CSCI-4260/MATH-4150: Graph Theory

Course Overview

Prof. Slota

Spring 2026

Welcome to Graph Theory!

- About me
- About the course
- General FAQs

Course Instructor: (Prof.) Slota

How I looked 10 years ago. Also, the last time I've ever worn a tie.

- 10th year at RPI, 9th time teaching Graph Theory
  - ~~I think I no longer have an excuse for doing a bad job~~
  - Note: I took last year off from teaching
- Office hours: M/Th 2-3pm in 317 Lally or by appointment
- Research interests: parallel graph algorithms, general graph analytics, high performance and scientific computing
  - Usually more "applied" than "theory" but here I am anyways
  - More applied course: Graph Mining
- Other interests: climbing, skiing, general sending of gnar

Course TA and Mentor

TA: Samantha Sussman-Randall

- `sussms@rpi.edu`
- Office Hours: Tuesday 4:30-5:30pm, Friday 11:30am-12:30pm in 118 AE

Mentor: Anthony Fabius

- `fabiua@rpi.edu`
- Office Hours: 1-3pm in AE 118

See website for up-to-date office hours, contact info, etc.

Generally: Contact either mentor or TA for help with assignments. Contact TA with grading concerns for homeworks. Contact mentor with grading concerns for WPs.

About the course

~~*"Dull, but easy."*~~

"Slota is like, super chill. So chill, bruh." – Reddit

"Too much theory." – CS majors

"Too many algorithms." – Math majors

"I've made a terrible mistake." – Engineering majors

About the course

(read syllabus for more detailed information)

- The course is a combination of pure graph theory and graph algorithms
  - Enough theory to annoy CS majors. Enough algorithms to annoy math majors.
- Website:
  - `https://www.cs.rpi.edu/šlotag/classes/SP26t/index.html`
  - Or: `https://gmslota.com` → Teaching → Graph Theory S26
  - Or: Submitty → Course Home
- Textbook:
  - Introduction to Graph Theory - 2nd Edition
    - Douglas B. West
  - Available in bookstore, Amazon, "etc."
- Schedule:
  - Please see website for up-to-date info

Your grade

(where it will come from)

- 40% – Homeworks: bi-weekly problem sets, covering the upcoming material
  - Submit via Submitty – usually given 2 weeks to complete
- 10% – Weekly Problems (WPs): covering the prior week's material
  - Time given most Thursdays for working on WP in class
  - Open everything: book, internet, neighbor, etc.
  - Will usually be collected via Submitty by Midnight on Thursday
- Two exams worth remaining 50% of grade
  - Midterm in last class before Spring break (20%)
  - Final during finals week (30%)

Late submission and Excuse Policy

- 7 total "sick days" allowed to be used through the semester
- 2 max can be used on each homework and WP assignment
- Submissions beyond 2 days will not be accepted without prior approval
  - You need to contact me before the deadline - extensions requested after the deadline generally won't be granted
  - Generally: To be able to go over homeworks in class and release solutions, I won't be particularly flexible
- Per the discretion of the instructor, missed assignment and midterm grades can be replaced with your final exam grade under certain circumstances
  - E.g., for longer-term illnesses or absences

Grading Methology

Generally, grading graph theoretic proofs consistently is difficult, given the numerous ways to approach a problem. The below rubric is created to simplify grading and make it as fair as possible, and it will be applied to all proofs in the class.

- **4 pts:** The proof is fully correct. No identifiable logical gaps, incorrect statements, or other inconsistencies.
- **3 pts:** The proof is nearly correct, but has at most 1 minor flaw, logical gap, inconsistency, etc.
- **2 pts:** The general approach of the proof is correct, but has several flaws, is not complete, or has some substantial error. *If you are an average student, you can expect most of your proofs on exams to be awarded 2 pts.*
- **1 pt:** There is at least one correct statement in some attempted proof.
- **0 pts:** There is little to no effort made for the proof. No correct statements or other redeeming qualities.

FAQs

The class is full. Can you do a registration override?

- Yes. Email me with a request if you haven't already.

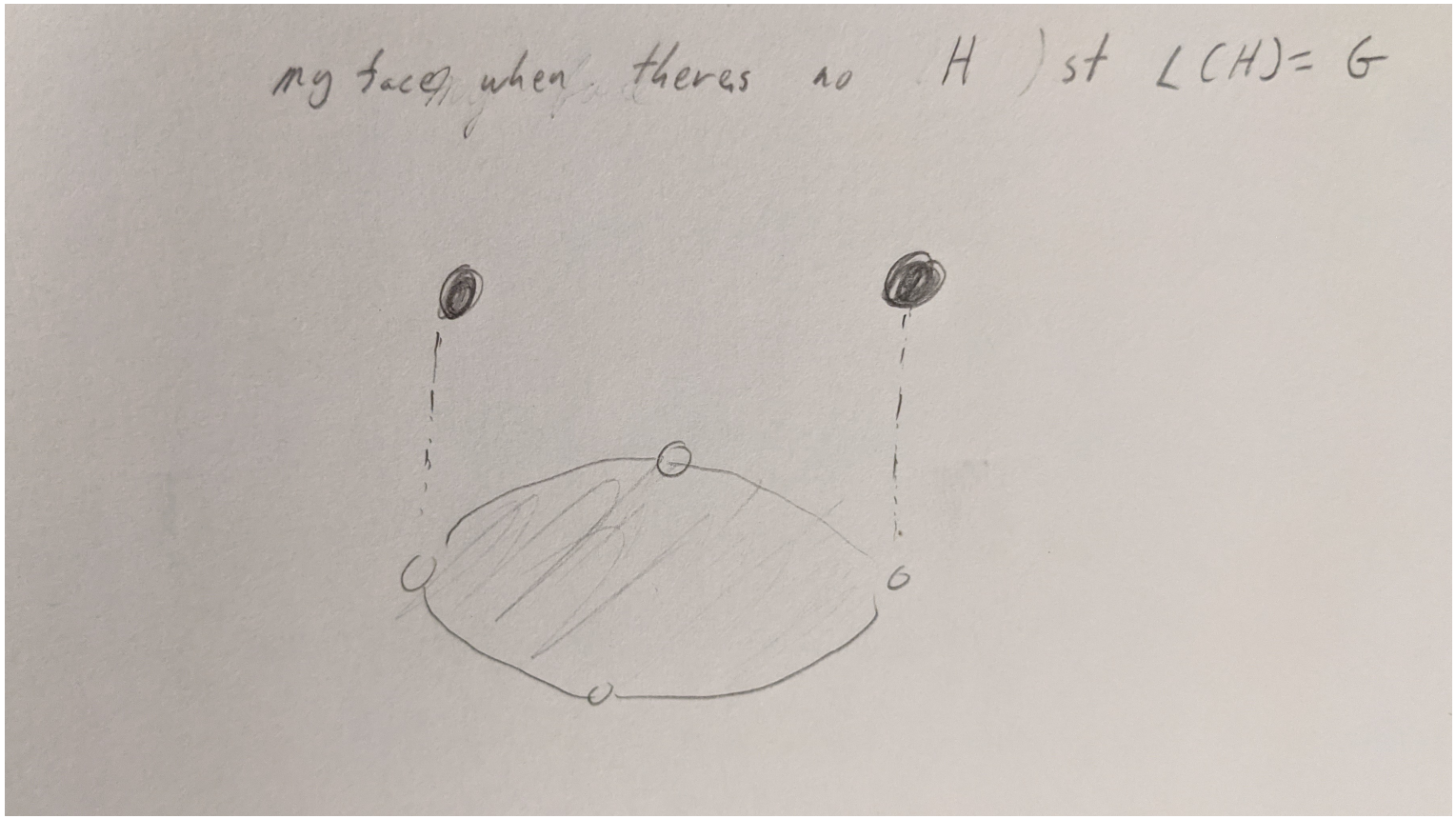
I missed [assignment] due to [reason], can I turn it in now?

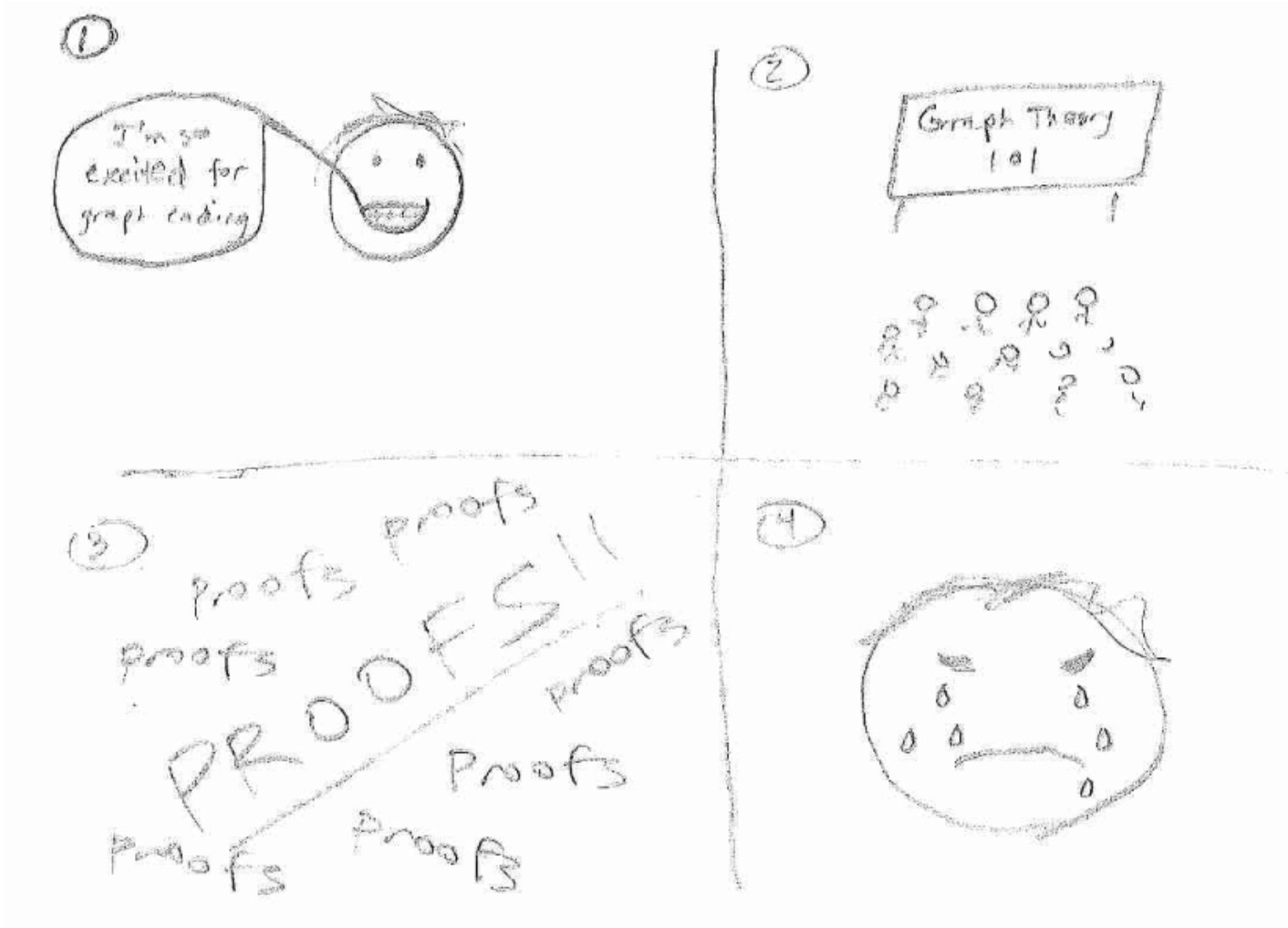
- Maybe. This depends on how late this request is being made relative to the deadline, what the [reason] is, etc. See the excuse policy in these slides and syllabus.

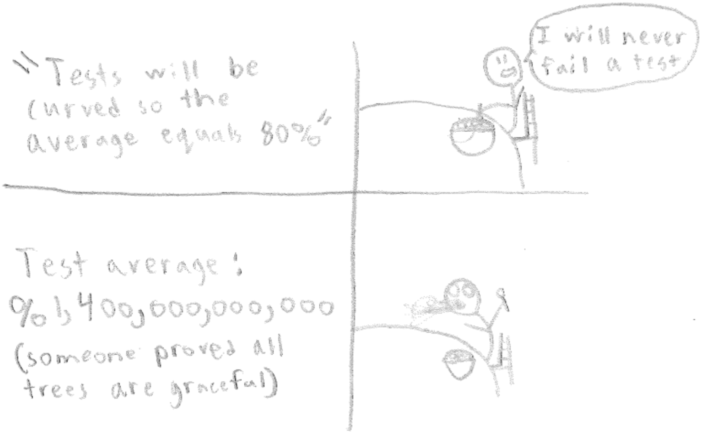
How are we doing office hours?

- TAs and mentors: In person in AE 118.
- Myself: In person in 317 Lally at 2pm on Monday/Thursday.
- Virtual or in person meetings outside these times can be scheduled.

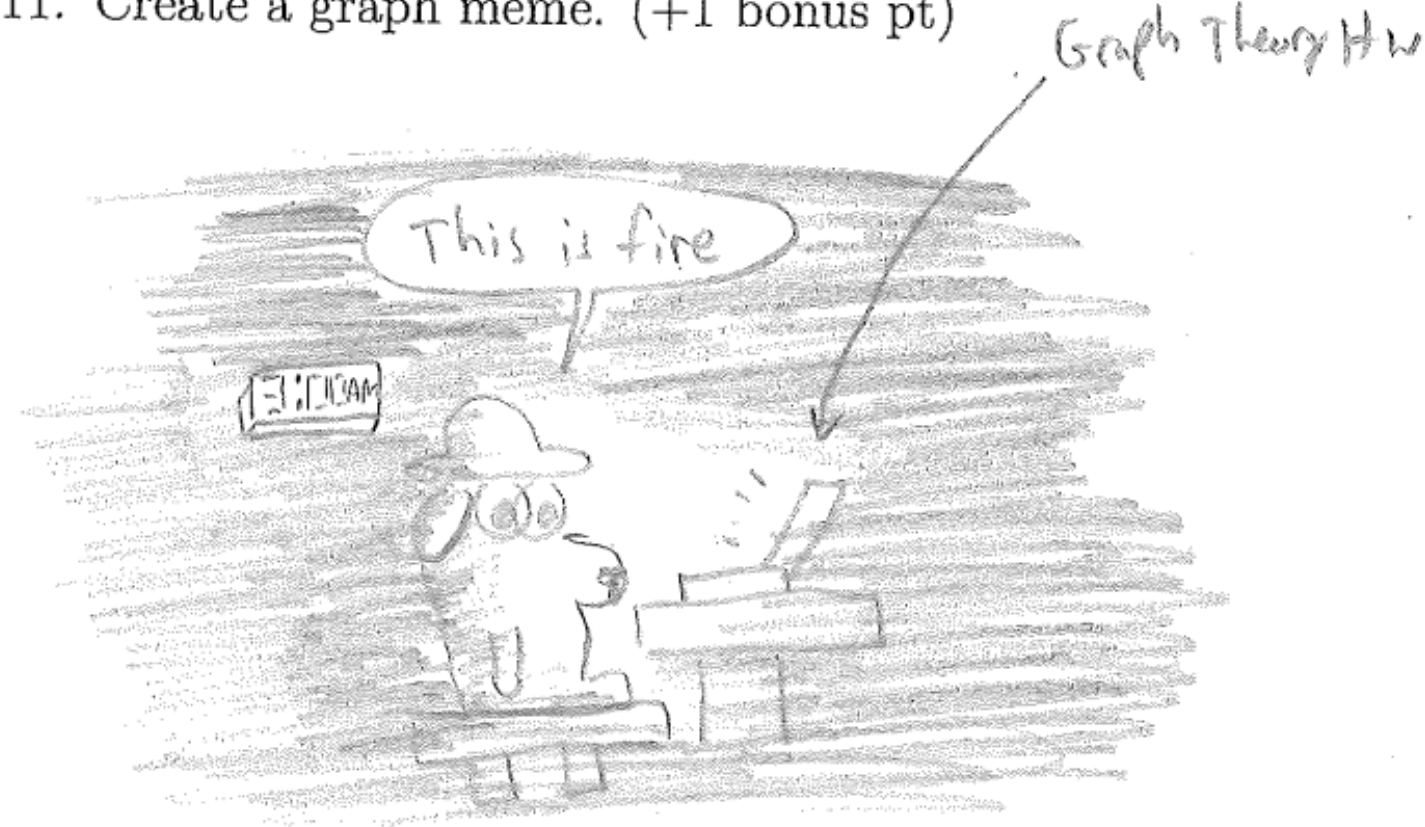
Graph Theory Meme Champions Spring 2024

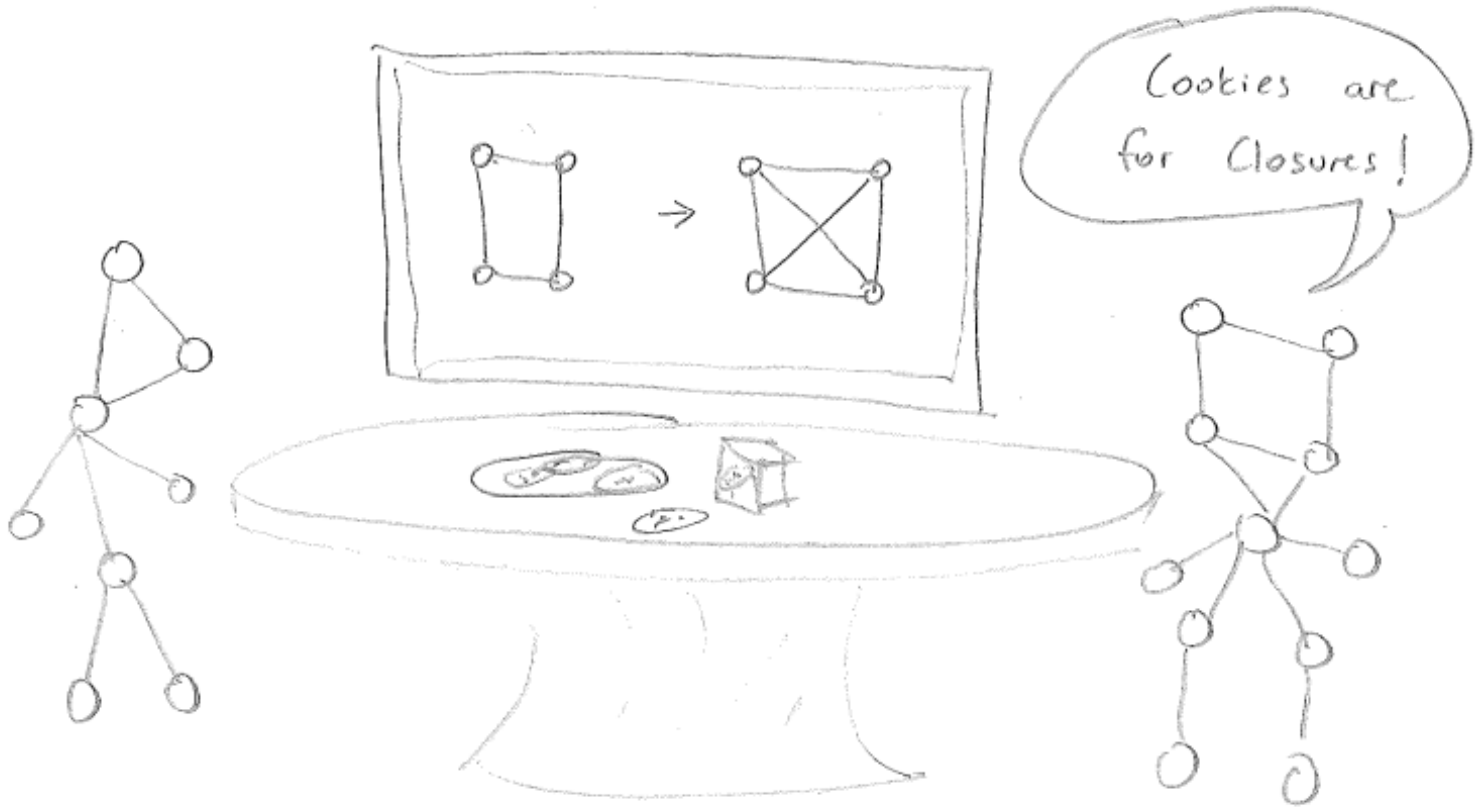

my face when theres no H st L(H)= G


1
I'm so excited for graph coding
2
Graph Theory 101
3
proofs
proofs
PROOFS!!
proofs
Proofs
proofs
proofs
proofs
4

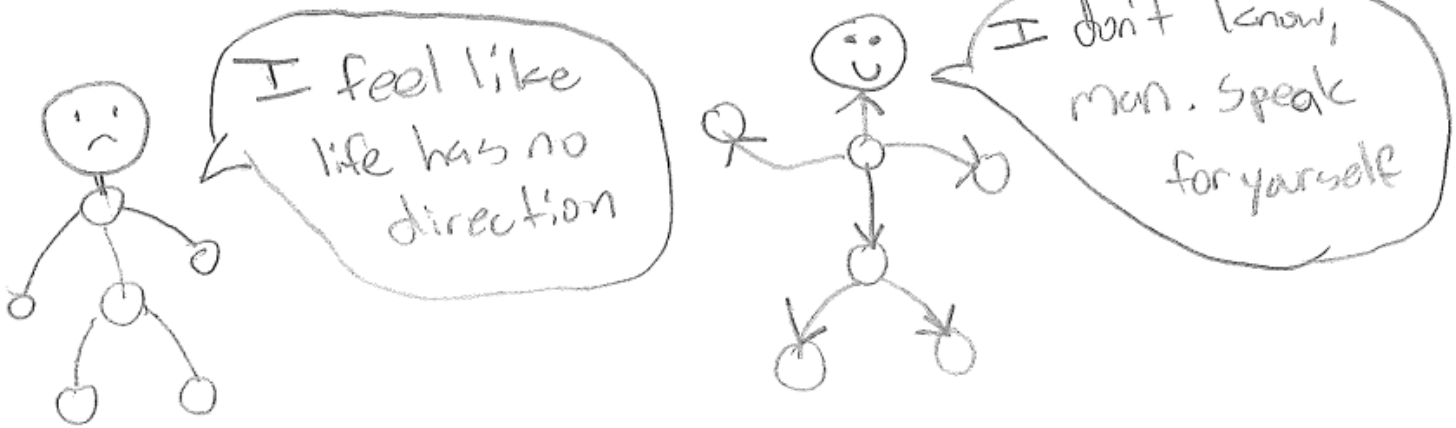

"Tests will be curved so the average equals 80%"
I will never fail a test
Test average: %1,400,000,000,000
(someone proved all trees are graceful)

11. Create a graph meme. (+1 bonus pt)



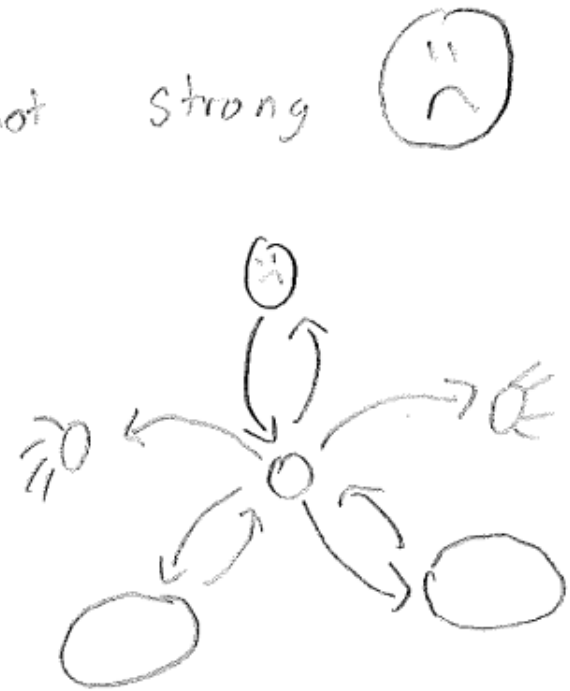

Cookies are for Closures!

1. Create a graph meme. (+1 bonus pt)



11. Create a graph meme. (+1 bonus pt)

If Graphs are everything, this means I am a graph. Am I strongly connected? No, Im not strong



Create a graph meme. (+1 bonus pt)