

(GC310): Applied Operating Systems

- 1) For the following reference string: 8,1,2,3,1,4,1,5,3,4,1,4
you have 3 frames (3 pages can be in memory at a time per process).
Find the number of page fault by applying :

1. The First-In-First-Out algorithm

8	1	2	3	1	4	1	5	3	4	1	4	Total PF
8	8	8	3		3	3	5	5	5	1		
	1	1	1		4	4	4	3	3	3		
		2	2		2	1	1	1	4	4		
PF	PF	PF	PF		PF	PF	PF	PF	PF	PF		10

2. Optimal Algorithm

8	1	2	3	1	4	1	5	3	4	1	4	Total PF
8	8	8	3		3		3			1		
	1	1	1		1		5			5		
		2	2		4		4			4		
PF	PF	PF	PF		PF		PF			PF		7

3. Least Recently Used (LRU) Algorithm

8	1	2	3	1	4	1	5	3	4	1	4	Total PF
8	8	8	3		3		5	5	5	1		
	1	1	1		1		1	1	4	4		
		2	2		4		4	3	3	3		
PF	PF	PF	PF		PF		PF	PF	PF	PF		9

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