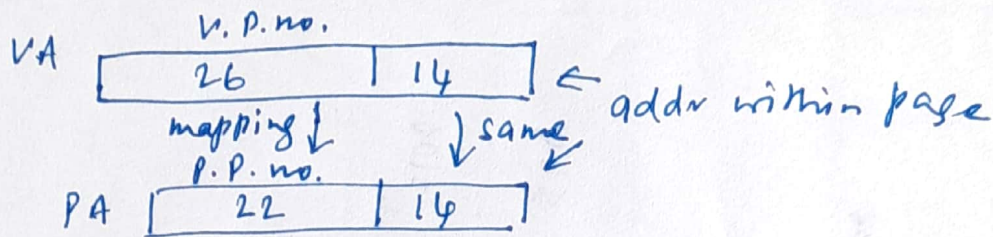


CS230 Tut 10 Solutions

① a) $VA = 40 \text{ bits}$ $PA = 36 \text{ bits}$ $\text{Page} = 16 \text{ KB} = 14 \text{ bits}$



② b) P.T entry size = 22 bits (P. P. no.)
 + 36 bits (disk addr)
 + 4 bits
 = 62 bits

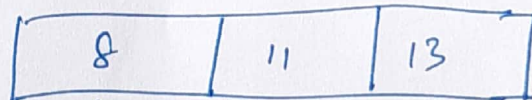
Num P.T entries = 2^{26}
 P.T size = $2^{26} \times 62 \text{ bits}$

② $VA = 32 \text{ bits}$ $PA = 24 \text{ bits}$
 $\text{Page} = 8 \text{ KB} = 13 \text{ bits}$

P.T entry size = 4 bytes

Num P.T entries / page = $\frac{8 \text{ KB}}{4} = 2^{11} = \text{num 2nd level P.T entries}$

VA gets split as



a) 3 accesses in total - as shown →

b) 3+3 accesses for 1st (3 for I, 3 for D)

c) $2^8 \text{ entries} = 2^8 \times 4 = 1 \text{ KB}$

d) Diagram →

