Computer Science — Python — HW #8

Assigned on Wed, 2017-02-22. Due on Tue, 2017-02-28.

1. Read chapters 6 and 7 of Think Python, 2nd ed. (Continuing with two chapters per week.)
2. **[Turn in]**
   1. Write a function **count\_palindromes(a, b)** that takes two integer arguments, **a** and **b**, and returns a count of how many integers **p** there are for which

* **p** is a palindrome, meaning a number whose digits are the same whether the number is read forwards or backwards.
* **p** is greater than or equal to **a.**
* **p** is less than **b**.

Assume that the argument **b** is greater than **a.**

* 1. Call the function to find how many palindromes there are between 10 and 1,000,000.
  2. Submit both the function **count\_palindromes(a, b)**, and the output from (b).

1. What is the output of the following script?

months = ['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep','Oct','Nov','Dec']

m2days = { 'Jan':31, 'Feb':28, 'Mar':31, 'Apr':30, 'May':31, 'Jun':30,

'Jul':31, 'Aug':31, 'Sep':30, 'Oct':31, 'Nov':30, 'Dec':31 }

for m in range(0, len(months)):

print('{0:s} -> {1:d}'.format(months[m], m2days[months[m]]))

1. Download the most recent version of the course slides for Unit #1 from <http://www.nyhs.org/Page/661>

The content and order have been modified slightly from how we initially saw them in class. For example, I added a slide on Python's designer, Guido van Rossum, and a slide on string formatting using string's **format** function.

1. Review all the slides. Remind yourself of details we've seen and discussed that you might have forgotten.
2. Study the loop examples not covered by HW #7. Specifically, mentally walk through the execution of the loop examples in the slides word\_count.py, convert\_int2str.py, convert\_str2int.py, and shuffle.py.
3. Work through the **Unit #1 Practice Exam**. Compare your answers with others in the class, but only \*after\* you've come up with your own answers.