Course Number & Title: BAN 3110- Programming for Business Analytics

Semester:

Professor: Dr. Mehmet Turkoz

HOMEWORK 3

Name and ID #:_____

Instructions:

a) **You can use any A4 paper to solve the exercises. (Make sure you put the correct answers and make it readable).**
b) **You can also use word file to solve the exercises.**
c) **When you solve the problems, you can take the picture of your solutions and put these pictures on a word file if you choose option a or b.**
d) **You have to convert your word file into one pdf file. If you send more than one pdf file, your submission will not be graded. Also, do not send any file except one pdf file.**

OR You can follow following steps instead of c and d

- Take the image or scan your answer sheet

- If you use the image files, CONVERT the image files (e.g., JPG, PNG...) to a single PDF file

- If you have multiple PDFs or image files (e.g., JPG files), you can use the link (https://combinepdf.com/) to combine multiple PDFs or convert multiple images to a single PDF.

-Upload one PDF file to the Blackboard "Assignments" tab

e) **Submit your solutions by Sunday by 11:59pm.**
f) **Include your pdf and py files. (You can upload these two files on Blackboard).**
g) **SUBMIT ON BLACKBOARD, NO EMAIL SUBMISSIONS**

1) [5pts] Write program with *while* loop which finds the followings for the given values between 150 to 1000.

a) How many **odd numbers** are between 150 and 1000 (include 150 and 1000)
b) Find the sum of **odd numbers** which are between 150 and 1000 (include 150 and 1000)
c) Find the multiplication of **odd numbers** which are between 150 and 1000 (include 150 and 1000)
d) Find the sum of square of **odd numbers** which are between 150 and 1000 (include 150 and 1000)

2) [5pts] Write program with *for* loop which finds the followings for the given values between 150 to 1000.

a) How many **odd numbers** are between 150 and 1000 (include 150 and 1000)
b) Find the sum of **odd numbers** which are between 150 and 1000 (include 150 and 1000)
c) Find the multiplication of **odd numbers** which are between 150 and 1000 (include 150 and 1000)
d) Find the sum of square of **odd numbers** which are between 150 and 1000 (include 150 and 1000)

3) [1pts] Write a program so that for given *M,* it computes the sum $s = \sum_{k=1}^{M} \frac{1}{k}$.

(Hint: Use the *while-loop* . As we see in in the class, you can update s as s=s+k and you need to increase the k in each step such that k=k+1).

4) [1pts] Write a program which repeatedly reads numbers until the user enters "done". Once "done" is entered, print out the total, count, and average of the numbers. If the user enters anything other than a number, detect their mistake using try and except and print an error message and skip to the next number. For example:

```
Enter a number: 4
Enter a number: 5
Enter a number: bad data Invalid input
Enter a number: 7
Enter a number: done
16 3 5.333333333333333
```

5) [1pts] Write another program that prompts for a list of numbers as above (question 4) and at the end prints out both the maximum and minimum of the numbers instead of the average.

6) [1pts] What is printed by the Python code?

```
for z in [2, 4, 7, 9]:
    print(z – 1)
```

7) [1pts] What is printed by the Python code?

```
n = 3
for x in [2, 5, 8]:
    n = n + x
print n
```