MPCA Lab
Week 7

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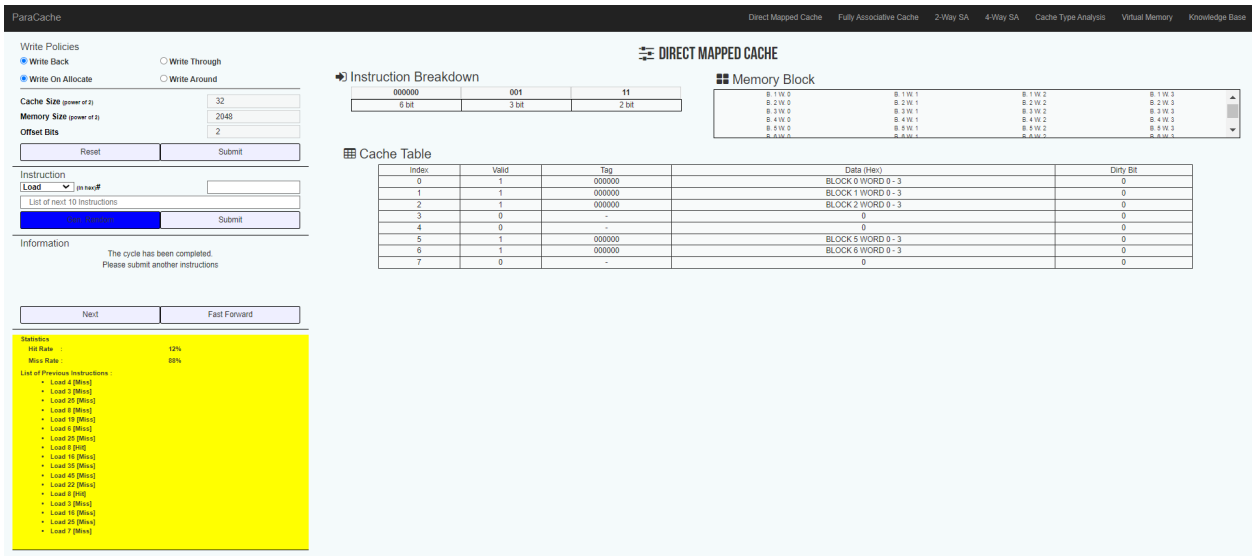
Section : L

Sem : 4

Roll : 42

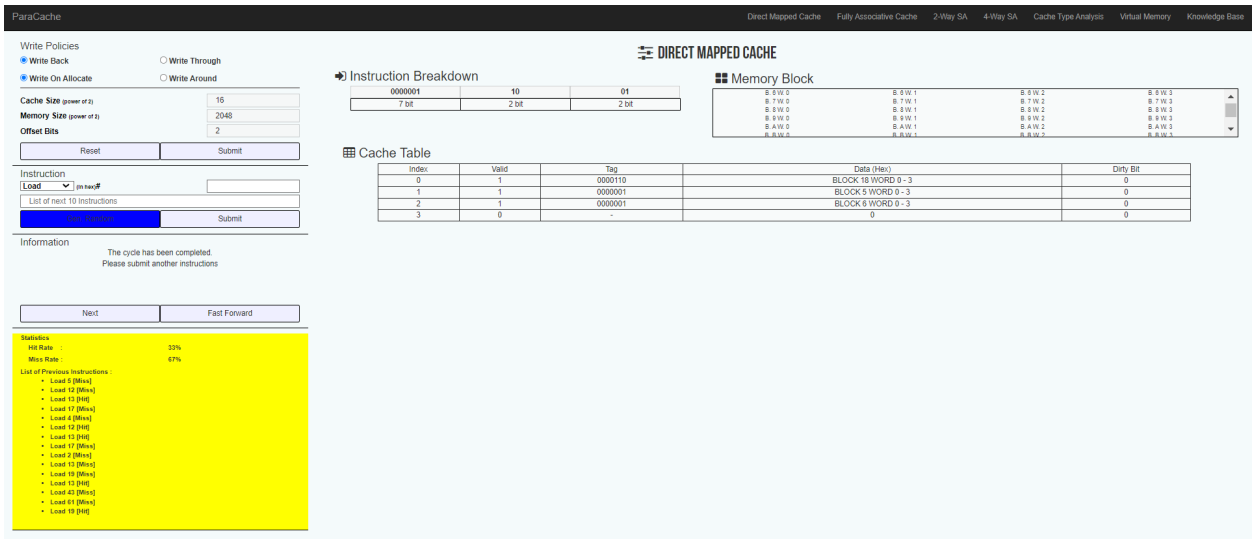
1. Consider a direct mapped cache with 8 cache blocks (0-7). If the memory block requests are in the order 4, 3, 25, 8, 19, 6, 25, 8, 16, 35, 45, 22, 8, 3, 16, 25, 7, which of the memory blocks will be present in the cache at the end of the sequence? Also, calculate the hit ratio and miss ratio.

Output :



2. Consider the cache has 4 blocks. For the memory references- 5,12, 13, 17, 4, 12, 13, 17, 2, 13, 19, 13, 43, 61, 19. What is the hit and miss ratio direct mapping.
Which of the memory blocks will be present in the cache at the end of the sequence?

Output :



3. Consider a main memory with 64-byte capacity and a cache memory of 8 bytes, initially empty. Consider the following addresses generated by CPU 0,3,4,1,2,5,7,6,0,3,11,1,5,15,9,4,0,4,3. List the data that is replaced in cache lines.

Output :