

CS543 – Operating Systems

Winter 2014 - 2015

Professor Mike Kain

Homework # 4 – Virtual Memory Manager

Due Date: Monday, March 9th, 2015 at 11:59pm EST

Please do the entire “Programming Project” at the end of Chapter 9 “Designing a Virtual Memory Manager”, including the “modifications” section. Please use the LRU algorithm for any page replacement. Please also turn in the following enhancements and questions (and turn them all in) in a zip or tarball to Drexel Learn.

Additional functionality required:

- Handle a read/write indication (this requires you to add a dirty bit to the pages and TLB and denote a copy back to the swap when the page is replaced in memory). An updated file addresses2.txt is available to test this functionality.

Additional questions to be answered:

1. How would you denote ownership of pages? Do you care?
2. Do you have to write back to the swap or can you write directly to the disk?

Please turn in:

- Well-commented source code
- A README denoting which files contain what content.
- Statistics for all three runs (original, modifications, and additional functionality)

This is worth 10% of your final grade. Appearance does count. All submissions should be made through Drexel Learn.

Please include the first letter of your first name and your last name as the name of your submission (e.g. mkain_hw4.zip). A point sheet will be posted to Drexel Learn before the due date of the assignment.