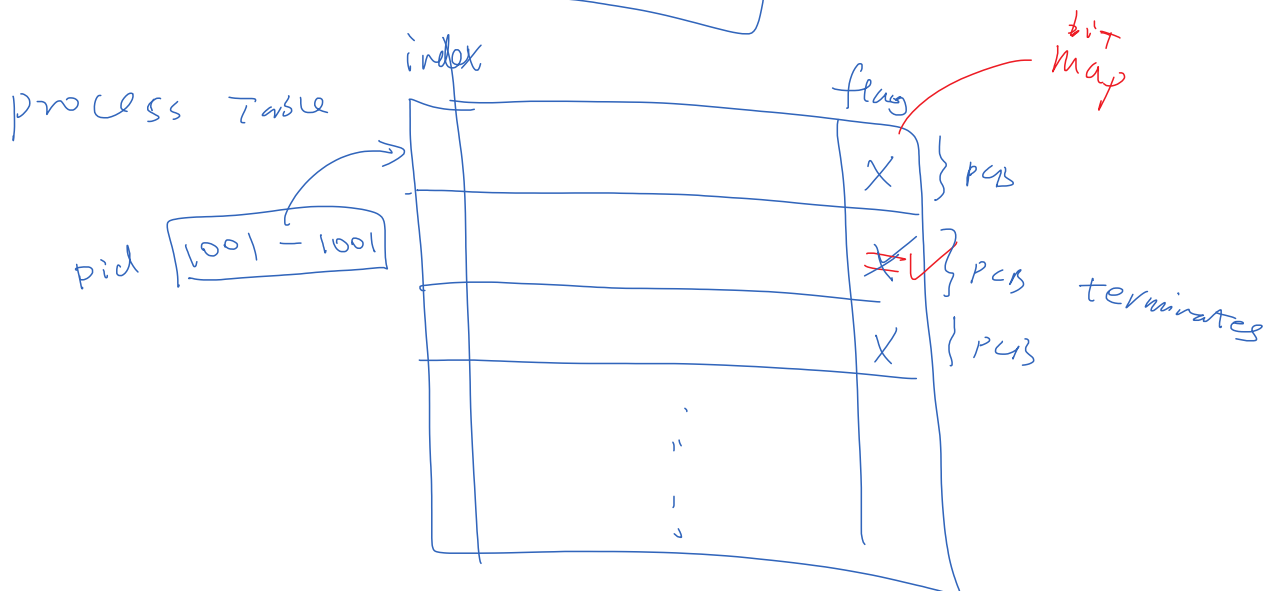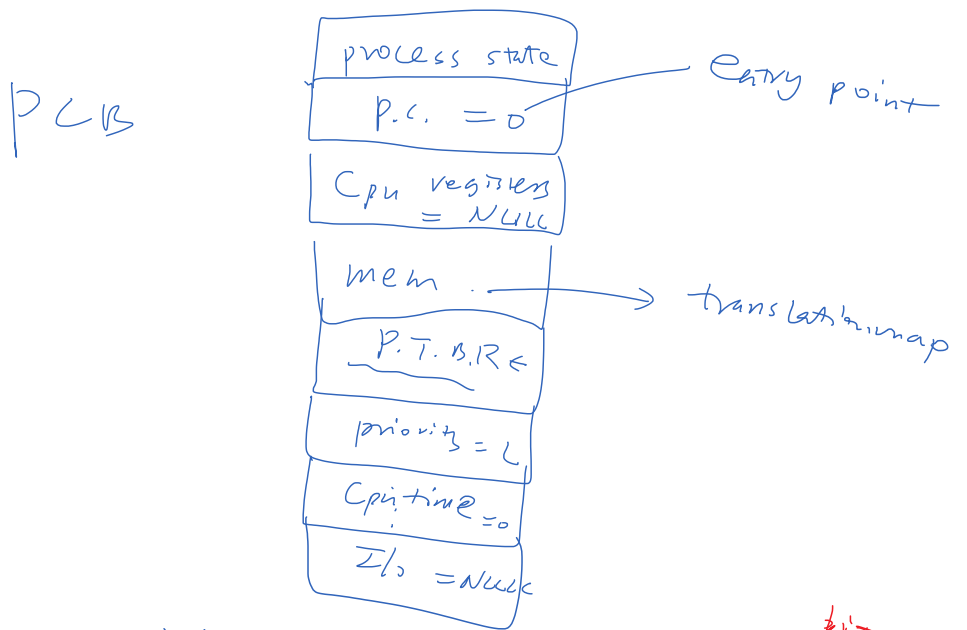◇ O.S. knows where to allocate

2) Whether the translation map would be modified during process execution?
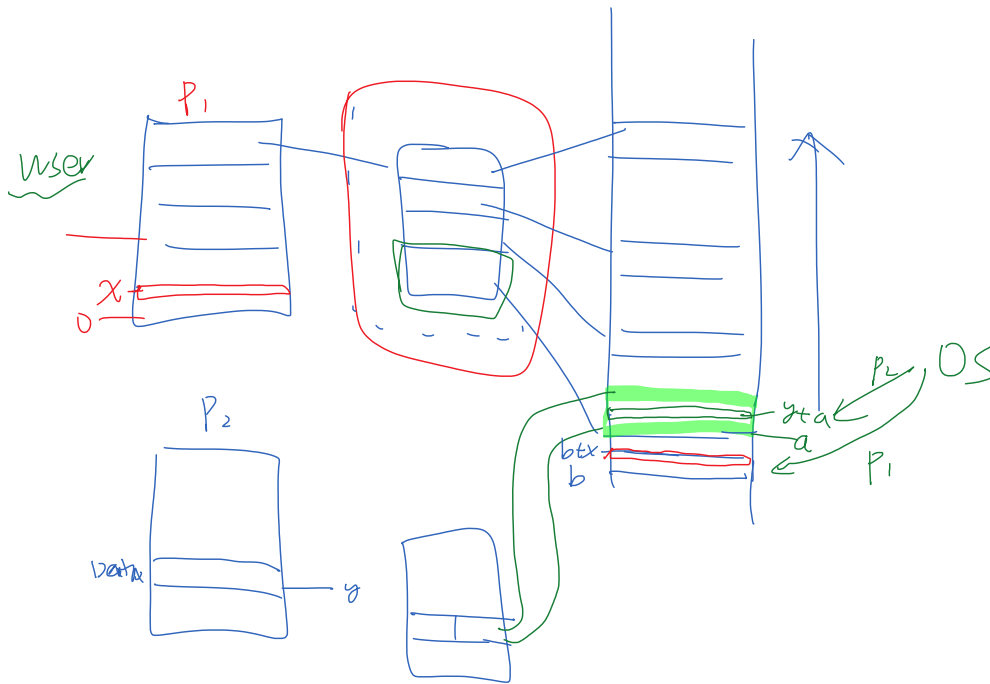
2.1) What condition?

"swapping" $\longrightarrow$ translation map would be destroyed.

PCB is unique for each process.

managed in kernel mem by O.S.

PCB

| process state |
| P.C. = 0 |  → entry point
| Cpu registers = NULL |
| mem. |  → translation map
| P.T.B.R ← |
| priority = L |
| Cpu time = 0 |
| I/o = NULL |

process Table

index     flag     bit map

| | X | } PCB |
| | ~~X~~ | } PCB  terminates |
| | X | } PCB |

pid [1001 — 1001]

<u>PCB</u> would be updated whenever OS gains control of the cpu



save state → $PCB_0$          1° ISR

⋮                                    2° Sys call

load $PCB_1$ → state          Query F.S. to know the phy parameters

                              $Cpu$ time          → I/o device controller

(Cpu) Scheduling

dispatching

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