7.5

Name: PRIONTO KUMAR CHOUDHURY   **ID:** 19301089   **Sec:** 03

[CO6] Consider a computer with a main memory of _size 4_ and a page reference string of 7 pages: **[6, 7, 5, 1, 3, 6, 3, 0, 4, 0, 0, 3]**. The page reference string represents the order in which the pages are accessed by a program. Apply LRU algorithm to simulate the page replacements that occur when the main memory can hold at most 4 pages at a time. Record the number of page faults that occur. **[5 Marks]**

6	7	5	1	3	6	3	0	4	0	0	3
6	6	6	6	3	3	3	3	3	3	3	3
	7	7	7	7	6		6	6	6	6	6
		5	5	5	5	2	0	0	0	0	0
			1	1	1	1	+	4	4	4	4
*	*	*	*	*	*	hit	*	*	hit	hit	hit

$$hit = 4$$

fault = 8

fault Ratio = $\frac{8}{12} \times 100\%$

hit Ratio = $\frac{4}{12} \times 100\%$

= 66.667%

= 33.33%

[CO6] Consider a system with 120MB of available memory and a list of 10 processes with the following memory requirements. Using a variable-sized partitioning approach, allocate memory to these processes using the First Fit, Best Fit, and Worst Fit algorithms and compare the results. **Fill in the blanks** with information of the **original block number** where each process has been assigned to. Write down **'N/A'** if you are unable to allocate any location. Finally mention the most suitable algorithm in this scenario. **[15 Marks]**

	Memory	
1	11 MB	
2	30 MB	→ N/A
3	45 MB	→ N/A
4	34 MB	→ N/A

| Processes	Size	Frist fit	Best fit	Worst fit
P1	10 MB			
P2	10 MB			
P3	5 MB			
P4	5 MB			
P5	5 MB			
P6	15 MB	1No 4 MB	1No 4MB	
P7	25 MB			1No 14 NA
P8	10 MB			
P9	20 MB			NA
P10	15 MB	NA		NA

Not Applicable   Not Applicable   Not Applicable.

No one is suitable algorithm for this scenario. Because we can not allocate (2, 3, 4) which (30, 45, 34).

Bonus Task: Make a unique meme using your own creativity revalant to CSE321 course. **[2.5 Marks]**

Operating System what we think
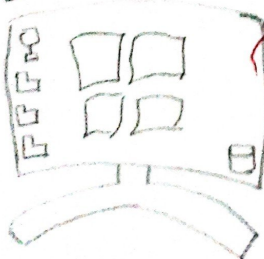
what Actually study in Operating System
• Students we are going to lean
→ Process synchonization
→ memory allocation.
→ Zombie state.
and many More.