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CS1550 – Project 3 – VMSIM

My program is split into 3 main classes,

Vmsim.java sets everything up and reads in the file.

Memory.java adds pages, updates the PageTable, and evicts pages.

PageTable.java is an array of PageTableEntries that contain all the page info.

The other 4 classes are the algorithms that simply return which frame to evict to the memory class.

OPT gives me giant page fault numbers. I can't figure out what is wrong with it but it is very close. I checked and the algorithm itself always chooses the right frame to remove like it should. I suspect I am doing something outside of the OPT class that is causing the problem but I have no idea what. I am reasonably sure that the algorithm itself works fine.

Clock and random are both relatively close on page faults. Obviously more frames gives less page faults.

NRU has less page faults the smaller the refresh interval gets, which is not correct. It worked before I started working on OPT and now it doesn't and I cannot figure out why. The code is there and makes sense. I did something outside of the algorithms code which screwed everything up and now I am out of time.

The data for NRU is with a refresh rate of 10, but the data is useless really.

OPT isn't included since it is nowhere close.

The best algorithm to use would probably be clock. Anything is better than random. NRU can be very good with the correct refresh rate. But that refresh rate might be different for different systems. So clock would be the most reliable, and there are ways of making clock better. NRU would be second.

