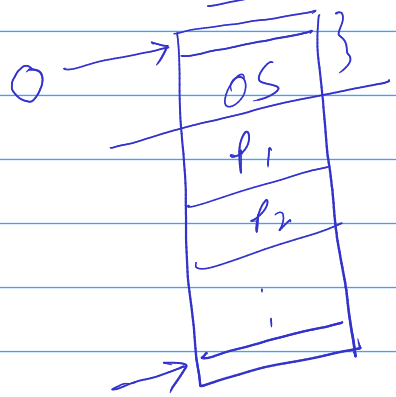
Main Memory.



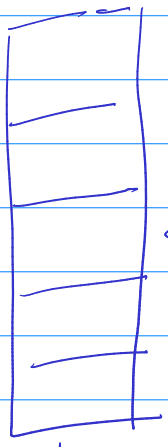
Logical Addr Space.

n bit address.

Address range: (0) to $(2^n - 1)$

1 KB = 2^{10} B
1 MB = 2^{20} B
1 GB = 2^{30} B
1 TB = 2^{40} B

Physical Addr. Space.



page size = frame size.

Page size = 4 KB = 2^{12} B.

Log. Addr. = 32 bit

page#	offset
20	12

32 bit

Size of PT
= No. of entries in PT × Size of each entry in PT
= $2^{20} \times 4$ = 2^{22} B

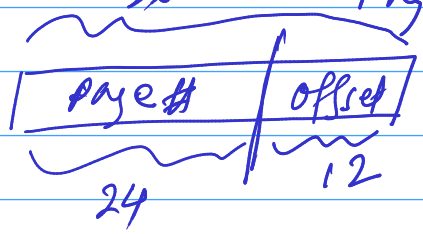
No. of pages = $\frac{2^{32}}{2^{12}} = 2^{20}$

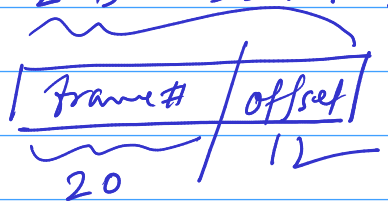
Size of each PT entry = 4B

Logical Addr. Space.
$2^{36} = 64GB$

Physical Addr. Space.
$= 2^{32} = 4GB$

Page Size = 4 KB = 2^{12} B





Single level PT

1st Level PT

Size of PT
= no. of pages × Size of each PT entry.
$= 2^{24} \times 4$ B
$= 2^{26}$ B

No. of Pages of 1st Level PT $= \frac{2^{26}}{2^{12}} = 2^{14}$

No. of entries in 2nd Level PT = no. of pages in 1st Level PT
$= 2^{14}$

Size of 2nd Level PT $= 2^{14} \times 4 = 2^{16}$ B

No of pages of 2nd Level PT $= \frac{2^{16}}{2^{12}} = 2^4$

No of entries in 3rd Level PT $= 2^4$

Size of 3rd Level PT $= 2^4 \times 4 = 2^6$ B