Lesson 1

Dietrich Kruse

Python 2 and Python 3 have several differences. Python 2 is still used in some legacy systems, but for the most part is outdated and no longer supported. Both versions' libraries are not compatible with each other. Text strings are stored in Unicode in Python 3, while Python 2 uses ASCII. Python 3 also has improved integer division and utilizes a print statement that requires parentheses unlike Python 2.

The Lab 1 script has three segments. The first takes a word, removes multiple letters, reverses the resulting string, and prints the new string to the console. The second takes a string of two integers separated by a space as input, splits the single string using the space as the delimiter, and converts the resulting strings into integers. The first integer is then raised to the power of the second integer, and the result is printed to the console. The third segment takes a sentence that includes the word "python" and replaces all instances of "python" with "pythons."

```python
# -*- coding: utf-8 -*-

# ============================================================
# Requests a word from user input
# Creates new_string using only the letters from indices 1:4
# Reverses new_string before printing to the console
# ============================================================
string = input("Please enter a word: ")
new_string = string[1:4]
new_string = new_string[::-1]
print(new_string)

# ============================================================
# Requests two numbers, x and y, from user input and immediately splits them
# and converts them to integers. This is required as the input() function
# returns a string. Syntax found at https://www.geeksforgeeks.org/input-multiple-values-user-one-line-python/
# Prints the value of x to the power of y to the console
# ============================================================
x,y = [int(x) for x in input("Please enter two integers separated by a space: ").split()]
print(x**y)

# ============================================================
# Requests a sentence from user input
# Replaces all instances of python with pythons before printing to the console
# ============================================================
sentence = input("Please enter a sentence that uses the word 'python': ")
new_sentence = sentence.replace("python", "pythons")
print(new_sentence)
```

```
In [22]: runfile('C:/Users/Dietrich/Documents/GitHub/Deep-Learning-Labs/Lab 1/Lab1.py', wdir='C:/Users/Dietrich/Documents/GitHub/
Deep-Learning-Labs/Lab 1')

Please enter a word: python
hty

Please enter two integers separated by a space: 14 2
196

Please enter a sentence that uses the word 'python': I love playing with python
I love playing with pythons
```