ECS 10

10/3

Announcements

- First assignment due tonight, 10pm
- Next assignment on Web page tomorrow AM
- Wait list people, stay after class. Things look good.

Data Types

- Integers, eg. 87
- Floating point numbers, eg 6.78
- Stings, eg. "Call me a taxi!"

"Parts of speech"

- Dark red – comments! Good idea to start off with a comment describing purpose of program and its overall strategy.
- Orange – Python commands. If you misspell it, it's not orange.
- Green – strings
- Black – numbers, variables

Expressions and values

- 34+57 is an **expression.**
  - Its value is 91
- "Coca-cola" is also an expression
  - Its value is "Coca-cola"
- Either kind of expression can be assigned to variables.
- We say Python **evaluates** an expression when it computes its value.

IDLE vs script window

- Type an expression in IDLE window – it gives back the value.
- Type an expression (alone) in script window and the value does NOT appear when you run the program.
- Python evaluates the expression, but then throws the value away.
- Has no effect unless it's assigned to a variable, explicitly printed, etc.

Strings and quotes

- "Coca-cola" and 'Coca-cola' are two ways of writing the same string.
- "Macy's" and 'Macy\'s' are two ways of writing a string containing an apostrophe.
- Can use \' or \" to make strings with apostrophes or quotes.

Concatenation

- An **operator** on strings
- "My "+"cat" is a string expression that has the value "My cat"
- "Gillian"+"," has the value "Gillian,"

Converting Integer to String

- To convert an integer to a string:

  str(10)
- The expression str(10) is a string, with value '10'

Different ways to skin a…

- Here are three ways to do the same thing
  - print "My cat",catName
  - print "My cat "+catName
  - print "My cat",

    print catName (this one works only in programs, not in the IDLE window. The comma prevents going to a new line).

Newline

- "\n" produces a carriage return
- Two ways to do the same thing:
  - print "A rose\nis a rose\nis a rose."
  - print "A rose"

    print "is a rose"

    print 'is a rose.'

Getting input

- Use the function raw_input()
- Example: color = raw_input(" Favorite color: ")
  - Python evaluates the function raw_input…
  - by printing the prompt "Favorite color: "
  - the user types in "red"
  - the string "red" becomes the value of the raw_input function
  - the variable color gets the value "red"