

CSCI 150 HW: function reading practice

Due: Wednesday, February 21

To receive full credit, for each exercise you should do the following:

1. **Predict:** First, complete the exercise *without* using the Python interpreter. (You are welcome to refer to your notes or textbook, read Python documentation, look at examples from class, *etc.*; just don't actually run any code.) Trace the execution of the code in the exercise, and write down the final output.
2. **Check:** Run the code. Does the actual output agree with what you wrote down in step 1?
3. **Evaluate:** If your answer to part 1 was different than the actual output, keep experimenting with it, consult the textbook or Python documentation, ask a friend or TA or professor, *etc.* until you can explain why the code works the way it does *and* what your misunderstanding(s) were in part 1. (You do not need to do anything for step 3 if the output agrees exactly with what you wrote in step 1.)

You will not be graded on how correct your answer is in part 1. However, you *will* be graded on the accuracy of your evaluation in step 3. Obviously, I will not be able to tell the difference if you simply run the code and paste the output for step 1; please do not do that! You will only be depriving yourself of a learning opportunity (not to mention that it is a violation of the academic integrity policy).

Turn in your answers and evaluations either electronically via the usual form, or on paper.

You should consider the code in each exercise separately from the other exercises.

You should complete the following exercises *without* using a computer, though you may consult your textbook. You should write your answers by hand and turn them in on paper.

1. Consider the functions defined below. What does `main()` print?

```
def foo(a):
    b = 3*a + 2
    return b

def bar(x,y):
    return foo(x) + foo(y)

def main():
    print "The value is " + str(bar(2,3))
```

2. Consider the functions defined below. What is printed by `main2()`?

```
def f1():
    print "mushroom"

def f2():
    f1()
    print "badger"
    f1()

def f3(n):
    f2()
    if n > 5:
        print "snake"
        f1()
    else:
        print "snaaaaaake"

def main2():
    f3(2)
    f3(6)
```