CIS 30A Programming Assignment 2

You can use any resources in the Canvas and your textbook but do not Google or use Chegg or any other internet resources. Do not discuss programming assignment questions with anyone including your classmates. If you have any questions about the programming assignment, contact your instructor. Do not discuss programming assignment questions in Discussion Board.

Please submit your work to Canvas by 11:59 PM 11/6/2022.

Be sure to submit your work using Python IDLE and must be submitted in .py file.

NO LATE ASSIGNMENT WILL BE ACCEPTED.

Please sign below in pdf file and submit it with your programming Assignment 2.

"I affirm that I will not give or receive any unauthorized help on this exam, and that all work will be my own."

Signature _____

(7 points) Q1. Write a python program to sort the words alphabetically in an string provided by the user. Use .split(), .sort() and for loop. For example, if given string is s= "Hello this Is an Example With cased letters" then your output should look

The sorted words are:
Example
Hello
Is
With
an
cased
letters
this

(7 points) Q2. Assign an integer x between 40 and 50 and assign an integer y between 80 and 100.
Write a python program using while loop that if x is less than 50 AND y is less than 100, increment both integers by 1 and program should stop if either integer reaches 50 or 100. Use while loop and print output for both x and y.
For example, if you assign x = 46 and y = 97, your output should look
47 98
48 99
49 100

(7 points) Q3.Write a function call isOdd with return to determine whether given integer is even or odd. Ask user to supply the integer

(10 points) Q4. Write a function that stores information about a car in a dictionary. The function should always receive a manufacturer and a model name. It should then accept an arbitrary number of keyword arguments. Call the function with the required information and two other name-value pairs,

such as a color or an optional feature. Your function should work for a call like this one:

```
car = make_car('subaru', 'outback', color='blue', tow_package=True)
```

Output

```
{'manufacturer': 'Subaru', 'color': 'blue', 'tow_package': True, 'model':
'Outback'}
{'year': 1991, 'manufacturer': 'Honda', 'color': 'white', 'headlights':
'popup', 'model': 'Accord'}
```

(9 points) Q5. Assume n is a positive integer. Write a function call pSUM with parameter (x, n) that computes and prints the value of the sum.

$$1+\frac{x}{1}+\frac{x^2}{2}+\frac{x^3}{3}\ldots+\frac{x^n}{n}$$

For example, in your driver code, try $x = 2, n = 5$ and your pSum should be 18.07.

(10 points) Q6. Write a function call pFact that takes two positive integers k, m and returns the product $k * (k-1) * (k-2) \ldots\ldots (k-m)$ If $k \leq m$, it should return 0.