Lecture 2: October 1, 2019

Reading: §2, 3.7

Assignments: Homework 1, due on October 10 at 11:59pm

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 [hypotenuse.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]