

# Assignment 2: Loops

Winter Code Camp

DUE: December 28, 2020, 11:59PM

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At the beginning of each python program, please include comments indicating your name and your student number

Example:

```
# Animesh Sarker  
# 105184718
```

Please submit this assignment as a **single zip file** called FIRSTNAME\_LASTNAME\_assignment2.zip.

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1. Write a python program that will grab a string from the user and output the string in reverse. [15 marks]

Sample input: Hello World!

Sample output: !dlroW olleH

Save file as loopAssign1.py

2. Write a python program that will ask the user for a number  $n$ , and output the sum of the first  $n$  terms of the following infinite series:  $\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}$  [15 marks]

Sample input: 10

Sample output: 2.9289682539682538

Explanation:  $\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{10} = 2.9289682539682538$

Save file as loopAssign2.py

3. Write a python program that will get a string from the user. The program should output the string and remove extra spaces between each word. [20 marks]

Sample input: Python is the best!

Sample output: Python is the best!

Save file as loopAssign3.py

4. Write a python program that gets numbers from the user until they enter zero, then tells the user the average of all the numbers, the largest number entered, and the smallest number entered. [20 marks]

Sample input:

10  
9  
8  
7  
0

Sample output:

Average: 8.5  
Largest: 10  
Smallest: 7

Save file as loopAssign4.py

5. Write a python program that will ask the user for a string. The program will output a hollow square with the entered string [30 marks]

Sample input: python

Sample output:

pythonp  
n y  
o t  
h h  
t o  
y n  
pnohtyp

Sample input: wpcc

Sample output:

wpccw  
c p  
c c  
p c  
wccpw

Save file as loopAssign5.py