

CPSC 1301, Computer Science I Lab Assignment

Learning Python, 5th Edition, Chapter06 Lab

Run the following commands in your Python interpreter. These are from *Learning Python, 5th Edition*, Chapter06. Submit a transcript of your session as your deliverable for this lab. This should be a plain text file named `pythonlab-Chapter06_lastname.txt`.

```
>>> a = 3
>>> a = 'spam'
>>> x = 42
>>> x = 'shrubbery' # Reclaim 42 now (unless referenced elsewhere)
>>> x = 3.1415 # Reclaim 'shrubbery' now
>>> x = [1, 2, 3] # Reclaim 3.1415 now
>>> a = 3
>>> b = a
>>> a = 'spam'
>>> b
>>> a = 3
>>> b = a
>>> a = a + 2
>>> L1 = [2, 3, 4]
>>> L2 = L1
>>> L1 = 24
>>> L1 = [2, 3, 4] # A mutable object
>>> L2 = L1 # Make a reference to the same object
>>> L1[0] = 24 # An in-place change
>>> L1 # L1 is different
>>> L2 # But so is L2!
>>> L1 = [2, 3, 4]
>>> L2 = L1[:] # Make a copy of L1 (or list(L1), copy.copy(L1), etc.)
>>> L1[0] = 24
>>> L1
>>> L2 # L2 is not changed
>>> x = 42
>>> x = 'shrubbery' # Reclaim 42 now?
>>> L = [1, 2, 3]
>>> M = L # M and L reference the same object
>>> L == M # Same values
>>> L is M # Same objects
>>> L = [1, 2, 3]
>>> M = [1, 2, 3] # M and L reference different objects
>>> L == M # Same values
>>> L is M # Different objects
>>> X = 42
>>> Y = 42 # Should be two different objects
>>> X == Y
>>> X is Y # Same object anyhow: caching at work!
>>> import sys
```

```
>>> sys.getrefcount(1) # 647 pointers to this shared piece of memory
```