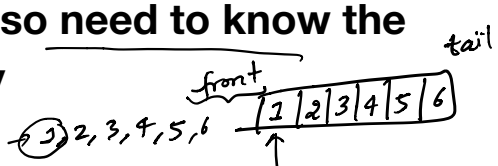
FIFO PAGE REPLACEMENT ALGORITHM

- How to find out the victim frame?
- Use page-replacement algorithms
- They are multiple page-replacements algorithms available. Which one to select?
- In general, select the algorithm which causes lowest page-fault rates
- We will evaluate an algorithm by running it on a string of page references and compute the page faults
- To determine the page faults, we also need to know the number of frames available in memory



- In FIFO, the oldest page is replaced - first in, first out
- Use a FIFO queue to maintain list of pages.
  - Replace the page that is at the head of queue
  - Insert the new pages brought into main memory at the tail of the queue
- If number of frames are increased, you would normally expect the number of page fault to decrease.
- Using FIFO algorithm, it's not always true. This anomaly is called Belady's anomaly

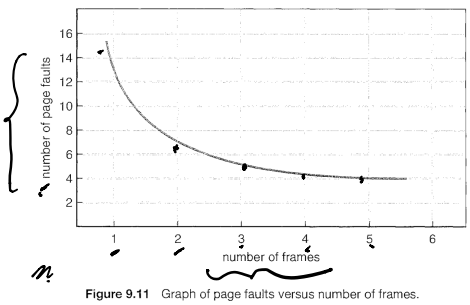


Figure 9.11 Graph of page faults versus number of frames.

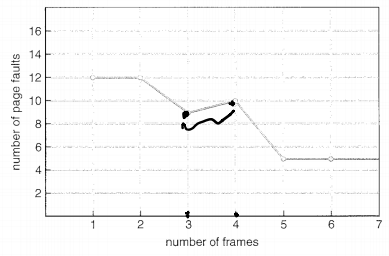


Figure 9.13 Page-fault curve for FIFO replacement on a reference string.

7	0	1	2	0	3	0	4	2	3	0	3	2	1	2	0	1	7	0	1	pages
																				frame 0
																				frame 1
																				frame 2

7 → 0 → 1

$\frac{15}{20} \times 100 = 75\%$