CS3102 Theory of Computation

www.cs.virginia.edu/~njb2b/cstheory/s2020

Warm up:

When is "more power" better? When is it worse?

Exercise 7-1

- The compiler for some programming language can detect infinite loops.

- How is this possible?

Code Safety

- You can easily prove things about your code, unless it uses memory

EVAL Circuit

- To evaluate other circuits, we needed a much bigger circuit

Moore's Law

- Observation made by Gordon Moore (CEO of Intel) in 1965
- Continues as a "mandate" for hardware manufacturers
- "Component Count" on chips doubles every year
  - Because component size shrinks
- This can't go on forever…

How do we continue?

- Less general-purpose hardware

Ethics

- ACM Code of Ethics:
  - https://www.acm.org/code-of-ethics
- In what ways do things you learned in this course give you additional ethical responibility?