MIS 6382
Object Oriented Programming in Python
Spring 2021
Homework One

The following guidelines should be followed and will be used to grade your homework:

- The code for each question should be implemented using Jupyter Notebooks.
- All the code should be included in one single **Jupyter Notebook file** (.ipynb file).
- This is an individual homework assignment; no group submissions will be accepted.
- Sample runs shown in the question should be used as a guide for implementation. However, extensive testing needs to be done on your code to deal with all test cases that might possibly be executed.
- Use the example format as your file name: **firstname_lastname_hw1.ipynb.**
- No need to handle exceptions.

Q1: Write a Python program to accept three numbers and return the sum of them

Your output should like as shown below:

```
Please enter the first number:3
Please enter the second number:4
Please enter the third number:5.5
The sum of the three numbers is 12.5
```

Q2: Write a Python statement for the following expression and display the results

$$x = \frac{a}{b} * 15.3 - 16^4 - 84 + 96/3$$

a. If a = 12 and b = 16, what will be the value of x
b. What is the data type of x?

Q3: Write a single Python statement to print the alphabets from a to g in a single line. Your output should like as shown below:

```
a
b
c
d
e
f
g
```

Q4: Check if string 'good' is **in** both string 'thatisnotbad' and string 'thisisgood'. Return three Boolean results: the first two from individual checks and the last one from overall check. (In addition to display the following sentences, program to check True or False to put into "__".) (Hint: search for python membership operators)

```
The statement that string 'good' is in string 'thatisnotbad' is __
The statement that string 'good' is in string 'thisisgood' is __
The statement that string 'good' is in both string 'thatisnotbad' and string 'thisisgood' is __
```

Q5: Last month Joe purchased some stock in Acme Software, Inc. Here are the details of the purchase:

• The number of shares that Joe purchased was 1,000.

• When Joe purchased the stock, he paid $32.87 per share.

• Joe paid his stockbroker a commission that amounted to 2 percent of the amount he paid for the stock.

Two weeks later Joe sold the stock. Here are the details of the sale:

• The number of shares that Joe sold was 1,000. He sold the stock for $33.92 per share.

• He paid his stockbroker another commission that amounted to 2 percent of the amount he received for the stock.

Write a program that displays the following information:

• The amount of money Joe paid for the stock.

• The amount of commission Joe paid his broker when he bought the stock.

• The amount that Joe sold the stock for.

• The amount of commission Joe paid his broker when he sold the stock.

• The amount of profit or loss that Joe made after the purchase and sale of the stock