CS3204 Operating Systems Arthur

Programming Assignment 4
Due: 12/06/05

You are to simulate 4 page replacement strategies: FIFO, LRU, LRU Approximation and LFU. The maximum page number used is 25. You will keep a PMT and MBT. You will run each algorithm twice, the first time with an eight (8) page MBT and the second time with a fifteen (15) page MBT. You will read page references from the file "pageref". The pageref file and sample output can be downloaded from arthur.cs.vt.edu; they are in the PGM4.tar file in ftp/CS3204.

For the LFU algorithm the reference count is the number of times a page has been referenced over its CURRENT stay in memory, NOT over the lifetime of the program. Resolve ties by selecting the FIRST lowest count in a top-to-bottom search of the MBT.

For each run of each algorithm you will print out (1) the MBT after the first 50 page references have been made and after the complete set of page references, and (2) the number of page faults and the page fault rate after the first 50 page references and after the complete set of page references. You will turn in a printout of your program and its output. You will also ftp a “tar” conforming to current submission requirements. Attend class for additional requirements.