Programmers Journal - Unit 2 lesson 4

49-56

**Exercise: Ask the user to supply a string. Then use that string as a prompt to ask for a float.**

user\_string = input("please enter a string: ")

user\_float = float(input(f"please enter a float value for {user\_string}: "))

print(f"You entered float {user\_float} for {user\_string}")

**Exercise 5.1**

user\_string = input("please enter a string: ")

length\_string = len(user\_string)

print("The string you have entered has", length\_string, "letters")

**Exercise 5.2**

from pcinput import getInteger

from math import sqrt

a\_side = getInteger("please enter a value for side 'A': ")

b\_side = getInteger("please enter a value for side 'B': ")

c\_side = sqrt(a\_side\*\*2 + b\_side\*\*2)

c\_side = round(c\_side, 1)

print(f"the value for side c is: {c\_side}")

**Exercise 5.3**

from pcinput import getInteger

num1 = getInteger("please enter a value for 'num1': ")

num2 = getInteger("please enter a value for 'num2': ")

num3 = getInteger("please enter a value for 'num3': ")

largest\_number = max(num1, num2, num3)

smallest\_number = min(num1, num2, num3)

average\_number = (num1 + num2 + num3) / 3

average\_number = round(average\_number, 2)

print("The largest number is: ", largest\_number)

print("The smallest number is: ", smallest\_number)

print("The average of these numbers are: ", average\_number)

**Exercise 5.4**

from math import exp

s = "e to the power of {:2d} is {: >9.5f}"

print( s.format( -1, exp( -1 ) ) )

print( s.format( 0, exp( 0 ) ) )

print( s.format( 1, exp( 1 ) ) )

print( s.format( 2, exp( 2 ) ) )

print( s.format( 3, exp( 3 ) ) )

**Exercise 5.5**

from random import random

x = 1+ int(random() \* 10)

print(x)

**Exercise: Write some code that allows you to test if 1/2 is greater than, equal to, or less than 0.5. Do the same for 1/3 and 0.33. Then do the same for (1/3) ∗ 3 and 1.**

result1 = 1/2

result2 = 1/3

result3 = (1/3) \* 3

if result1 > 0.5:

print("1/2 is greater than 0.5.")

elif result1 == 0.5:

print("1/2 is equal to 0.5.")

else:

print("1/2 is less than 0.5.")

if result2 > 0.33:

print("1/3 is greater than 0.33.")

elif result2 == 0.33:

print("1/3 is equal to 0.33.")

else:

print("1/3 is less than 0.33.")

if result3 > 1:

print("(1/3) \* 3 is greater than 1.")

elif result3 == 1:

print("(1/3) \* 3 is equal to 1.")

else:

print("(1/3) \* 3 is less than 1.")

**Exercise: Write some code that allows you to test for each vowel whether it occurs in your name. You may ignore capitals.**

user\_string = input("please enter your name: ")

vowels = 'a', 'e', 'i', 'o', 'u'

for i in vowels:

if i in user\_string:

print(f"{i} occurs in your name.")

else:

print(f"{i} does not occur in you name.")