Introduction to Python

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**Homework Exercises: Variables, Indices**

**1. Write the code to:**

1. create a string and assign it to a variable
2. Print a slice of the first four letters of the string

**2. Write a program that asks what your favorite color is, and then outputs “Your favorite color is X.”**

**3. Fill in the table showing the values of the variables in this program after each statement is executed.**

| Command | Value of X | Value of Y | Value of swap |
| --- | --- | --- | --- |
| X = 1.0 |  |  |  |
| Y = 3.0 |  |  |  |
| swap = X |  |  |  |
| X = Y |  |  |  |
| Y = swap |  |  |  |

**4. If you assign a = 123, what happens if you try to get the second digit of a via a[1]?**

**5. What does the following program print?**

atom\_name = 'carbon'

print('atom\_name[1:3] is:', atom\_name[1:3])

**6. Given the following string:**

species\_name = "Acacia buxifolia"

What would these expressions return?

1. species\_name[2:8]
2. species\_name[11:] (without a value after the colon)
3. species\_name[:4] (without a value before the colon)
4. species\_name[11:-3]
5. species\_name[-5:-3]

What happens when you choose a stop value which is out of range? (i.e., try species\_name[0:20] or species\_name[:103])

**7. Given a list assigned to the variable buildings, as below, write the code to print how many letters there are in the second element of the list**

Buildings = [“Jolley”, “Eads”, “Seigle”, “Cupples”]