



Section 14

x86 Control Flow

CS 107A, Autumn 2021
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Don't forget to start recording



Special Guests Today



Unix Tip Spotlight

- Procrastinating via `emacs`
 - M-X doctor
 - Talk to a virtual psychotherapist
 - F10 → Tools → Games
 - Exactly what it sounds like
- “`emacs` is a great operating system, it just lacks a good text editor”



Announcements

- 2nd round of 1:1s: <https://calendly.com/adbenson/cs107a-1-1>
- Free extra late day from CS 107
<https://edstem.org/us/courses/14319/discussion/799995>
- Today is a short section due to the feedback session at 4:40pm - please give feedback to help me grow as a teacher!



Mid-quarter Feedback Summary

- I shouldn't come late to class 😅
- Most students think the amount of content in-class is about right, or maybe not even enough (due to questions being asked)
- Somewhat favorable sentiment (but less than other categories) towards section exercises
- Favorable sentiment towards office hours
- Several very kind notes, thank you!

My action items:

- I'll put more effort to avoid coming late :)
- My guess is that one impact on the sentiment towards section exercises is that we often run out of time - I will work on balancing that for future sections



Bird's Eye View

Day	Week 7 Wednesday	Thursday	Friday	Week 8 Monday	Tuesday	Wednesday	Thursday	Friday
CS 107A		Section: x86 Control Flow			Section: x86 Function Calls		Section: MQA Review (?) / assign5 OH	
CS 107	Lecture: x86 Runtime Stack		No Lecture	No Lecture		No Lab		Lecture: Managing the Heap
CS 107 assignments	assign4 due, assign5 released							assign5 due next Monday



Agenda

- assign5 Tour
- Review of x86 resources
- nanobomb1 Walkthrough
- nanobomb2 Exercise



Section 14 Extra Code Exercises

```
git clone /afs/ir/class/cs107a/WWW/git/section14
```




assign5 Tour



DO NOT ****ING RUN THE ~~BOMB~~ VAULT

Watch the walkthrough if you want
to know what happens when you do so



Data (11 Spr21 Students) and Advice from last spring

- ATM Part a: 1.77 hours
- ATM Part b: 3.09 hours
- ATM Part c: 4.09 hours
- Dataset Aggregation: 1.16 hours
- Secure Vault Level 1: 1.43 hours
- Secure Vault Level 2: 4.32 hours
- Secure Vault Level 3: 6.64 hours
- Secure Vault Level 4: 9.95 hours
- Note: Data from last winter is significantly less time 🙌
- Advice from a spring student: “Start with vault first. I did this and am so glad I did. Most people will start with ATM, so you will be able to get help in office hours. Near the deadline, it will be difficult to get help with vault. Also, you don’t want to do vault when you are stressed and tired near the deadline; save ATM for that.”



nanobomb1 Walkthrough



nanobomb2 Exercise