Good coding, in any language

• **Readability Counts!**
  - Good variable names, comments and docstrings, name and date, space things out, gather inputs together...

• **Back up your work!**
  - Never put more than a few hours into coding without backing up.
  - Find an easy backup method so you will do it (e.g. save whole project).
  - For one or two files, email them to yourself.

• **You should not be typing the same thing multiple times.**
  - Use a variable name to define any constant used multiple times, or that you might want to change.
  - Replace repetitive code blocks with a function.

• **Avoid *spaghetti code* – long, convoluted programs – use functions to break into functional tasks.**
  - But also avoid ravioli code – many little functions each of which does nearly nothing.
Good coding, in any language (cont’d)

• Plan exactly *what your code should do*, then code.
  o Write comment/docstring stating what your program will do, *then* write a program that does this.
  o Write comment/docstring that says what function arguments are and return will be, *then* write a function that does this.

• Build your code up in stages, testing as you go along.
  o Write dummy (docstring-only) functions to test the overall program, then fill in the details.
  o Run your code at every stage of development rather than creating a huge program and expecting it to work.

• Your code is not finished until it is thoroughly tested.
  o Write program to test your code at the same time as you write your code.
  o Test all distinct input cases, including erroneous ones.