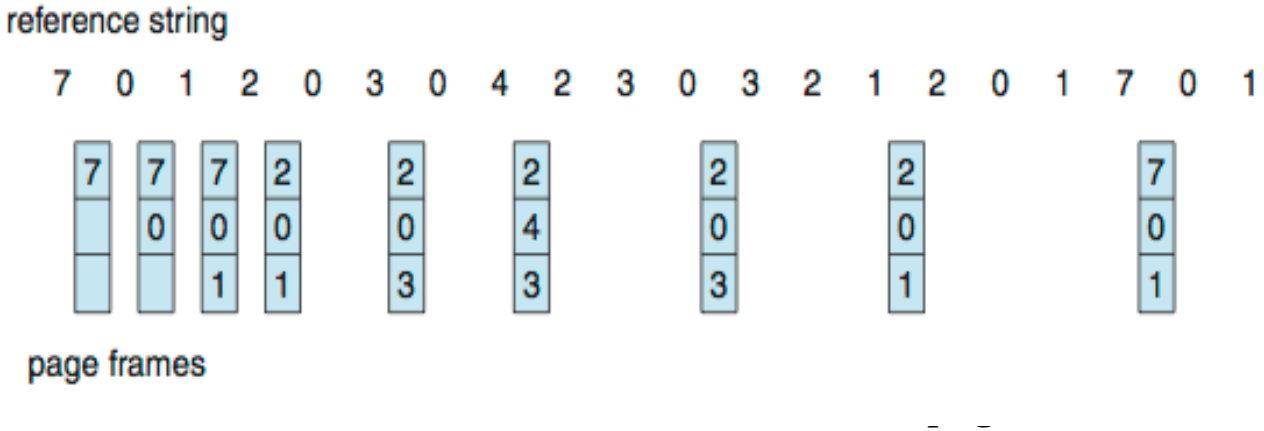
Optimal Page Replacement

Optimal Algorithm

- The algorithm that has the lowest page-fault rate of all algorithms.
- Never suffer from Belady's anomaly.
- Such an algorithm does exist and has been called OPT or MIN.
  - ***Replace the page that will not be used for the longest period of time.***

Optimal Algorithm - Example

- Reference string: **7,0,1,2,0,3,0,4,2,3,0,3,0,3,2,1,2,0,1,7,0,1**
- 3 frames (3 pages can be in memory at a time per process)



- 9 page faults are the optimal for this example

Optimal Replacement

- Possible only we know the future reference to pages
- Not practical.
- Used for measuring how well the algorithms performs.