

The University of Alabama in Huntsville
ECE Department
CPE 431/531 – 01
Fall 2015
In Class Cache Exercise

Here is a series of address references given as hexadecimal word addresses: 1, 4, 8, 5, 20, 17, 19, 56, 209, 11, 4, 43, 5, 36, 8, 16, 59, 187. Assuming a direct mapped cache with four word blocks, a total size of 16 words that is initially empty, (a) label each reference in the list as a hit or a miss and (b) show the entire history of the cache

		Hit/Miss
0x1	0000_0000_0000_0001	
0x4	0000_0000_0000_0100	
0x8	0000_0000_0000_1000	
0x5	0000_0000_0000_0101	
0x20	0000_0000_0010_0000	
0x17	0000_0000_0001_0111	
0x19	0000_0000_0001_1001	
0x56	0000_0000_0101_0110	
0x209	0000_0010_0000_1001	
0x11	0000_0000_0001_0001	
0x4	0000_0000_0000_0100	
0x43	0000_0000_0100_0011	
0x5	0000_0000_0000_0101	
0x36	0000_0000_0011_0110	
0x8	0000_0000_0000_1000	
0x16	0000_0000_0001_0110	
0x59	0000_0000_0101_1001	
0x187	0000_0001_1000_0111	