CYSE 250 Basic Cybersecurity Programming & Networking
Total Points: 400

Purpose: This assignment provides you with a deeper understanding and practical experience of fundamental concepts of Python and conditional statements.

Requirements & Submission:
1. The answers of this assignment must be submitted *electronically* on canvas.
2. Some answers require more details than just what we had discussed in lecture slides.

Question (1) (Total: 100 points)

Write a program in python to read integer n and then find the sum of the series [x - x^3 + x^5 + ...].

```
x = int(input("x value: "))
n = int(input("n value: "))
s = 0
k = 1
for i in range(n):
s += k*(x**(2*i+1))
k *= -1
print(s)
```

Question (2) (Total: 100 points)

Write a program in python to read 10 numbers from the keyboard and find their sum and average.

```
sum = 0
print("Enter 10 numbers: ")
for i in range(1,11):
num = int(input("Number %d = " %i))
sum = sum + num
avg = sum/10
print("Sum of 10 numbers =",sum)
print("Avg of 10 numbers =",avg)
```

Question (3) (Total: 100 points)

Write a program in python to read integer n and then display the multiplication table for the given integer.

```
num = int(input("Enter number: "))
for i in range(1,11):
print(num, 'x', i, '=', num*i)
```

Question (4) (Total: 100 points)

Write a program in python to read n integer and then display the n terms of a harmonic series and their sum.

1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n terms

```python
n = int(input("Enter number: "))
sum = 0
for i in range(1, n+1):
sum += 1/i
print("%.2f" % sum)
```