Second Chance

Access	Hit/Miss	Evict	P0	P1	P2	P3
1	Miss		1			
2	Miss		1	2		
3	Miss		1	2	3	
4	Miss		1	2	3	4
1	Hit		1*	2	3	4
2	Hit		1*	2*	3	4
5	Miss	3	1	2	5	4
1	Hit		1*	2	5	4
2	Hit		1*	2*	5	4
3	Miss	4	1*	2*	5	3
4	Miss	5	1	2	4	3
5	Miss	3	1	2	4	5

- Total 8 misses

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