2810ICT Week1 PythonLab

1. Problem: Given three integers, a b c, one of them is small, one is medium and one is large. Print True if the three values are evenly spaced, so the difference between small and medium is the same as difference between medium and large. Otherwise, print False.

Input: 2 4 6  
Output: True   
Input: 4 6 2   
Output: True   
Input: 4 6 3   
Output: False

Solution:

nums = input("input 3 numbers separated by a space: ")  
  
num1, num2, num3 = nums.split(' ')  
  
if int(num1) > int(num2) and int(num1) > int(num3):  
 if int(num2) > int(num3) and int(num1) - int(num2) == int(num2) - int(num3):  
 print(True)  
 elif int(num3) > int(num2) and int(num1) - int(num3) == int(num3) - int(num2):  
 print(True)  
 else:  
 print(False)  
elif int(num2) > int(num1) and int(num2) > int(num3):  
 if int(num1) > int(num3) and int(num2) - int(num1) == int(num1) - int(num3):  
 print(True)  
 elif int(num3) > int(num1) and int(num3) - int(num1) == int(num2) - int(num3):  
 print(True)  
 else:  
 print(False)  
elif int(num3) > int(num1) and int(num3) > int(num2):  
 if int(num1) > int(num2) and int(num3) - int(num1) == int(num1) - int(num2):  
 print(True)  
 elif int(num2) > int(num1) and int(num3) - int(num2) == int(num2) - int(num1):  
 print(True)  
 else:  
 print(False)  
else:  
 print(False)