



COMP 150: 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**
 - Variables
 - Loops/conditionals
 - Data read-in (CSVs)
 - Pandas, Plotly
 - Functions

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?

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!
 - 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 13: Binary/Hex 15: Project Day 1 17: Project Day 2, Select Report Topic
Week 15: April 20, 22, 24	Code Project 20: Project Day 3 22: Project Day 4 24: MT III -- Same format as MT II
Final: May 1, 4:15-6:16 PM	We are not going to meet on this day. Code Project Due Reports due

Code project - Let's solve Enigma!

- Entirely in Python
- Guided!
- Will produce:
 - Working code - we will solve Enigma!
 - Your own custom cypher to break
 - Report (as you go) - Due May 1



Reports

- You will learn about and write on a topic!
- 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!
- 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!