Lesson 3.04: Debugging and Scope

# Learning Objectives

* Define and identify: scope
* Identify issues and bugs in written code relating to scope
* Recognize variable scope within functions
* Differentiate between lists scope and variable scope

# Materials/Preparation

* Lab handout
* Read through the handout so that you are familiar with the requirements and can assist students

# Pacing Guide

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| Duration | Description |
| 5 Minutes | Welcome, attendance, bell work, announcements |
| 10 Minutes | Lecture |
| 30 Minutes | Worksheet/In class Activity |
| 10 Minutes | Discussion |

# Instructor’s Notes

1. Lecture
   1. Debugging in Functions!
      1. Scope
         1. Variables
            1. Passing a variable in doesn’t affect the variable once you are out of the function
            2. Interpreter looks for the variable definition closes to it

Discuss how python is silly and will print variables outside of it’s own definition

* + - * 1. test\_number = 1

def add2(plan\_number):

plan\_number = plan\_number + 2

test\_number = 100

return

print test\_number

add2(test\_number)

print test\_number

* + - * 1. what will this do?
      1. Lists
         1. Lists do get updated if you pass them as arguments into functions.

If you feel like the students are understanding, then you can go into how list are pointing to data

1. Worksheet
   1. Have a few debugging problems to work through individual involving lists and updating variables and have the students write down the answers first and then try them out on the computer
2. Discussion
   1. Go over any confusing points.