

Outline for January 16

Reading: Wentworth *et al.*, §4.1–4.4

Assignments: Homework 1, due on January 18 at 11:55pm

1. Functions [*hello.py*]
 - a. What functions are
 - b. Defining them
 - c. Using them
2. Quick look at using functions [*quad.py*]
 - a. Passing values to functions
 - b. Returning values from functions
3. In more detail: passing values to functions [*args.py*]
 - a. Formal parameters in subject definition
 - b. Actual parameters (arguments)
 - c. Matching arguments to formal parameters
 - d. Local variables
4. In more detail: how Python does function calls [*quad.py*]
 - a. Caller suspends execution at point of call, remembers where it left off
 - b. Formal parameters assigned values from actual parameters
 - c. Execute function body
 - d. Return control to where caller left off
5. Refactoring code
 - a. Compute the perimeter of a triangle [*peri0.py*]
 - b. Collapse similar statements: make the distance between 2 points a function [*peri1.py*]
 - c. Collapse similar statements: make the prompts a function [*peri2.py*]
 - d. Refactor for clarity only: make the perimeter computation a function [*peri3.py*]
 - e. Now add error checking [*peri-c.py*]
6. Add error checking: “quad.py” done right [*quad-c.py*]