



COMP 125: MT II Review

Week 13, Lecture 19



Midterm II: Format

- Friday, In-Class
- Written portion:
 - Arrive and pack away belongings
 - Three written questions (10-15 minutes), **closed world**
 - No deep details, but any discussion is an option
- Practical portion:
 - Three practical problems (25-30 minutes), **open internet, no AI**
 - Boundaries
 - Motion
 - Interactivity
 - Rotation/Translation

Midterm II: Written Examples

- What is a conditional statement and when would we use one?
- What is a for loop and when would we use one?
- What is the difference between a for and a while loop?
- Give an example of a type of cyber attack, and describe roughly how it works.
- How is cyber security enforced?
- Describe the differences between mainframe computers, PCs, and supercomputers.
- What is the transistor? What is its role in modern computing? What did it replace?
- Describe the canvas in P5. How do we interact with it? How does translation and rotation work?
- How do we make motion work in P5? (Think: moving pixels vs flipbook.) Describe the role of the background of the canvas.

Midterm II: Practical

- The problems will be much more complex this time, *but*
- Anything from prior labs is on the table
 - To study, go through each lab and re-work it from scratch - should take approx. an hour
- Open-world (including your own labs), just closed-neighbors
- Do *not* use AI.
 - Easy to tell!
 - AI will default to javascript primitives and syntax, which we do not use.
 - AI also tends to use idioms common to more complete languages, and it differs from our approach.
 - If AI use is detected, you will receive a zero on both portions of the midterm

Remainder of the Semester

Dates	Contents
Week 14: April 13, 15, 17	Code Project! Guided: Re-Make Brick Breaker 17: Select Presentation/Report Topic
Week 15: April 20, 22, 24	20, 22: Re-Make Brick Breaker 24: Begin Presentations
Final: May 1, 9-11 AM	Code Project Due Finalize Presentations Reports due

Brick Breaker

- Example: <https://brick-breaker.vercel.app/>
- Note: *This code already exists online.*
- We are going to re-make it for ourselves step by step!
- This will be a guided project with options for customization and extra credit
- Due on the day of our final (May 1)

Presentations/Reports

- You will first learn about and write on, then teach a topic!
 - ~3 page report
 - 15 minute presentation given to the class
- List of topics will be provided (no overlap, first come first serve!)
 - *but*
- If you want to do a topic of your choice, also fine!
- Presentation must include:
 - Slides or visual material of your choice
 - Some kind of technical or code example
- Report must include:
 - 2,000 words (approx 3 pages single-spaced size-12 font)
 - Discuss a topic at length
 - What you learned, interesting historical context, technical details, etc
 - Citations from at least 8 trusted sources

Example Topics

- History of paper tape readers in old computers
- Trans-continental fiber optic cables
- Halt and catch fire instruction
- The first computer virus (ARPANET)
- History of keyboards
- Spectre and Meltdown
- History of the GPU
- Linux - who, what, where, when, why, and how?

And beyond!