University of Pittsburgh
Department of Computer Science

CS 2001 – Research Topics in Computer Science

(Due on Thursday, December 9)

Solve #1 only. #2 is given for your fun (is it fun at all?)

1. Nowadays every PC or server has some memory hierarchy in it. That is, it has cache memory, possibly of multiple levels. Write a short C program to figure out the size of the cache(s) on a machine of your choice. Build a simple model based on your program and correlate with your results. You can consult available information on the processor of your choice.

SUBMIT a report (on a paper) with the C source code with comments. Describe the rationale and procedure of your experiments and results. Specify in the report which machine (and which microprocessor) you used. Your experiments should cover all the cache memory layers in the system. At level 1, you can consider only data cache.

2. Can you again write a simple program to figure out the set-associativity of the cache(s)?

DO NOT FORGET TO PUT YOUR NAME.
SUBMIT DIRECTLY TO SANGYEUN CHO’S MAILBOX:
    Mailbox 276, 5th floor, SENNOTT SQUARE