CS 433 Assignment 5

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List of files:

main.cpp → *tests simulation implementation and the paging algorithms*

simulation.cpp – source file → *simulation implementation containing paging algorithms*
simulation.h – header file

makefile – two important commands:
        make all (compiles program and creates executable)
        make clean (removes object files)

sim – program executable

Program Instructions: Run the program by typing in the following
        ./sim <x> <y>
        x: page size
        y: memory size

Analysis:

page size: 256 memory size: 1024			
	# of page faults	# of flushes	# of page replacements	elapsed time (ms)
Random	4967368	1999946	4967368	871
LRU	4967106	1999946	4967106	749
FIFO	4967027	1999946	4967027	756

page size: 1024 memory size: 16384			
	# of page faults	# of flushes	# of page replacements	elapsed time (ms)
Random	4966723	1999946	4966723	809
LRU	4967106	1999946	4967106	788
FIFO	4966936	1999946	4966936	773

page size: 4096 memory size: 32768			
	# of page faults	# of flushes	# of page replacements	elapsed time (ms)
Random	4966715	1999946	4966715	795
LRU	4967106	1999946	4967106	751

FIFO	4966912	1999946	4966912	776

	page size: 8192		memory size: 65536	
	# of page faults	# of flushes	# of page replacements	elapsed time (ms)
Random	4966715	1999946	4966715	849
LRU	4967106	1999946	4967106	757
FIFO	4966912	1999946	4966912	764

Analysis conclusion:

After analyzing the data collected, I have come to the conclusion that the LRU algorithm is the best paging algorithm out of the 3 total algorithms used.