

FIFO

FIRST IN FIRST OUT ALGORITHM FOR
PAGE REPLACEMENT



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- The Oldest page in the physical memory is the one selected for replacement.
- Easy to implement
- Keep a list
- On a page Fault, the page at the head is removed and the new page is added to the tail of the list.



What we Required to Perform an Algorithm

Pages

- Page is just like an operation/job. Which is allocating in Frames so whenever a page is required give the page to OS.

Frames

- The frame is for storing the page.



LOGIC



Step 1

Create a list for storing the pages. Create Frames for storing pages at a time. And traverse pages 's list



Step 2

If the called page is not available in Frames and Frames is not full so add the page is Frames list.

Step 3

If the called page is not available in Frames and Frames is full so Delete the page which is added first as compared to another.

Pages = [0,2,1,6,4,0,1,0,3,1,2,1]

No Of Frames = 4

0	2	3	4	5	6	7	8	9	10	11	12
			6	6	6	6	6	6	1	1	1
		1	1	1	1	1	1	3	3	3	3
	2	0	2	2	0	0	0	0	0	0	0
0	0	0	0	4	4	4	4	4	4	2	2
★	★	★	★	★	★			★	★	★	

- The red-colored number is not available in Frames and added as a Page Fault
- The blue-colored number is available in Frames and considered as Page Hit

★ Denotes Page Fault



- First 4 Pages are not available in Frames so considered as a Page Fault. (0 -> 4)
- Then the required page is 4 which is not available in Frames so delete the page which occurred first among them which is 0. (Page Fault)
- Now the required page is 0 and it is not available in Frames so delete the page which occurred first among them which is 2. (Page Fault)
- Now the required page is 1 and is available in Frames so consider it as a Page Hit.
- Now the required page is 0 and is available in Frames so consider it as a Page Hit.
- Now the required page is 3 and it is not available in Frames so delete the page which occurred first among them which is 1. (Page Fault)
- Now the required page is 1 and it is not available in Frames so delete the page 6. (Page Fault)
- Now the required page is 2 and it is not available in Frames so delete the page 4. (Page Fault)
- Now the required page is 1 and is available in Frames so consider it as a Page Hit.



Conclusion

So,

Page hits = 3

Page Faults = 9

Hit Ratio = $3/(3+9) = 0.25$

Fault Ratio = $9/(3+9) = 0.75$