CSSE 332 – Operating Systems
Rose-Hulman Institute of Technology
Computer Science and Software Engineering Department
Page Replacement Policies

Name:⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ Box:⎯⎯⎯⎯⎯⎯⎯

Fill in each table, using the given page replacement policy.

- Assume the process has a fixed resident-set size of 4 frames which are initially empty.

- The top row of the table gives the page address stream.

- Each column gives the pages that are present in the frames after the page reference for that column, and whether a page fault was generated by that reference.

- A page faults occurs whenever a referenced page is not in a memory frame.

Problem 1 (5 points) **FIFO** (first-in, first-out)

	4	2	4	5	1	88	77	88	3	4
Frame 1										
Frame 2										
Frame 3										
Frame 4										
Page fault?										

Problem 2 (5 points) **LRU** (least recently used)

	4	2	4	5	1	88	77	88	3	4
Frame 1										
Frame 2										
Frame 3										
Frame 4										
Page fault?										

Problem 3 (5 points) **Optimal** assuming the stream continues with:
4 88 2 5 6 6 5 4 2 2 . . .

	4	2	4	5	1	88	77	88	3	4
Frame 1										
Frame 2										
Frame 3										
Frame 4										
Page fault?										

Problem 4 (5 points) **Clock**. Use an "*" to indicate that the referenced bit is set and show the next frame pointer, as we did in class.

	4	2	4	5	1	88	77	88	3	4
Frame 1										
Frame 2										
Frame 3										
Frame 4										
Page fault?										