Fall ’14 CIS 314 Assignment 5 – 120/100 points – Due Friday, 12/5, 11:59 PM

This assignment will involve solving problems related to caching. For ease of submission, please submit a .zip file containing a single solution document for non-coding exercises (.txt, .doc, or .pdf) and individual source files for coding exercises (see naming conventions below). Your code and answers need to be documented to the point that the graders can understand your thought process. Problems will be graded based on work shown, not your final answer; full credit will not be awarded if no work is shown!


4. [+20] (Extra credit). Write a Y86 program to recursively calculate numbers in the Fibonacci sequence. Your program should define a function "RecFib" that takes an integer argument n and returns the nth Fibonacci number. Your function should calculate this number recursively, NOT iteratively. Your program should have a main section that calls RecFib(2) and RecFib(10) (because RecFib(15) appears to be too much work for yis). The program should end with the results of these calls stored in %ebx and %eax, respectively. Make sure to follow conventions for your function, with respect to passing parameters and returning values, as well as how you handle the %ebp and %esp. Additionally, you should follow x86 caller- vs. callee saved conventions (see Sec. 3.7.3). Name your source file recfib.ys. Hint: you will need to allocate additional stack space for this to work; an initial address of 0x500 seems to do the trick.

Upload .zip file to Blackboard (see Assignments section for submission link).