CPSC 1301, Computer Science I Lab Assignment

Lab 01b

July 16, 2021

1 Installing and Testing your Python

Install the appropriate Python for your machine. Use Python3. See `https://www.python.org/`. Test your Python by doing this lab.

```
C:\Users\ccc31\cols-st\cpsc1301>python
Python 3.8.5 (tags/v3.8.5:580fbb0, Jul 20 2020, 15:43:08) [MSC v.1926 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> # VARIABLES ########################################
>>> print ("Hello, CSU!");
>>> name = "Student"
>>> print("Hello", name, "!")
>>> c = "Columbus"
>>> s = "State"
>>> u = "University"
>>> print("Hello", c, s, u)
>>> h = "Hello"
>>> print(h, c, s, u)
>>> greeting = "Hello, CSU!"
>>> print(greeting)
>>> # assign your name to a variable and greet yourself
>>> # ----------- your code here -----------------
>>> # ARITHMETIC #######################################
>>> x = 5
>>> y = 7
>>> z = 9
>>> x + y
>>> x * z
>>> z - y
>>> z / x
>>> z % x
>>> x % z
>>> x // z
>>> z // x
>>> x / z
>>> z / x
>>> print(x + y, x - z, z * y, z / x, z % x, y // x)
>>> x + y * z
>>> (x + y) * z
>>> x + (y * z)
>>> x + y * z - x
>>> (x + y) * (z - x)
>>> x + (y * z) - x
```

```
>>> x * y / z
>>> (x * y) / z
>>> x * (y / z)
>>> x / y * z
>>> (x / y) * z
>>> x / (y * z)
>>> # COMPARISON OPERATORS ########################################
>>> x == 5
>>> x != 5
>>> x == y
>>> x != y
>>> x > y
>>> x < y
>>> x >= 5
>>> x >= y
>>> 5 >= x
>>> 5 > x
>>> w = print("Hello")
>>> w
>>> print(w)
>>> # LOGICAL OPERATORS ############################################
>>> 0 and 0
>>> 1 and 1
>>> 2 and 4
>>> 2 or 4
>>> True
>>> not True
>>> False
>>> not False
>>> not (1 and 1)
>>> not (1 or 12)
>>> not (0 and 0)
>>> not (0 or 0)
>>> True and True
>>> True and False
>>> False and True
>>> False and False
>>> True or True
>>> True or False
>>> False or True
>>> False and False
>>> # DOING MATH ###################################################
>>> import math
>>> math.pi
>>> math.sqrt(4)
>>> math.sin(0)
>>> math.cos(0)
>>> math.tan(0)
>>> exit()
```

2 Writing and Running your First Python Program

Use this template for writing your Python programs. Use any text editor of your choice. I recommend Notepad++ (`https://notepad-plus-plus.org/`).

```
1  #!python
2  # Name: template.py
3  # Author: Charles Carter
4  # Date; May 16, 2021
5  # Purpose: creates a template for python programs
6
7  # import statements here (if any)
8
9  # define methods here (if any)
10 def hello():
11     print("Hello from 'template.py'")
12
13 #main function executes the defined functions
14 if __name__ == '__main__':
15     print("Hello from main")
16     hello()
```