

## OPTIMAL PAGE REPLACEMENT ALGORITHM

- Finding an algorithm which has the lowest page-fault rates?
- Replace the page that will not be used for longest period of time?
- What if all the pages are not going to be used in the future again? Use FIFO for page replacement or replace any page.
- Similar to SJF (burst time), this algorithm requires looking into the future (page references).
- Therefore, it is not used in any is and just used for comparing algorithms.
- Doesn't suffer from Belady's anomaly.

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

$$\begin{aligned}
 & 20 - 11 = 9 \\
 & \frac{9}{20} \times 100 = 45\% \\
 & \text{FIFO} \quad \text{LRV} \\
 & 15 \quad 75\%
 \end{aligned}$$