Lab Manual 18/11/19

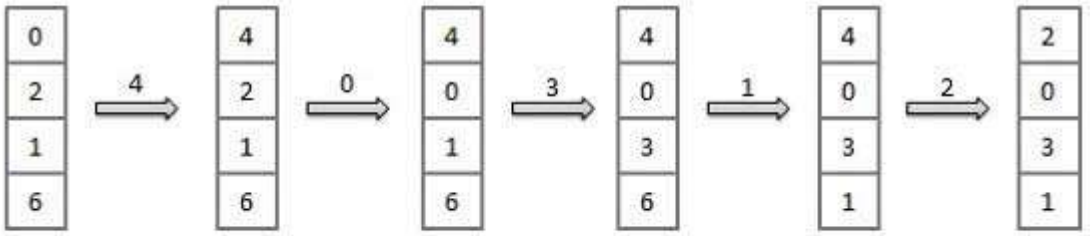
Page Replacement Algorithms:

FIFO:First in First Out

- Oldest page in main memory is the one which will be selected for replacement.
- Easy to implement, keep a list, replace pages from the tail and add new pages at the head.

Reference String : 0, 2, 1, 6, 4, 0, 1, 0, 3, 1, 2, 1

Misses : x x x x x x x x x



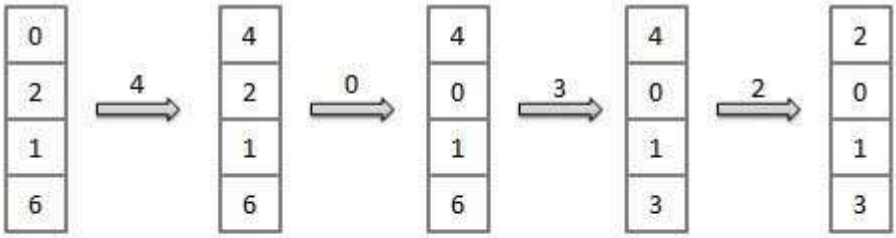
Fault Rate = 9 / 12 = 0.75

LRU:Least Recently used Algorithm

- Page which has not been used for the longest time in main memory is the one which will be selected for replacement.
- Easy to implement, keep a list, replace pages by looking back into time.

Reference String : 0, 2, 1, 6, 4, 0, 1, 0, 3, 1, 2, 1

Misses : x x x x x x x x x



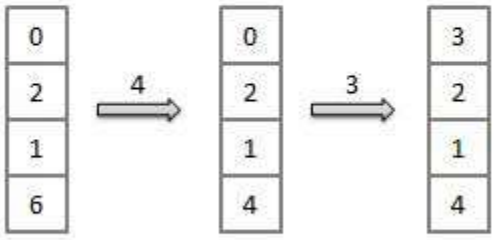
Fault Rate = 8 / 12 = 0.67

Optimal Page Algorithm:

- An optimal page-replacement algorithm has the lowest page-fault rate of all algorithms. An optimal page-replacement algorithm exists, and has been called OPT or MIN.
- Replace the page that will not be used for the longest period of time. Use the time when a page is to be used.

Reference String : 0, 2, 1, 6, 4, 0, 1, 0, 3, 1, 2, 1

Misses : x x x x x x



Fault Rate = 6 / 12 = 0.50

Q.1 Consider the following page reference string 1,2,3,4,2,1,5,6,2,1,2,3,7,6,3,2,1,2,3,6 .How many page faults would occur assuming three frames for FIFO,LRU and Optimal page replacement algorithms

	1	2	3	4	2	1	5	6	2	1	2	3	7	6	3	2	1	2	3	6
0																				
1																				
2																				