Second Chance implementation
Version 1 : FIFO-like algorithm

➡ use the accessed bit supported by most hardware

Data structure

linked list of pages with two pointers head and tail

Code

- on hit, set the corresponding page's accessed bit to 1
- on miss

  1. while head's accessed bit is 1, set head's accessed bit to 0 and move it to tail
  2. else head's accessed bit is 0, swap the head an move the new page to tail

◉ Good performances but requires moving pages on every miss

Second Chance implementation
Version 2 : Clock algorithm

➡ use the accessed bit supported by most hardware

Data structure
circular linked list of pages (clock) with one pointer (hand)

Code

- on hit, set the corresponding page's accessed bit to 1
- on miss
  1. while hand's accessed bit is 1, set hand's accessed bit to 0 and move to next page
  2. else if hand's accessed bit is 0, swap the hand's page with the new page and an move next page

◉ Better performances than fifo-like second chance (no rotation on miss)