Outline for January 9

Reading: §2

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

1. Variables
   a. What they are
   b. Variable names
   c. Variable types (int, float, string)
   d. Function type()
   e. Python keywords

2. Variables
   a. Legal names
   b. Keywords
   c. How to pick variable names

3. Simple assignment: variable = expression

4. Expressions
   a. Operators +, -, *, /, //, %, **
   b. Precedence
      i. Parentheses for grouping (, )
      ii. Exponentiation (**); associates right to left
      iii. Positive, negative (unary +, -)
      iv. Multiplication, division, integer division, remainder (*, /, //, %)
      v. Addition, subtraction (binary +, -)
      vi. In general, operators of equal precedence are evaluated from the left to the right (associativity); exception noted above

5. Example
   a. Compute the hypotenuse of a right triangle hypotnoex.py

6. The difference between strings and integers twoplustwo.py
   a. Difference between '2 + 2', 2 + 2

7. Type converter functions int, float, str

8. String operators
   a. Operator +: string concatenation
   b. Operator *: repetition

9. Input: input statement
   a. input(prompt) prints prompt, waits for user
   b. When user hits enter, it returns what was typed as a string

10. Exceptions
    a. Division by zero divby0.py
    b. Typing letters when a number is expected hypotex.py

11. Writing a program: compute pay with overtime