CPSC 1301, Computer Science I Homework 08

Chapters 10 and 11, *Learning Python*

Readings

Read chapters 10 and 11 in the *Learning Python* book.

Discussion Questions

Answer the discussion questions in writing.

1. This chapter points out the difference between *statements* and *expressions*. What is the difference between the two. Specifically, what is the purpose of statements, and what is the purpose of expressions?
2. What is a *compound statement*? What purpose does the colon character (:) serve in compound statements?
3. What is the main benefit of Python's indentation syntax?
4. Many editors allow you to optionally convert tabs to spaces. What is one very good reason to do this? How do you instruct notepad++ to convert tabs to spaces?
5. Under what circumstances would Python require you to use a semicolon (;) to separate statements?
6. What is an Read-Eval-Print loop (REPL)? The Python interactive interpreter is a REPL.
7. What is the error generated by this code, and ho do you fix it?
   `number = input('Enter a number'); sum = number / 2`
8. What do the following statements do? (`finally` is not in this chapter.)
   - `try`
   - `except`
   - `else`
   - `finally`
9. What does the assignment operator (=) do?
10. What does this statement mean: "Assignments create object references."
11. What does this statement mean: "implicit assignments ... simply *bind* names to object references at runtime."
12. How does *extended sequence unpacking* work? Give an example.
13. What does each of the following lines do?
    - `x = [1, 2, 3, 4]`
    - `*a, b, c = x`
    - `a, *b, c = x`
    - `a, b, *c = x`
14. What does this statement do? `a, b = b, a` How does this work?

15. What does this statement do? `x *= 10` How does this work?

16. What are Python's variable name rules? A short and simple answer is sufficient.

17. What does this statement mean? "Names have no type, but objects do."

18. What is the difference between `print()` and `sys.stdout.write()`?

19. Review the Test Your Knowledge quizzes at the end of each chapter.