Video 1 : Introduction to cache memory

LRU takes care of Temporal locality.

Block/Paging takes care of spatial locality

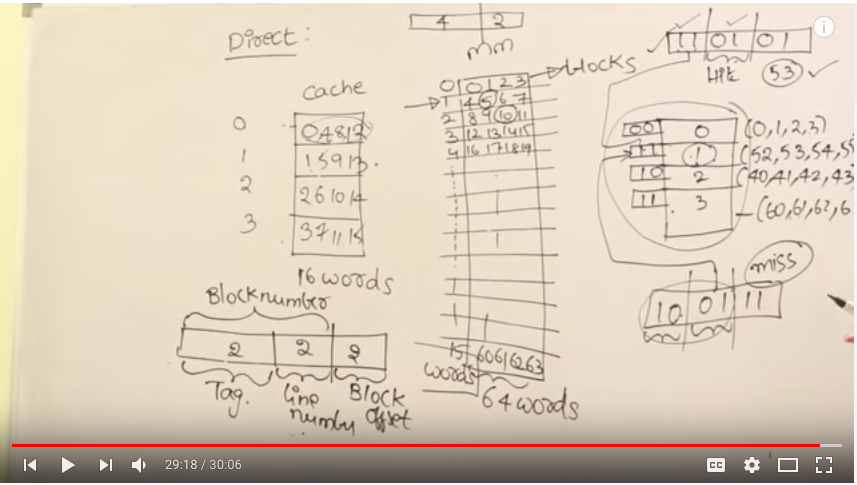
Video 2 : Direct Mapping

Process/Virtual memory – Pages

Main Memory – Frames/Blocks

Cache – Lines

1 Word is smallest addressable unit in memory. Can be anything say 1 word=1byte.

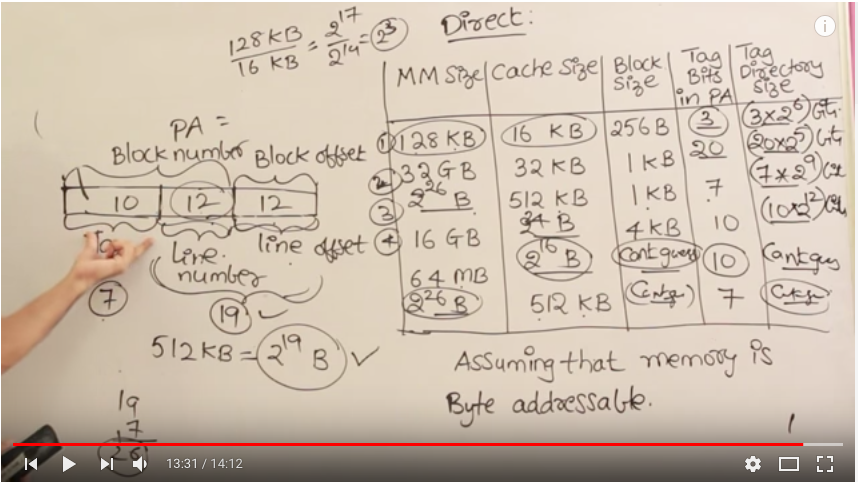


Video 4 : Direct Mapping Problems 2

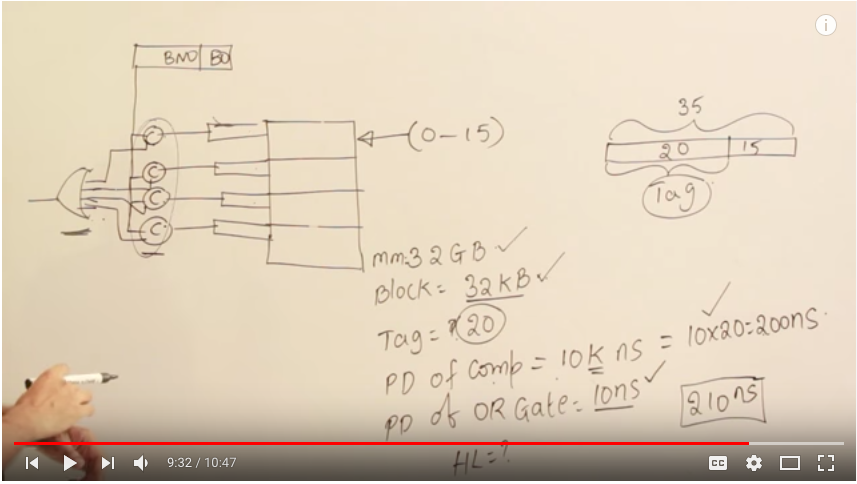
Address = Tag + LineNumber + BlockOffset/LineOffset

Cache size = 2 pow (LineNumber +LineOffset)

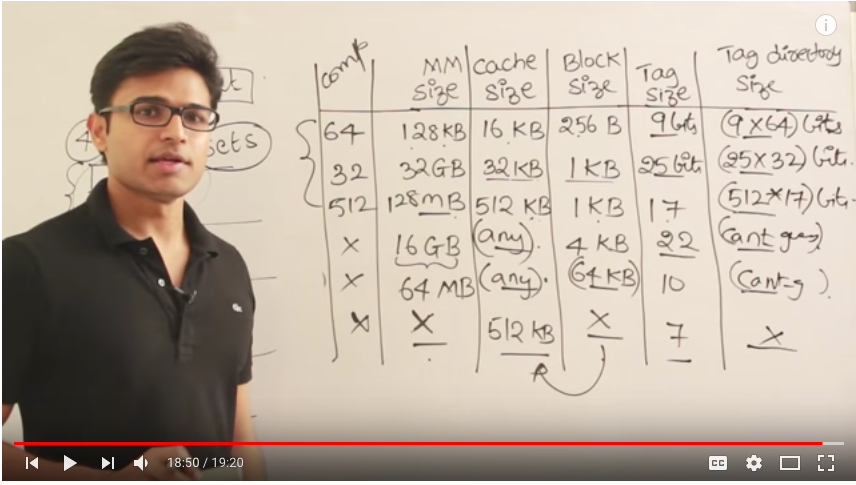
Tag Directory size = Tags \* 2 pow LineNumber



Video 5 : Introduction to associative mapping



Video 3 : Numericals on associative mapping



Video 6,7 : Problems on Set Associative Mapping

Similar to direct mapping

In direct mapping,

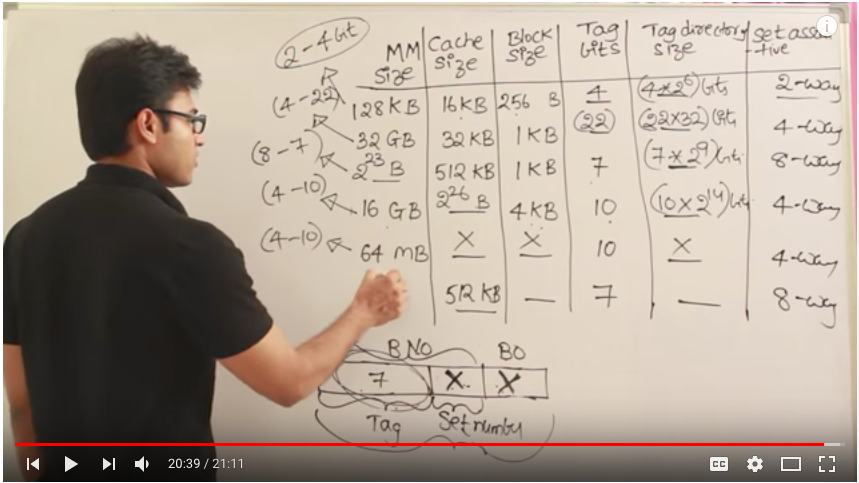
Address = Tag + LineNumber + BlockOffset/LineOffset

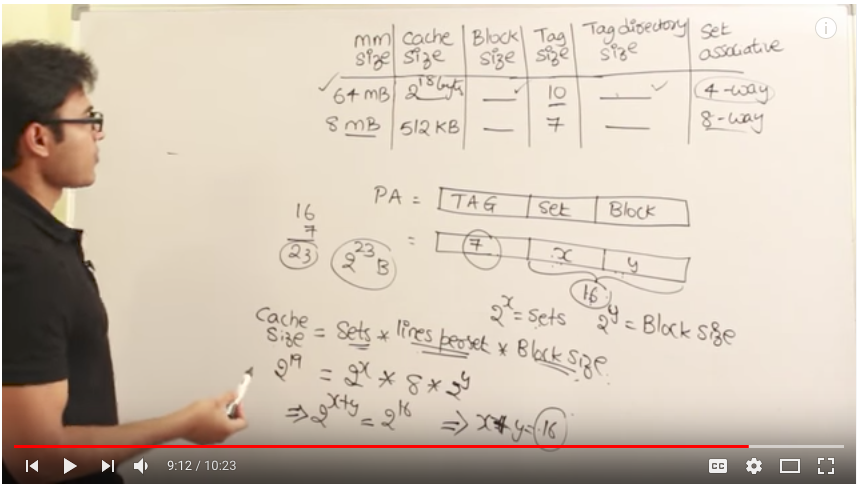
Here,

Address = Tag + SetNumber + BlockOffset/LineOffset

Only, Set Number = Line Number/ N-Set Associative

Less Comparaters reqd than Associative but more than Direct





Video 8 : Comparing all the mappings

