Name:

Date:

Class: CS 160

Assignment #7

* **For the following problems -- create a screenshot of your code and paste the picture in the document. Keep the picture size/quality readable for grading.**
* **Alternatively, you may upload a zipped folder containing your python files (.py) instead of pasting pictures in this file. Be sure all commands have been entered.**
* **Each task is worth 2 points.**

Use python’s IDLE *or* your favorite IDE 😊

1) Type the following commands one at a time, hitting return/enter after each to input your command.

print("Hello World!")

# I can create comments in my code as a single line

print("I am alive") # or I can create comments at the end of a line.

# print("Or to comment out a line of code temporarily or permanently.")

print("That's classy")

print('I can use apostrophes as well, not only quotes.')

print('But I can use "quotes" if I want to.')

print("I just have to 'change' them up from whatever 'sits' at the very beginning and very end.")

print("Unless I use an \"escape\" character.")

2) Math and Booleans of math.

2 + 2

12 - 7

3 \* 4

20 / 4

8 % 3 # The % sign means MODULUS(remainder). 3 will go into 8 x whole number of times, the remainder is 2.

11 % 3 # Still a remainder of 2. 3 goes into 11 three whole times, but the remainder is 2.

print(5 + 1 - 2 + 6 % 4 / 2) # PEMDAS is order of operations.

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print(5 > 7) # False

print(3 + 2 < 7) # True

print(6 <= 6) # True

print(8 >= 9) # False

3) Variable assignment. These values will hold until changed or the program is closed. Use these variables to complete parts four and five below.

num01 = 2

num02 = 4

num03 = 5.0

num04 = 10

num05 = 100

word01 = "Strings"

name01 = "Jack Ryan the 3rd" # I can put numbers into a string

name02 = "Natsu Dragneel"

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Note: To test any of these variables, print them out. num01-05 are **integers**, while word01 and name01-02 are **strings**. Notice that “” signify the value of the variable is a string.

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print(num01)

print(num03)

print(name01)

4) Variable manipulation.

name01 = "Jack Ryan the Third" # I can reassign a variable with a new value

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print(num01 + num02)

print(num05 / num02)

num06 = num04 + num02 # This creates a new variable, num06

print(num06)

5) String theory.

# Here we will combine two strings, notice the + symbol

print("My first string" + " my second string")

# We can also combine strings we write out and variables

print("My name is not", name02 + ",", "but it could be.")

print("And I have", num02, "eggs in my basket.")

print("However, I cannot feed my", num04 \* 3, "fellow guild members with only", num02, "eggs.")

6) We will be learning a second method of printing strings here. This is known as format strings by using print(f” { } ”).

name = "Trex" # Use this or any name you want

armSize = "small" # Enter a description

legLength = 382 # integer, not a string

eyeColor = "red"

weight = 8000

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print(f"My name is {name} and I has {armSize} arms.")

print(f"My legs are {legLength}cm long, but I'll never tell you my true height.")

print(f"My eyes are {eyeColor} and weigh {weight}kg.")

7) We may print strings using alternative methods by using .format and formatter.

print("I ate {} apples for lunch today.".format(5)) # Using an integer with value of 5

print("I'll assign the variable :: {} :: at another time".format('underDog')) # Using a string

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# Notice the group of three {}

formatThisWay = "{} {} {}"

print(formatThisWay.format("The", "red", "dog"))

print(formatThisWay.format("jumped", "eagerly", "over"))

print(formatThisWay.format("the", "blue", "moon"))

8) If not this, then what? If/Else statements.

x = 25

y = 5

if x == 25:

print("x is in fact 25")

else:

print("x is not 25, we have an issue")

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if y == 10:

print("y is in fact 10")

elif y == 15:

print("y is 15!!")

else:

print(f"y is not 10, is not 15; it is {y}")

9) For you and I.

word = "apple"

myList = ["pickles", "frisbee", "China"]

# The following two for loops do the same thing

for x in word:

print(x)

for anyLetter in word:

print(anyLetter)

# This loop will cycle through a list

for x in myList:

print(x)

# This loop will break after the if statement is satisfied

for x in myList:

print(x)

if x == "frisbee":

break

# This loop will break and then continue after the if statement is satisfied

for x in myList:

if x == "frisbee":

continue

print(x)

10) The semi-infinity loop.

x = 5

while x <= 10:

print(f"This iteration, x is {x}")

print("I am waiting \n \t and waiting \n \t\t and still waiting \n")

x += 1 # += and -= will increase or decrease the x value by 1, by default