Memory

Mem

0

base

base + limit

address (range check)
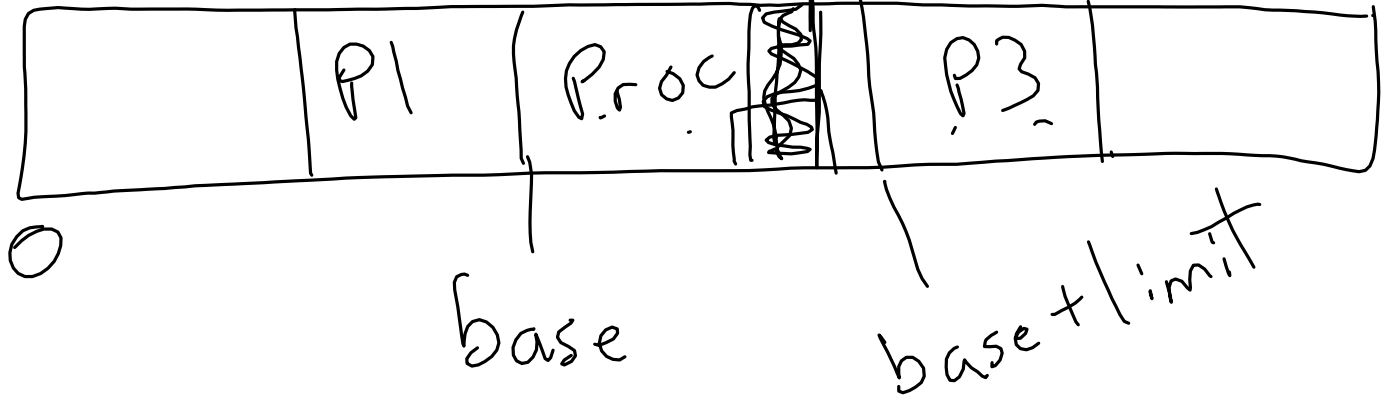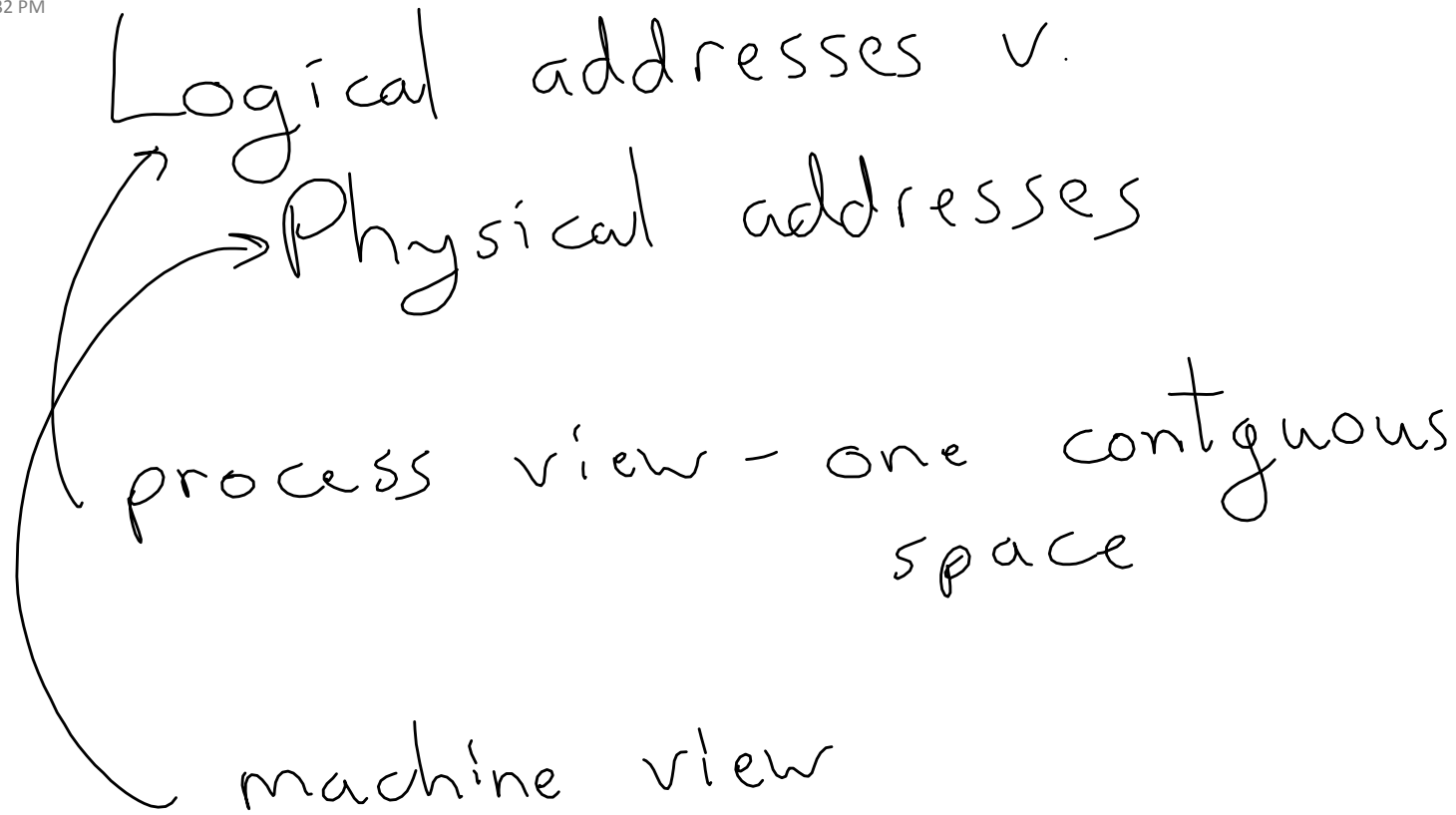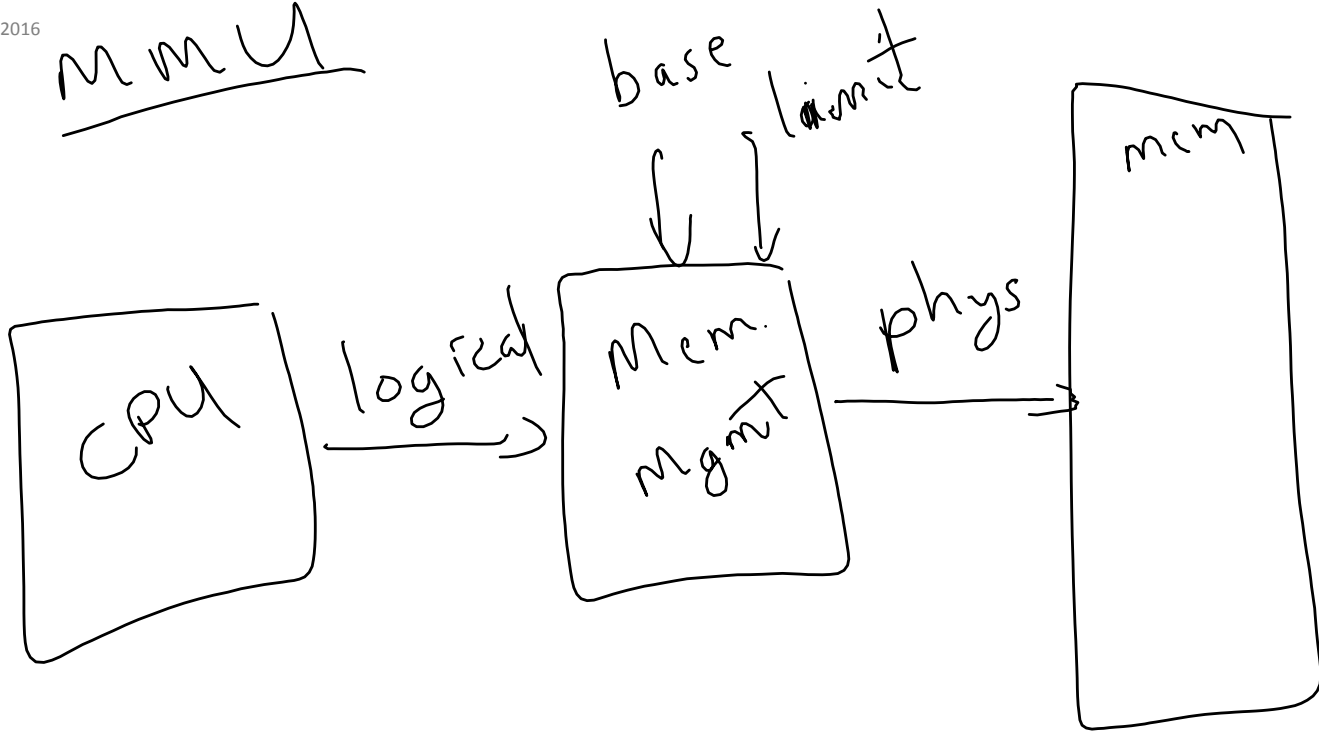
Binding

determine addr. w/ in a process.
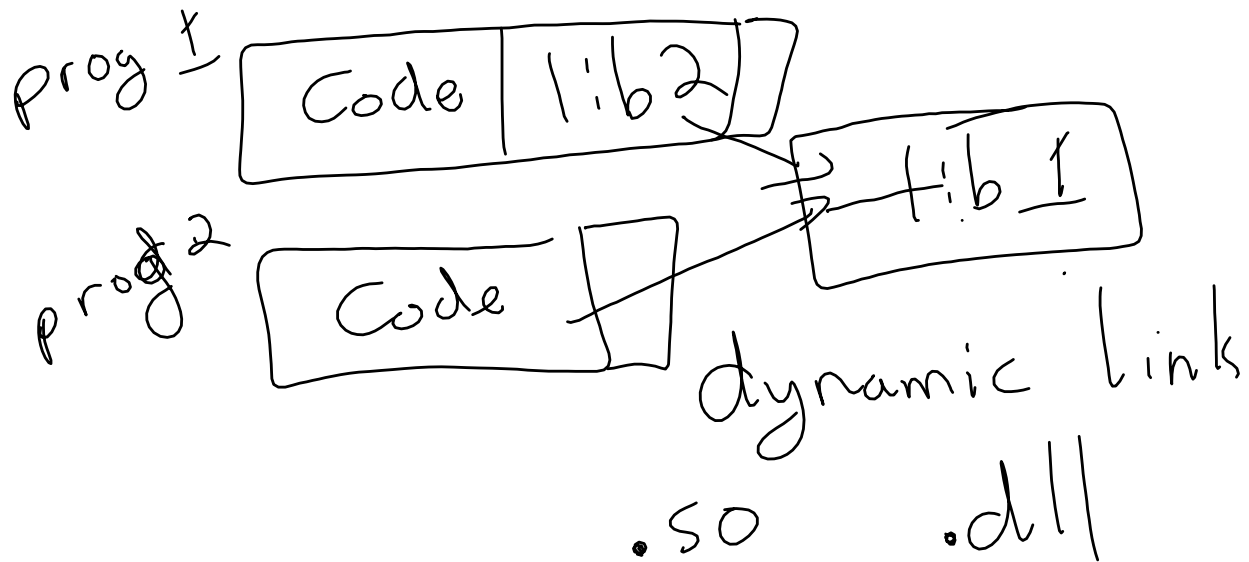
compile time - location known when proc is built

load time - move into memory

execution time - calc. addr as needed
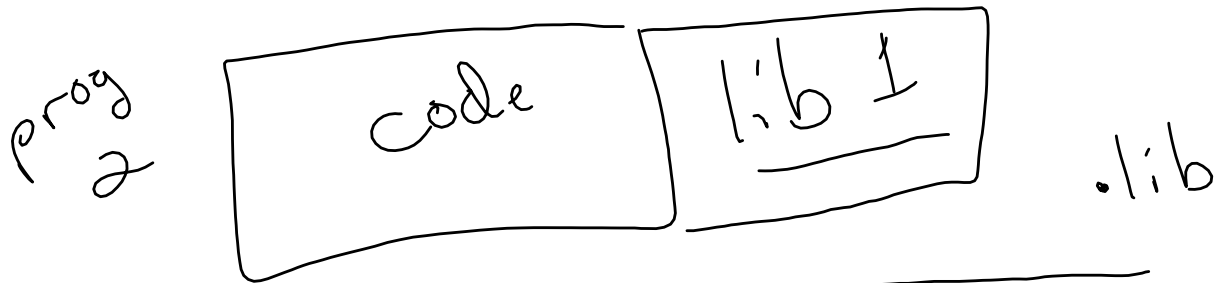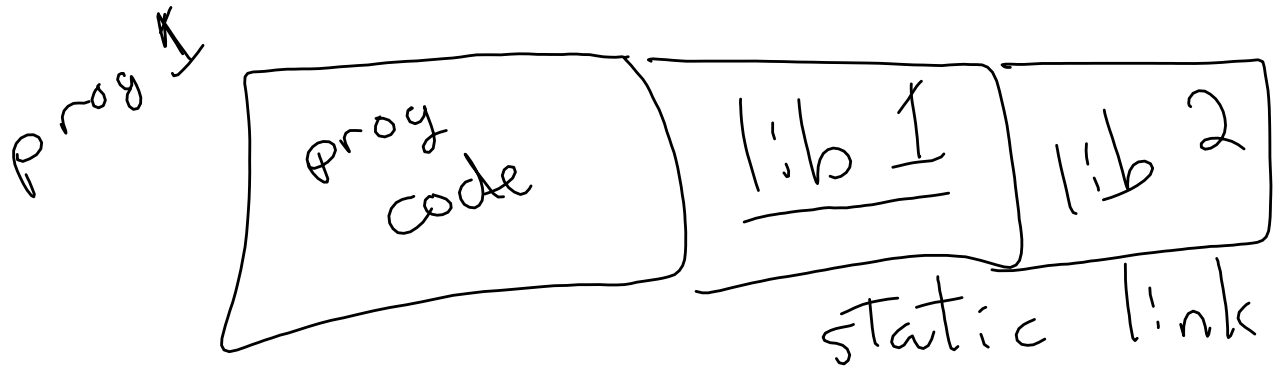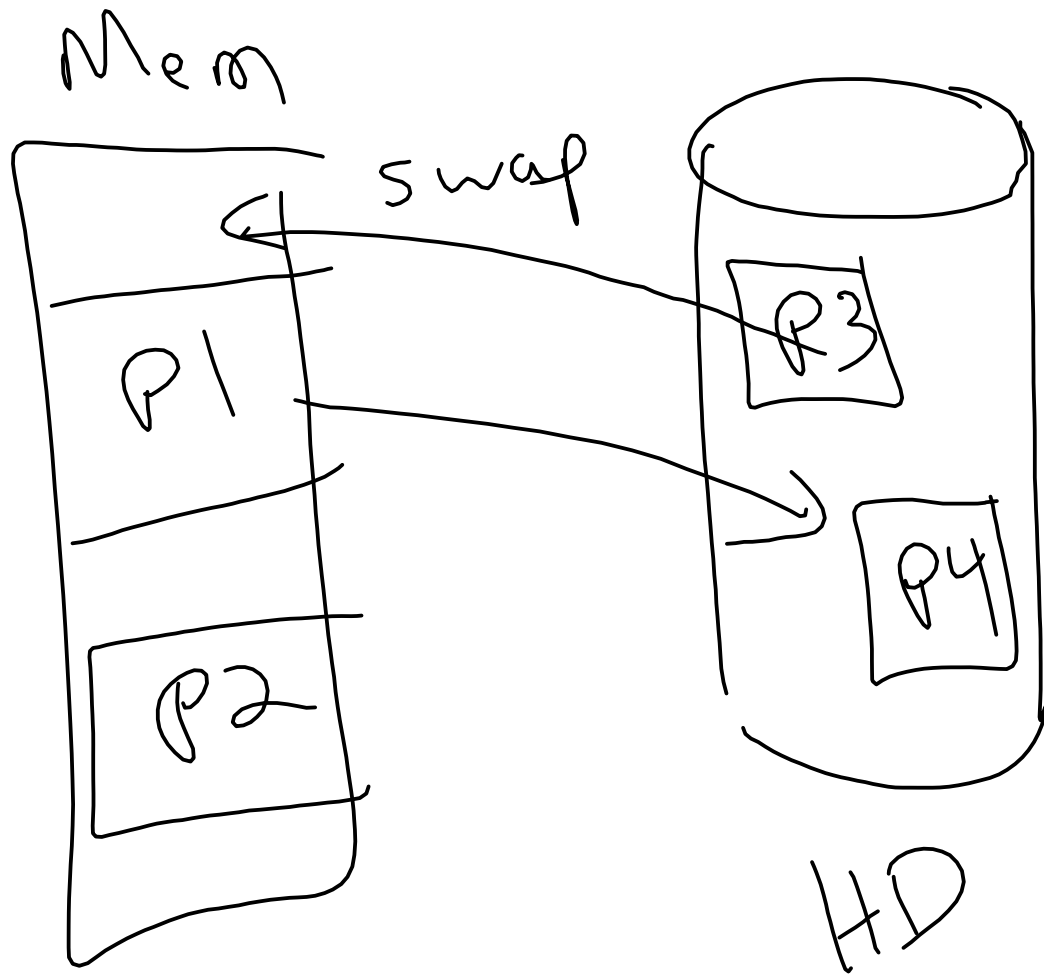
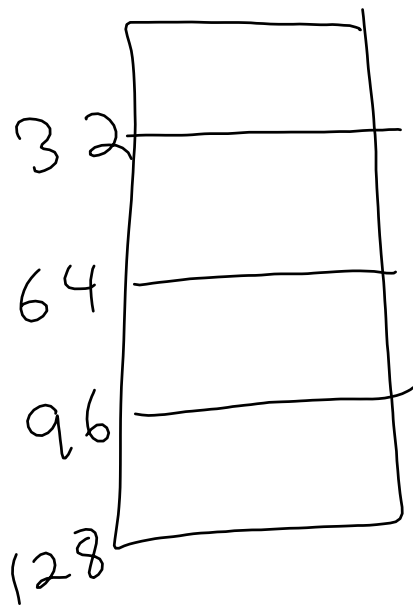# Logical addresses v.
Physical addresses

process view - one contiguous
space

machine view

MMU

base   limit

CPU →logical→ Mem. Mgmt →phys→ mem

Linking

prog 1

prog
code | lib 1 | lib 2

static link

prog
2

code | lib 1

.lib

prog 1

Code | lib2

lib 1

prog 2

Code

dynamic link

.so   .dll

Mem

swap

P1

P2

P3

P4

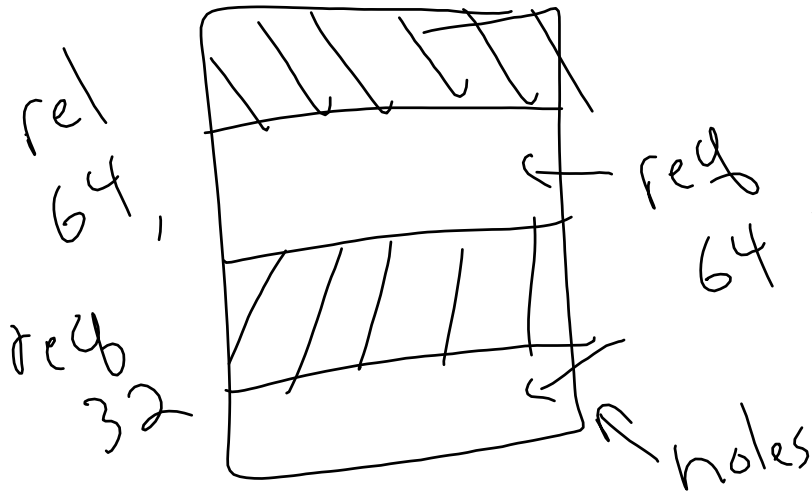HD

32

64

96

128

req. 64

req 32

rel 64,

req 32
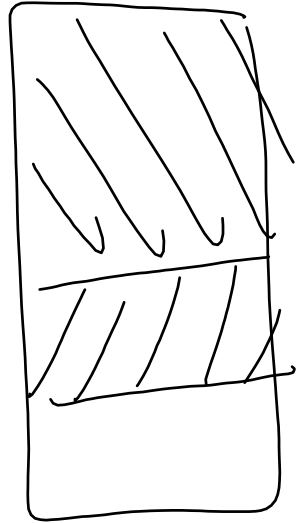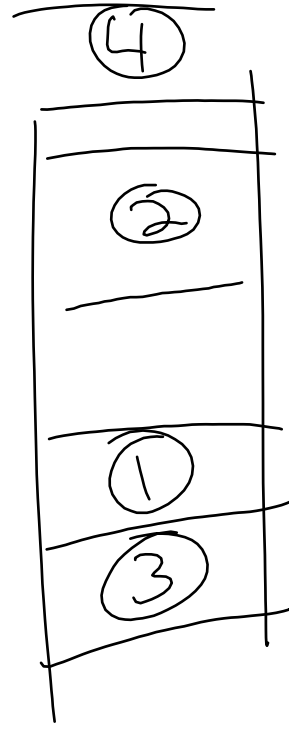
req 64

holes
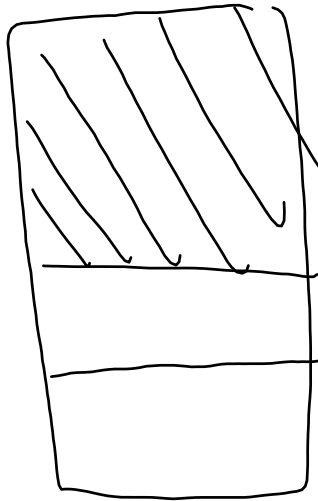
external
fragmentation

- first fit

- next fit

- best fit

- worst fit

Segmentation

① - text area

② - data

③ - constants

④ - lib.
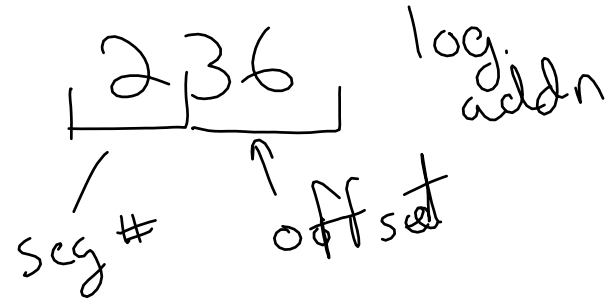
Base, limit for each segment
— segment table

logical

addr

CPU

s | d

seg #   offset

0
1
2
3
.

base | lim

base

limit

+ —— range —— phys addr
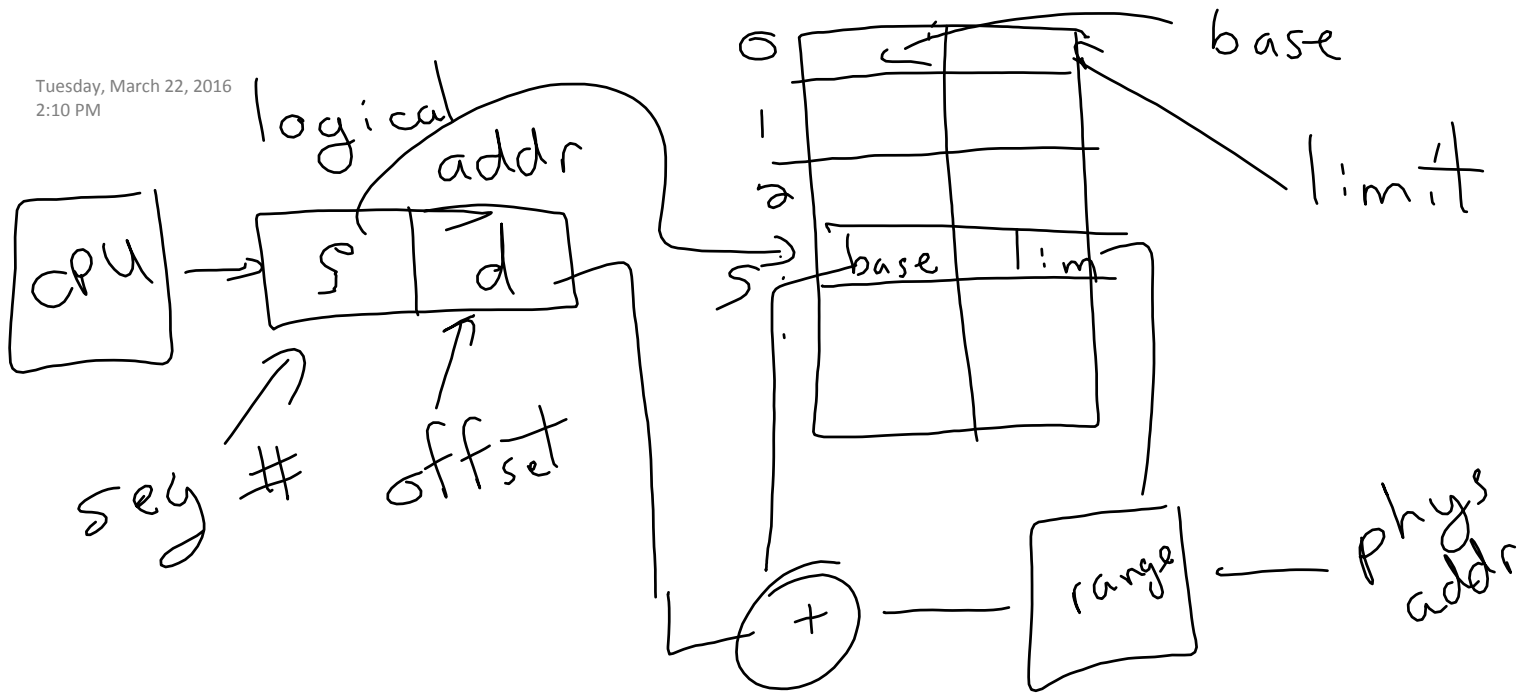
	base	limit
0	500	100
1	200	100
2	50	100
3	1010	100

2 36   log. addr

seg #   offset

86 — phys addr

log ~

	100		200		300		400
50.		51		52		53	

phys

50	200		500		1010	
52	51		50		53	