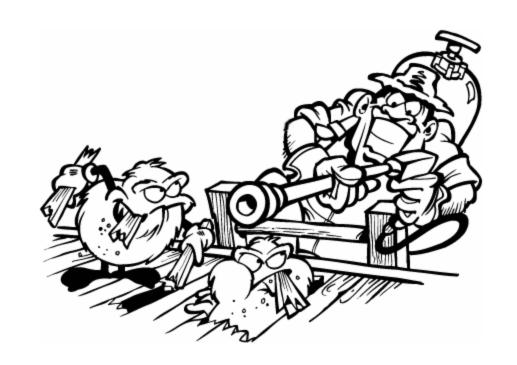
So your code doesn't work Now what?

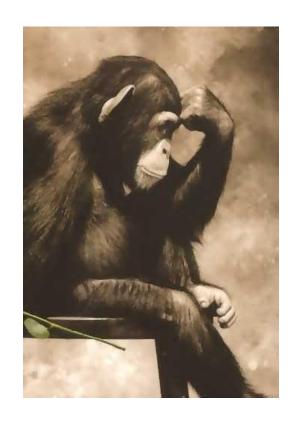


Basic Debugging





Think before you change your code





Be a scientist

- Observe
- 2. Develop a hypothesis about what is wrong
- 3. Come up with a change to test that hypothesis
- 4. Make that change (and no others)
- 5. Determine if it produces the expected result
- 6. If so great
- 7. If not
 - Did it fix a different problem?
 - If so keep the change and develop a new hypothesis
 - If not reverse the change and develop a new hypothesis



Do not change more than one thing at a time

Do not change something without a reason



Observation

- 1. Read the error message
- 2. Talk through your code
- 3. Observe what your code is doing



Read the error message

```
NameError: name 'y' is not defined
File "C:\path\to\buggy_file.py", line 10,
in <module>
```

What went wrong

Where did it go wrong



Talk through your code

- ▶ What is your code actually doing in words?
- Is that what it should be doing?



Get more information

What are do the variables look like as your code is running?

- Amateur
 - Print statements
- Professional
 - Debugger

