



CIS 241

System-level Programming and Utilities

Welcome! :^)

Instructor: Dr. Austin Ferguson

Pronouns: he/him

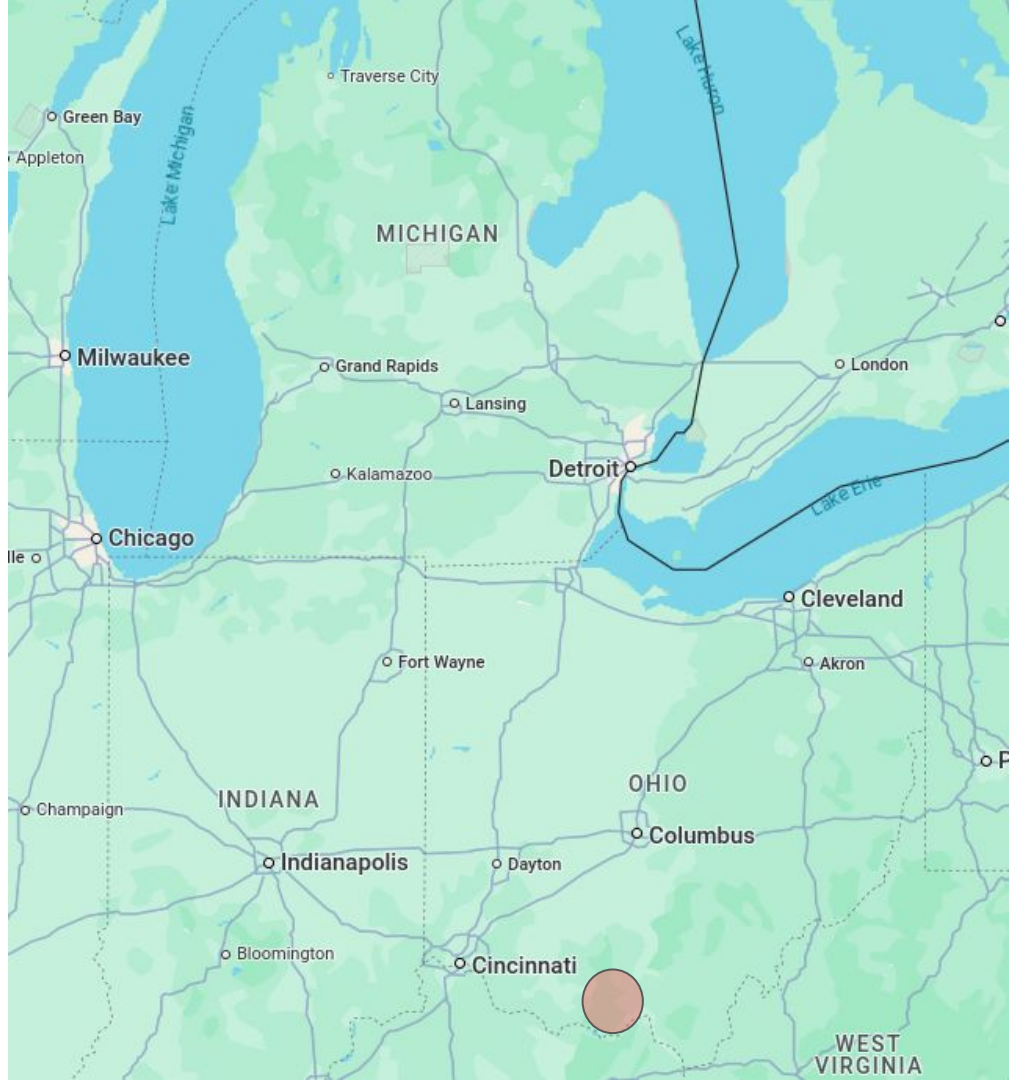
Email: ferguaus@gvsu.edu

Office: MAK D-2-106

Adapted from materials from Dr. Carrier

Who am I?

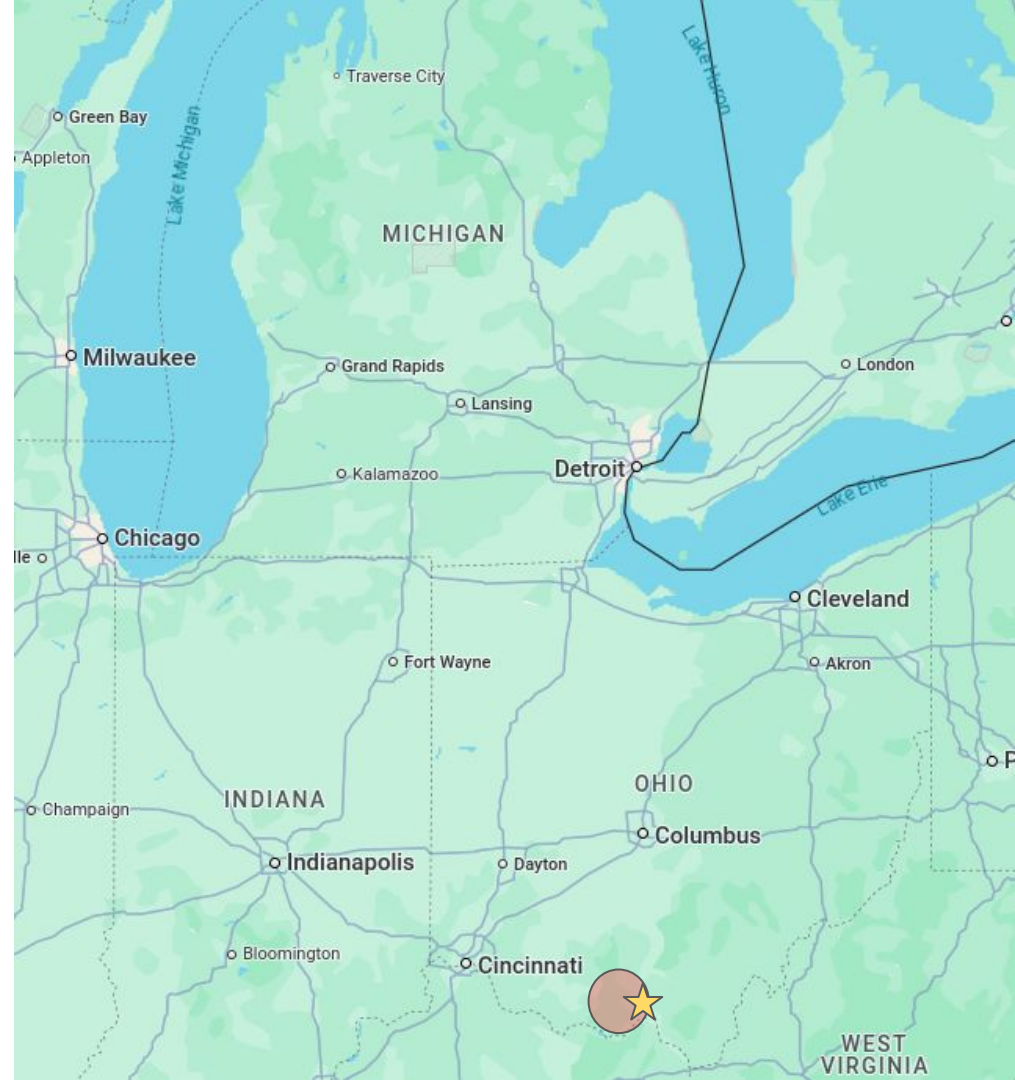
Who am I?



Who am I?

Undergrad: Shawnee State Univ.

- Computer Engineering
- Game Programming



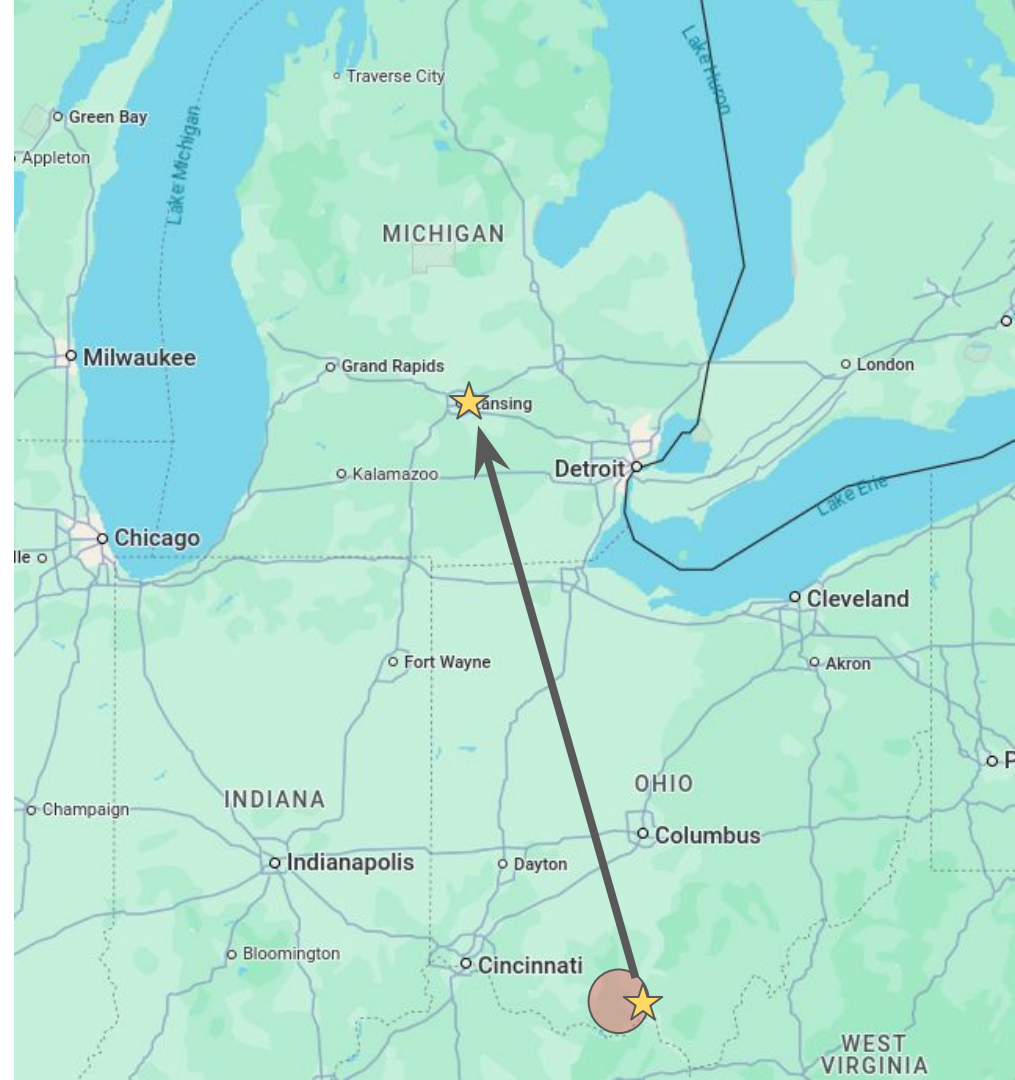
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- Computer Science
- Ecology, Evolution, and Behavior



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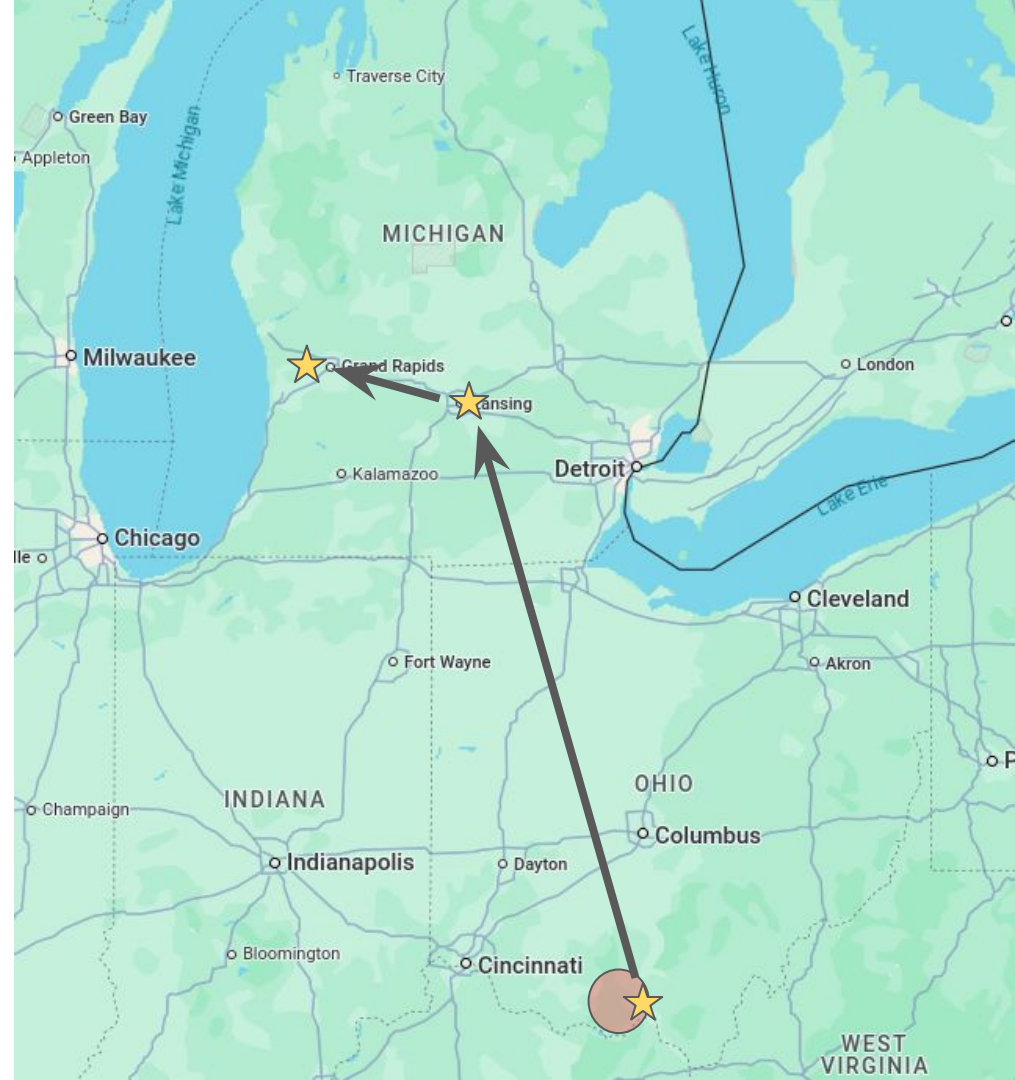
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Now: Here!



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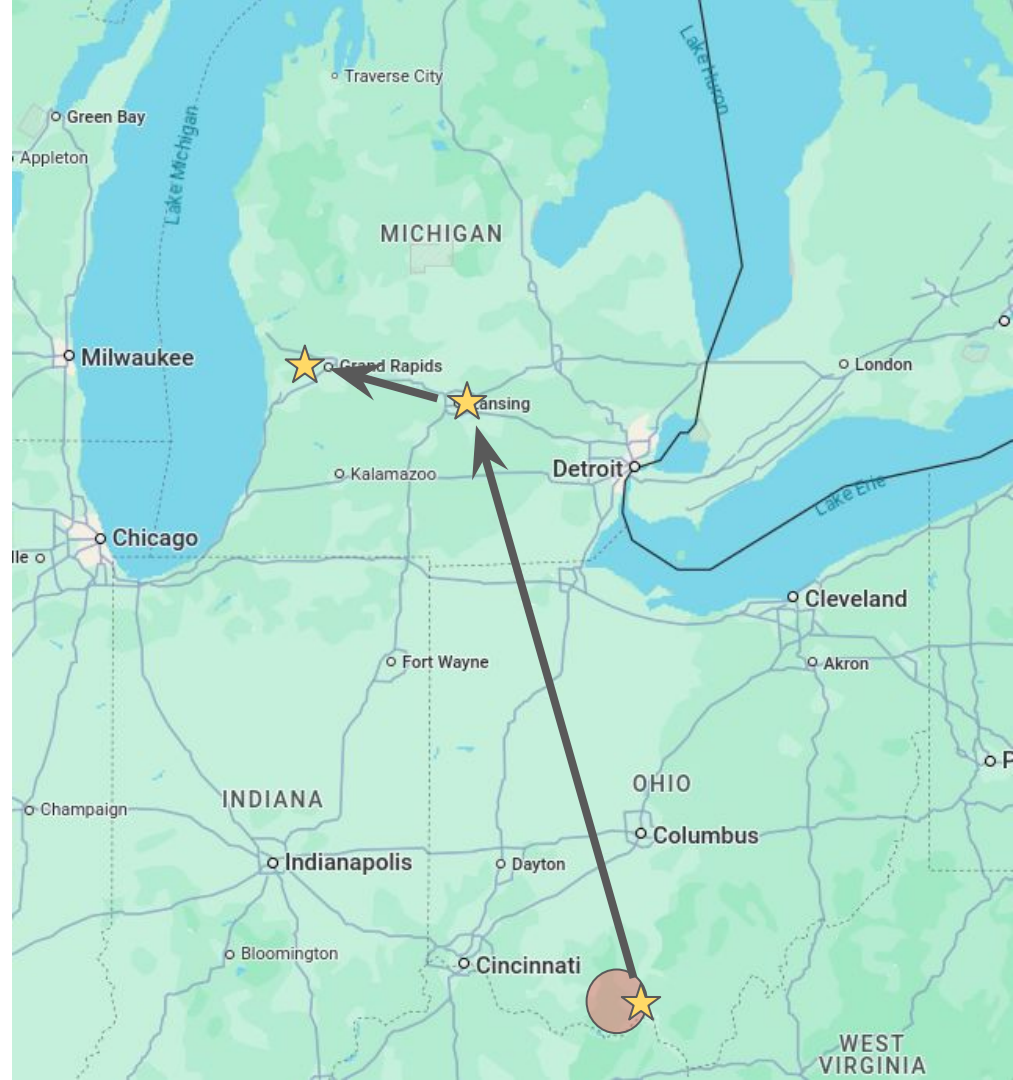
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???

Now: Here!



My research

My research (10k-foot view)

My research (10k-foot view)

I use computational models...

... to study evolutionary biology theory

Historical contingency in evolution



Course logistics!

Course logistics



Course logistics

- Grades
- Links to other platforms



Course logistics



- Grades
- Links to other platforms

- Assignments



Course logistics



- Grades
- Links to other platforms

- Assignments



- Later in course
- Version control



Course logistics



- Grades
- Links to other platforms

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- Communication



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- Version control

Blackboard
ULTRA

Course logistics



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Contact info!

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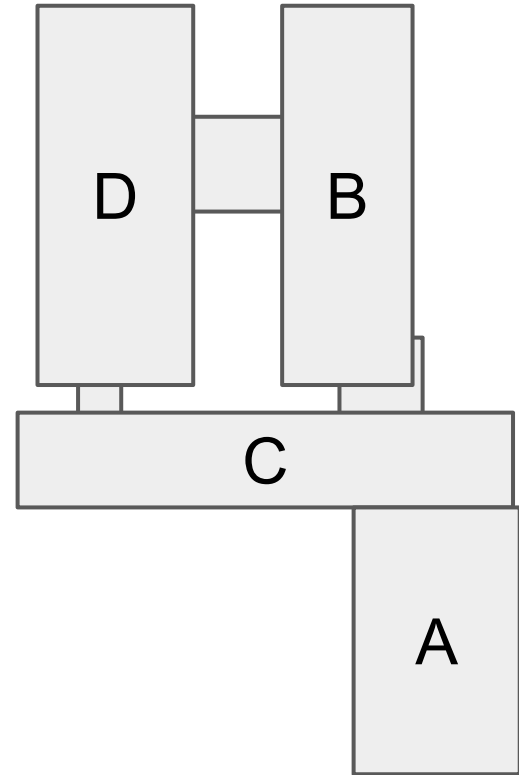
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Or email if private

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“Office” hours*:



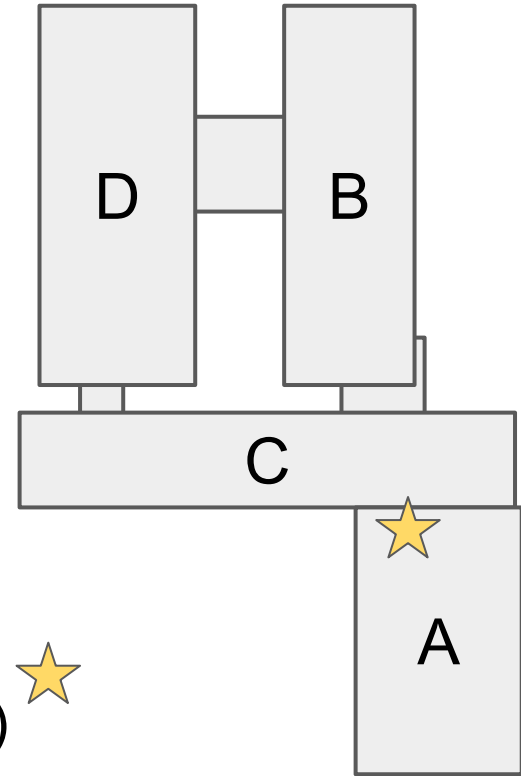
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- Student Success Center (MAK A-1-101)
 - Mon. 10-11am

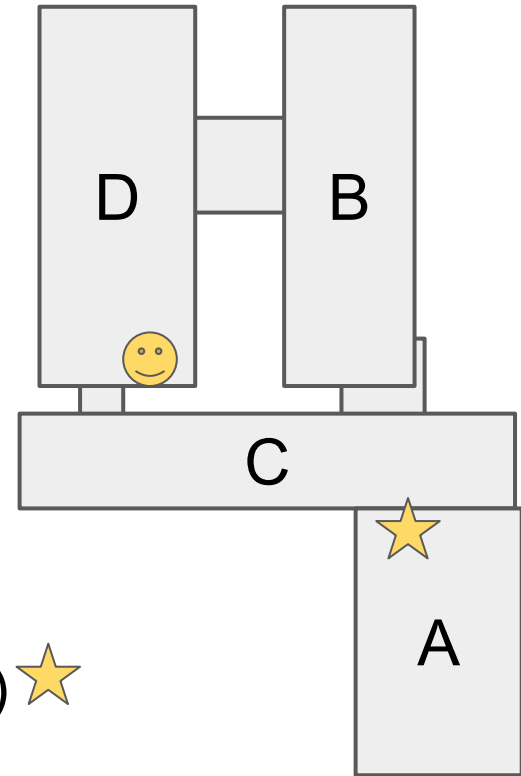


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“Office” hours*:

- Student Success Center (MAK A-1-101) ★
 - Mon. 10-11am
- My office (MAK-D-2-106)
 - Tues. 4-5pm
 - Wed 3-4pm



Textbooks

None required!

Syllabus has links (**FREE** from GVSU library) for extra reference

Grades 🙈

Grades 🙈

| Assignment type | # of assignments | Total % of final grade |
|----------------------|------------------|------------------------|
| Check-in assignments | ~ 10 | 25% |
| Projects | ~ 4 | 30% |
| Command line quiz | 1 | 5% |
| Midterm exam | 1 | 20% |
| Final | 1 | 20% |

Late penalty: 10% per day late, up to 5 days

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Grades 🙄

Wednesday deadlines?

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Link to extension day form (also in syllabus)

<https://docs.google.com/forms/d/e/1FAIpQLScCXbtweHG9nyq2CeRV0cym1EgpSCtNQLW7LqfFRYjQl5YyeA/viewform?usp=header>

Grades 🙄

| | | | |
|-----------|-----|-----------|-----------|
| A | 94% | C | 74% |
| A- | 90% | C- | 70% |
| B+ | 87% | D+ | 67% |
| B | 84% | D | 60% |
| B- | 80% | F | Below 60% |
| C+ | 77% | | |

Final grade is rounded (ceiling function)
93.05% -> 94%

Other policies

- SAR Accommodations - happy to help, just reach out ASAP!
- Religious observance - let me know beforehand!
- Collaboration
 - Collaboration welcome on check-ins, but all work should be your own
 - Projects should be kept to conceptual questions (do not share code!)

Other policies

- Academic misconduct and plagiarism
 - Don't do it!
 - I take this stuff seriously
 - All code and text MUST be your own
- Artificial intelligence (AI)
 - I get it can be helpful, but it's so easy to misuse
 - You should not be generating text/code
 - Obfuscating generated code is still misconduct!

Other policies

- Regret clause
 - Within 48 hours of a deadline / exam, you can invoke the regret clause if you think you committed academic misconduct
 - You will receive a zero on the assignment, but not an OSCCR report

When in doubt, just ask! I'm here to help!

Extension / late days are way better than misconduct!!!

A supportive peer community helps with success

Look for Computing-related student organizations!

▲
JOIN THE
GVSU CIS
COMPUTING
CLUB!

Participate in a variety of activities:

- Company Visits
- Staff and Student Presentations
- Research Opportunities
- Tech News
- Skill Workshops and Team Projects
- Career Preparation

COME TO OUR WEEKLY MEETINGS!

Where: MAK A-1-105 (EOS Lab)
When: Thursdays 6 PM - 7 PM

Join on LakerLink! Find us on Discord!

Or contact us by email: cclub@mail.gvsu.edu



wic@mail.gvsu.edu



Hackers Analyzing
Threats (HAT) -
vijay_bhuse@gvsu.edu

Grand Valley Competitive Programming Club
(CPC) – woodriir@gvsu.edu

A note on transparency

A note on transparency

- I'm new!

A note on transparency

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- I rely on your feedback

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 - For this semester
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Thanks in advance! :^)

Grading?

Communication?

Questions about logistics?

Content?

Resources?

The big picture

Basic Linux terminal usage

```
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-40-generic x86_64)

System information as of Sun Aug 25 02:15:07 PM EDT 2024

System load:  0.13           Temperature:    126.0 C
Usage of /:   53.6% of 97.87GB Processes:      327
Memory usage: 17%           Users logged in: 0
Swap usage:   0%            IPv4 address for enp1s0: 35.39.29.66
```

```
EOSLab
computing
```



```
-----
Contact HPC Support for help/questions
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-----
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The big picture

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git basics
(version control)

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eoslab
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Why should I care? 🤔

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- Accessing servers and HPC systems



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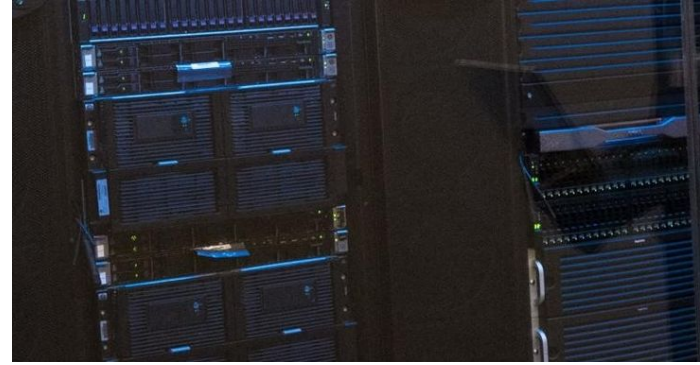
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- Efficiency



Why should I care?

Terminal:

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- Efficiency
- Running programs without GUIs

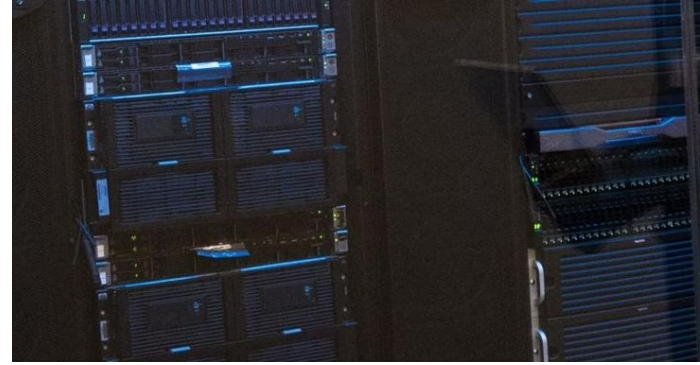


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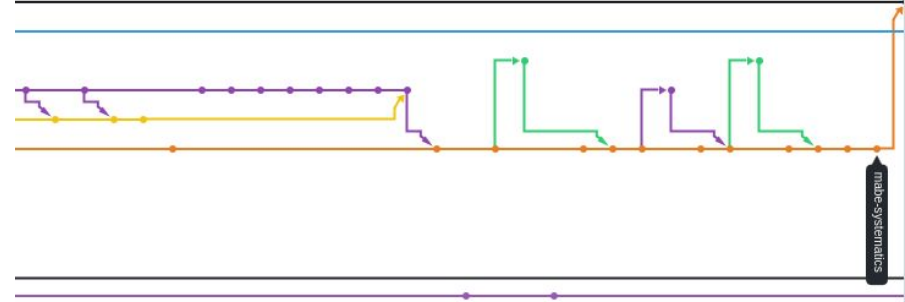
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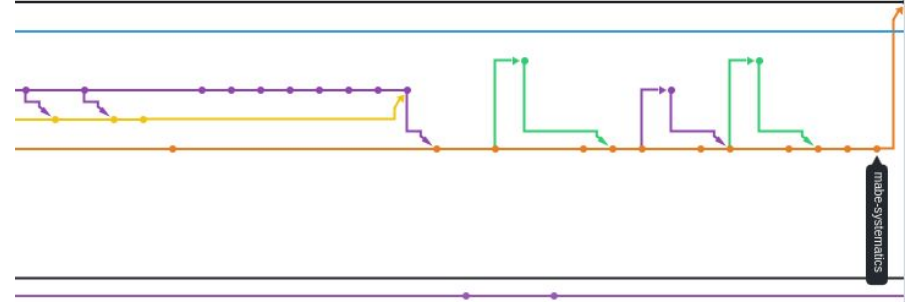
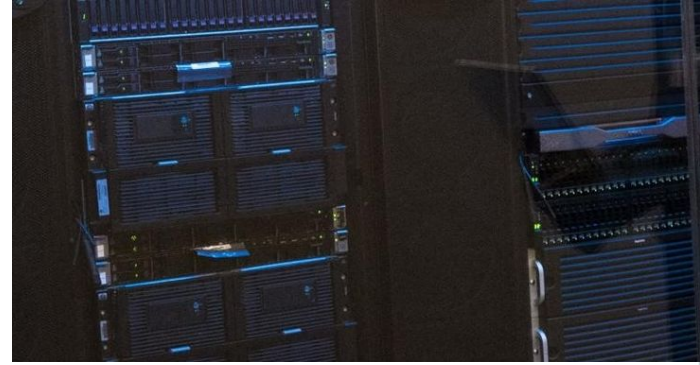
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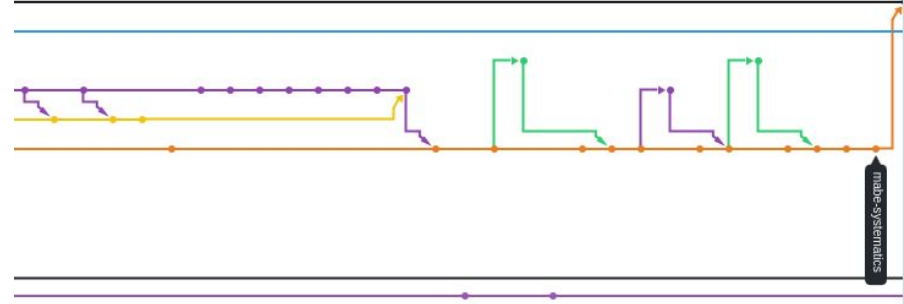
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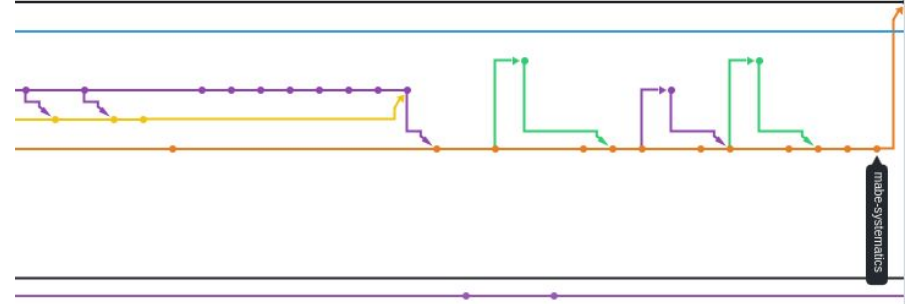
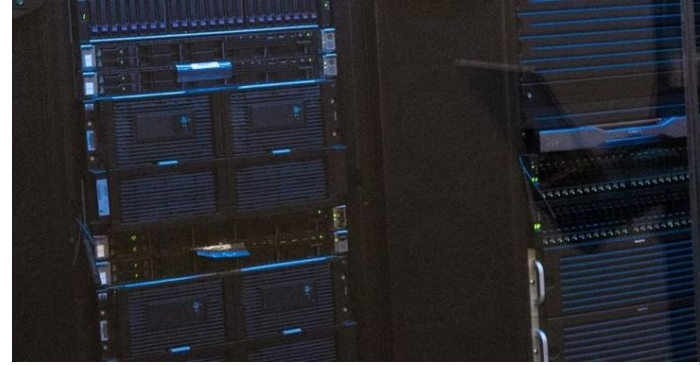
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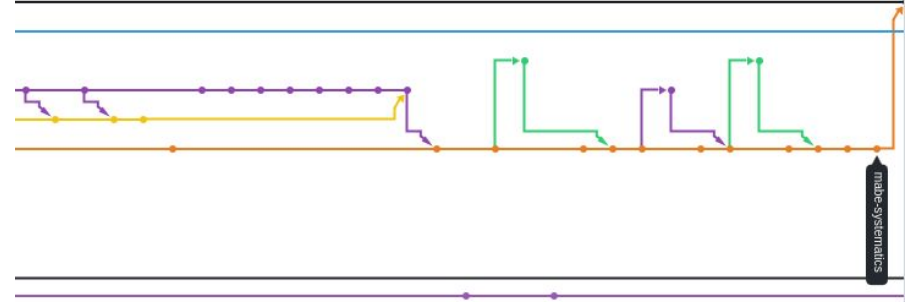
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- Understand the low level (memory management)



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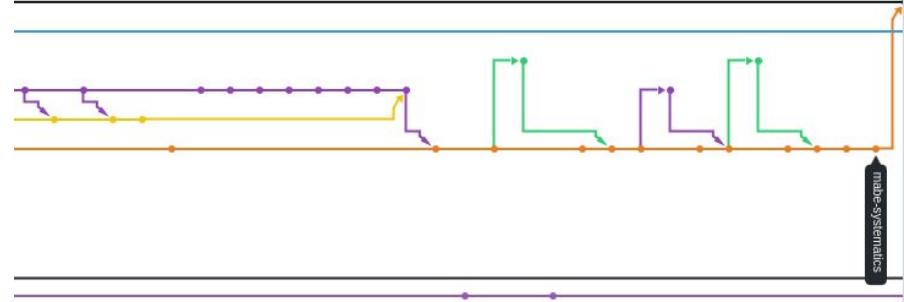
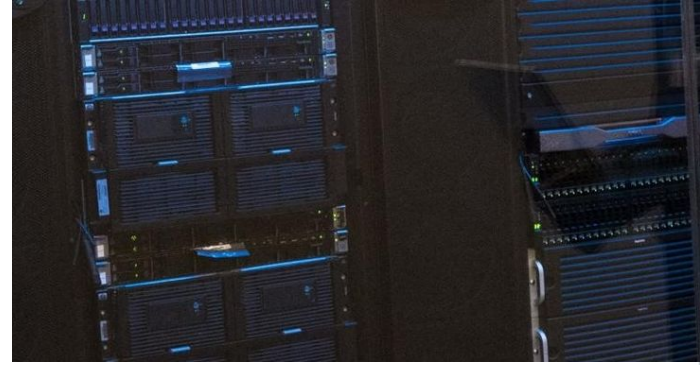
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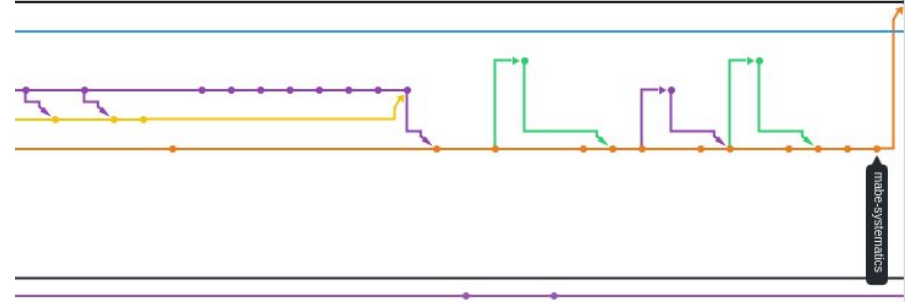
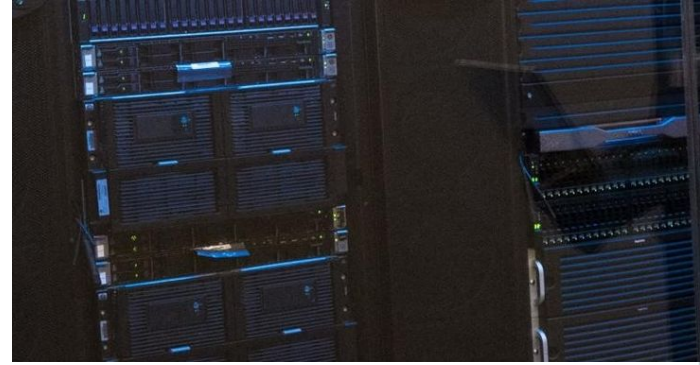
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C:

- Understand the low level (memory management)
- Will improve your high level programming
- Still used in embedded systems



[SparkFun - \(Wikimedia\)](#)