Lecture 20: November 8, 2019

Reading: Handout, *The Dynamic Debugger gdb*   **Assignments:** Homework #3, due November 8, 2019

1. Greetings and felicitations!

   (a) Homework

       i. Homework 1 grades are out

       ii. Homework 3: submit through Gradescope

       iii. Homework 2 is now reopened until Wednesday so you can fix things that you lost points for on homework 1

   (b) In discussion section, ask questions of the TAs — they are there to help! And when they ask something, try to answer.

   (c) Some errors by the TAs and me are because we're human; others are deliberate, to see who will spot it; this tells us if we need to cover something more thoroughly

   (d) If you get a message like "Attempted stack smashing", look at your local arrays; it probably means you overflowed one of them

2. Static debugging

   (a) How to narrow down where the problem is using $printf$ [*sample1.c*, *sample2.c*]

   (b) Handle multiple bugs [*sample3.c*]

3. Dynamic debugging with *gdb* [*sample1.c*, *sample2.c*, *sample3.c*, *nfact2.c*]

   (a) Bringing a program into *gdb*

   (b) Breakpoints, conditions, commands

   (c) Stepping through it

   (d) Printing values

   (e) Watchpoints