Welcome!

Today:
➔ Midterm 2 Review
➔ Assignment 2 Review

Logistics:
➔ Midterm 2 scores posted

Fun fact...

The Student Safety and Security Committee, a part of Student Government, recently funded $10,000 to permanently install three picnic tables outside Sitterson Hall!

More info:
https://www.cs.unc.edu/~jbakita/sssc/tables.html
This was a challenging test

Note that these slides have been updated since class to reflect the correction to Q. 1.1.2, and the addition of one more test from Thursday morning.
Very happy with the scores on 1.3.2 and 1.4.2—these were unexpectedly good.

Glad to see that folks have paid attention to what makes fast programs, and how to do basic debugging in gdb!
**Midterm 2 Review**

**Statistics**

**Raw Scores:**
- Best: 22.0/22 (100%)
- Worst: 4.4/22 (20%)
- Avg (mean): 15.7/22 (71%)

**Top missed questions:**
1. Q. 1.4.4  (93%)
2. Q. 1.2.5  (66%)
3. Q. 1.2.6  (65%)
4. Q. 1.2.8  (55%)
5. Q. 1.1.1  (51%)
6. Q. 1.1.2  (47%)
7. Q. 1.1.7  (44%)

Histogram of Midterm 2 Grades

Not quite as good as Midterm 1's 86% average
Q. 1.4.4: "Invalid read of size 4"

Correct:  6.6%
Partial:  50.7%
Negative: 40.8%
Blank:   2.0%
Q. 1.2.5: Results of a page fault

Correct: 34.2%
Partial: 65.1%
Negative: 0.0%
Blank: 0.7%

Partial Credit Breakdown:
-0% Selected C
80% Selected B
72% Selected C
64% Selected D
Q. 1.2.6: fwrite() implications

Correct: 35.5%
Partial: 50.0%
Negative: 9.2%
Blank: 5.3%

Partial Credit Breakdown:
95% Selected A
81% Selected B
45% Selected C
52% Selected D
Q. 1.2.8: Filling filesystem blocks

Correct: 44.7%
Incorrect: 53.9%
Blank: 1.3%
Q. 1.1.1: Using a function pointer

Correct: 48.7%
Incorrect: 50.7%
Blank: 0.7%
Q. 1.1.2: Pointer math

Correct: 52.6%
Incorrect: 46.7%
Blank: 0.7%

Code available at https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l19/deref.c
Q. 1.1.7: Using static

Correct: 55.9%
Incorrect: 44.1%
Blank: 0.0%

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l19/static.c
I'll curve, likely at least giving everyone back points for Q. 1.4.4.

AND

Your grade on the Final Exam can now replace the lower of your two midterm grades.
Assignment 2 Solution

Let's have some fun with it...
Let's take a look at my solution...

**Essentials**
- fread() directly into the bytes of a TetrisGameState
- Open file as both readable and writable
- Check library functions for error codes
- Use stderr for error messages
- Parse numeric input into a larger type, so that we can verify it's in range
- Reset file index with fseek() before fwrite()

**Fun**
- #define the filename to avoid duplication
- Use a goto to avoid duplicated error lines
- Rely on the fact that a negative number, viewed as an unsigned number, is large
- Use a switch rather than repeated if statements
- Skip expensive strcmp() calls, and just check the first character

See the other screen for my code.
Questions?

Assignment 5 partly written, will be posted later today.

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