In the name of God

Computer Architecture: Assignment #4

Due on Friday, March 4, 2016

Dr. Zarandi 10:45 am

Iman Tabrizian

Contents

Problem 1

Computer A:$T_{access} = t_1 * h_1 + (1 - h_1) * (t_1 + t_2) = 0.98 * 2 + 0.02 * 22 = 2.4ns$
Computer B:$T_{access} = t_1 * h_1 + (1 - h_1) * (t_1 + t_2) = 0.90 * 1.2 + 0.1 * 21.2 = 3.2ns$

Problem 2

(a)

0	1	...	63	64
x	x	x	x	x
x	✓	✓	✓	x
x	✓	✓	✓	x

hit rate = 64%

(b)

With LRU replacement policy you the hit rate will be the same as above because with the above policy also the least recently used element will be deleted. hit rate = 64%