Midterm Contents & Format

CSCI-UA.0201-00X
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Contents

The exam will test your ability to apply the concepts introduced thus far in the course. Your depth of understanding of each concept will benefit from review of lecture code, lecture slides, homeworks, labs, recitation exercises as well as reading of the texts. However, nothing appearing in the textbook that was not mentioned in class will be on the exam.

Moreover, the exam will cover everything we have seen so far in the course, including:
- C programming (pointers, structs, functions, arrays, dynamic memory allocation)
- Bit-level manipulation (bitwise operators, boolean algebra, bit sets)
- Number systems (binary, hexadecimal)
- Integer encoding (unsigned, two's complement, etc.)
- Floating point encoding (IEEE 754)

- Machine-level programming (material introduced on plus March 2nd through arithemtic operations. e.g. CSPP 3.1-3.5)

Format

The exam will emphasize reading and writing code as well as problem solving using course concepts.

Fact-oriented questions will represent very little of the exam, if at all. (Ex. What is the name of the stack pointer register in X86-64?). This is why you are allowed the 'cheat sheet'. **Moreover, a cheat sheet will be allowed on this exam**. You can bring 1 page (8.5 by 11, two-sided) of notes. It must be hand-written. It can contain whatever you think would be useful. You will be handing it with your exam.

The questions types will roughly be as follows....
- <u>Code Writing</u> (Ex. Implement a C function that flips the 4th bit of some integer parameter.)
- <u>Code Reading</u> (Ex. Read this C or assembly code and determine its function...)
- <u>Multiple Choice</u> (Ex. Which of the following is the decimal value for two's complement bit pattern 10101001)
- <u>True/False</u> (Ex. The bias for normalized floating point numbers with 3 bits of exp is 3)