Debugging in Python - Office Hours Agenda

[Link to office hours](#)

What is debugging?
- Observing the state of your program near bugs so you know what's going on
- Finding where your code diverges from your mental model

How do we avoid bugs in the first place?
Write small pieces of functionality and test often.

Debugging Tools:
- Simple Techniques
    - print statements
    - asserts
    - console reading
- ipython + pdb
    - Brief overview of what ipython is
    - How to start debugger: %run -d filename
    - Commands
        - h (help)
            - h (command name)
        - s(tep)
            - advance one line
        - pp
            - pretty print an expression
        - b(reak)
            - You can give it a line number or a function name
            - No arguments lists the breakpoints
        - a(rgs)
            - show the args of the current function
        - c(ont(inue))
            - Keep running until the next breakpoint (or the program ends)
        - cl(ear)
            - clears a breakpoint, given a bp number
        - l(ist)
            - Show the lines of code around the current one
    - Learn more at:
        - The [pdb documentation](#)
        - The [ipython debugging documentation](#)