Programmers Journal - Unit 2 lesson 6

**Exercise: Change the code block above so that it not only prints the total, but also the average of the five numbers.**

from pcinput import getInteger

total = 0

count = 0

while count < 5:

total += getInteger( "Please give a number: " )

count += 1

print( "Total is", total )

average= total / 5

print("Average is", average)

**Exercise: The first code block of this chapter also asks the user for five numbers, and prints the total. However, that code block uses “Enter number x: ” as a prompt, whereby x is a digit. Can you change the code block above so that it also uses such a changing prompt to ask for each number?**

from pcinput import getInteger

num= 5

total= 0

for i in range (1, num + 1):

prompt= f"Number {i}:"

num= getInteger(prompt)

total += num

print( "Total is", total)

**Exercise: Create a loop that lets the user enter some numbers until he enters zero, and then prints their total and their average. Make sure you test the loop with no numbers entered, and with several copies of the same number entered.**

from pcinput import getInteger

num= -1

total= 0

count= -1

while num != 0:

num= getInteger("Enter a number:")

total += num

count += 1

print( "Total is", total)

average= total / count

print("Average is", average)

**Exercise: Fix the code above so that it no longer is an endless loop.**

number = 1

total = 0

while (number \* number) % 1000 != 0:

total += number

number += 1

print( "Total is", total )

**Exercise: Write countdown code. It starts with a given number (e.g., 10), and counts down to zero, printing each number it encounters (10, 9, 8, ...). It does not print 0, instead it prints “Blast off!”**

import time

countdown = 10

while countdown > 0:

print(countdown)

time.sleep(0.5)

countdown -= 1

print("Blast Off!")

**Exercise: The factorial of a positive integer is that integer, multiplied by all positive integers that are lower (excluding zero). You write the factorial as the number with an exclamation mark after it. E.g., the factorial of 5 is 5! = 5 ∗ 4 ∗ 3 ∗ 2 ∗ 1 = 120. Write some code 7.2. for loop 71 that calculates the factorial of a number…**

from pcinput import getInteger

num = getInteger("Enter a integer: ")

factorial = 1

for i in range(1, num + 1):

factorial \*= i

print(f"{num}! = {factorial}")

**Exercise: Use the for loop and range() function to print multiples of 3, starting at 21, counting down to 3, in just two lines of code.**

for x in range( 21, 2, -3 ):

print( x )

**Exercise You already created code with a while loop that asked the user for five numbers, and displayed their total. Create code for this task, but now use a for loop.**

from pcinput import getInteger

total= 0

for i in range(5):

num= getInteger(f"enter number {i + 1}:")

total += num

print("total is", total)

I learned how to use loops in my code to have it loop a certain amount of times or to manually stop it. I also learned how to have a countdown be played, that counts down to zero and prints a message. I believe I need to work on my loops to really get them down in my brain to have it be like muscle memory because it takes me a little to figure it out. I had some difficulties with the loops and getting them to work properly how I intended them to, but I feel like I overcame the obstacles that I had and got to the right code.