Lecture 1
Basics.

1. PYTHON
   a. Where to download from.
   b. Different ways of running Python.
      i. Terminal
      ii. IDLE - the interpreter

2. VALUES
   a. In python.
      i. Numbers 2, 3.4
      ii. Strings 'abc'
      iii. Booleans
      i. type(2), type('abc'), type('True')
   c. Those are the basic types. But as we go along, we'll build up this taxonomy.
   d. No matter how complex the data structure. All of them, at their basis, is going to be some combination of those primitive data structures.
   e. With each type, there's a different set of operators that can deal with it.

3. OPERATIONS
   a. Arithmetic: +, -, *, /, **
   b. Show an expression. E.g., 5*7
   c. More usually, we are going to give it commands. (Later).
   d. Overloaded operations 'ab'+‘ab’, 3*‘ab’

4. SIMPLE EXAMPLES running Python shell.
   a. 3*5, 3**5
   b. 3/5 = 0 ?? It's doing integer division.
   c. 3.0 / 5 = 0.599999.. 
   d. Similar things for strings
   e. concatenate strings

5. ERRORS
   a. Syntax error. E.g, print 52a
   b. Static semantic error. E.g., 3+'ab'
   c. Full semantic error. E.g,

6. TYPE CONVERSIONS
   a. str(3) + ‘ab’
   b. int(‘3’) + 3

7. OPERATOR PRECEDENCE
   a. All other things being equal, exponentiation, before multiplication and division, before addition and subtraction. When in doubt, use parenthesis.

8. VARIABLES
   a. We would like to store values. In order to operate on them later on. Cook metaphor.
   b. mystring = 'eric'
   c. Good practice: meaningful names.
   d. a = 1, b = a, what is b?
   e. a = 2, now what is b?
   f. The type of a variable is inherited from its value.

9. HELP() and QUIT()
   a. help(‘if’), Quit with q.
   b. quit()