

Assignment 8

1. Given a series of references in word addresses: 5,1,4,8,17,20,11,9,4,5,6,17,9
  1. Show the hits and misses and final cache contents for a direct mapped cache with a total of 8 one-word blocks. Initially the cache is empty
  2. Show the hits and misses and final cache contents for a direct mapped cache with a total of 4 two-word blocks. Initially the cache is empty
  3. Show the hits and misses and final cache contents for a 2-way set associative cache with a total of 4 two-word blocks. Initially the cache is empty. Assume LRU replacement.
  
2. Suppose we have the following address sequence is required for a program:  
2,3,5,2,3,4,2,3,5,2,3,5,4,2,4,5,6,3,2,1. The cache is 3 blocks with LRU placement policy. What is the hit ratio?
  
3. For an address structure, that has 28 MB memory size, 4 MB cache size, and 32 Block size, what is the address for the fully associative methodology, direct mapped, and set associative (set size is 2 blocks)