CSE321 Quiz 3

Marks:10 Time: 20 min

ID:	Name:	Section:

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1. In a system with 64 bytes physical memory and page size of 4 bytes, page table of a process is given below:

Page	Frame
P0	4
P1	8
P2	13
P3	2
P4	9

Calculate the physical address for the logical addresses: **9, 2, 35, 10, 16.** **[5]**

2. Given the following sequence of memory accesses: **1, 2, 3, 4, 1, 2, 5, 1, 2, 3, 4, 5**, and a system with **3** page frames, simulate the behavior of the LRU and Optimal page replacement algorithm. Calculate the hit ratio and page fault ratio for each algorithm. **[5]**

1. page size = 4 bytes → offset = 2 bits

a) 9 = 1001

10 → page no

01 → offset

physical address = $(110101)_2 = 53$

b) 2 = 010

→ page# = 0 → frame# = 4

∴ physical address = $(10010)_2 = 18$

c) 35 = 1000 | 11 → offset

→ page# → invalid

d) 10 = 10 | 10 → offset

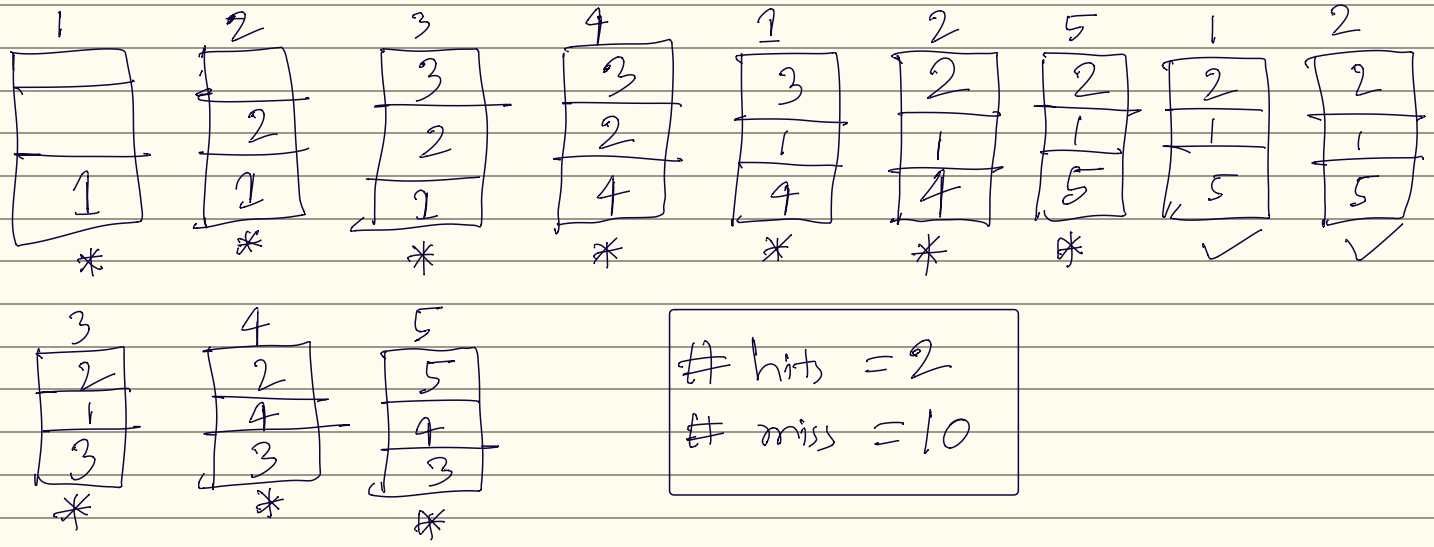
→ page#

P.A. = $(110110)_2 = 54$

e) 16 = 1000 | 00 → offset

∴ P.A. = $(100100)_2 = 36$

2. LRU



hits = 2

miss = 10

Optimal