We can assign a value to a variable using this syntax:

variable\_name = value

In Python, and when programming in general, we need to build systems for dealing with data that changes over time. That data could be the location of a plane, or the time of day, or the television show you're currently watching. The only important thing is that it may be different at different times. Python uses *variables*to define things that are subject to change.

greeting\_message = "Welcome to Codecademy!" current\_excercise = 5

In the above example, we defined a variable called greeting\_message and set it equal to the string "Welcome to Codecademy!". It also defined a variable called current\_exercise and set it equal to the number 5.

**Updating Variables**

Changing the contents of a variable is one of the essential operations. As the flow of a program progresses, data should be updated to reflect changes that have happened.

fish\_in\_clarks\_pond = 50 print "Catching fish" number\_of\_fish\_caught = 10 fish\_in\_clarks\_pond = fish\_in\_clarks\_pond - number\_of\_fish\_caught

In the above example, we start with 50 fish in a local pond. After catching 10 fish, we update the number of fish in the pond to be the original number of fish in the pond minus the number of fish caught. At the end of this code block, the variable fish\_in\_clarks\_pond is equal to 40.

Updating a variable by adding or subtracting a number to the original contents of the variable has its own shorthand to make it faster and easier to read.

money\_in\_wallet = 40 sandwich\_price = 7.50 sales\_tax = .08 \* sandwich\_price sandwich\_price += sales\_tax money\_in\_wallet -= sandwich\_price

In the above example, we use the price of a sandwich to calculate sales tax. After calculating the tax we add it to the total price of the sandwich. Finally, we complete the transaction by reducing our money\_in\_wallet by the cost of the sandwich (with tax).