1. Create a function exp(a, n) that returns the exponential result (a^n). Read user input **a** and **n** in a single line from the keyboard.

```
Example input:
>> enter numbers: 2 3

Example Output:
>> result is: 8
```

2. Write a python to read three floating numbers from the keyboard in a single line with '-' (dash) in between and output their sum.

```
Example input:
>> enter numbers: 2.3-4.5-1.7

Example Output:
>> sum is: 8.5
```

3. Write a python program to reverse every word from a given string **s** and output a new string. The position of words will remain the same, but their contents will be in reverse order.

s = "Programming Hero is the best"

Expected output: "gnimmargorP oreH si eht tseb"

4. Write a python program for the requirement below. Notice the output must be in sorted order -

```
Input  : x3b4U5i2
Output : bbbbiiUUUUUxxx
```

5. Write a python program to read **student_name** and **mark** from keyboard and store the data in a text file with an unique **student_id .**

6. Read the following function -

```
def func(arg1, arg2, arg3=4, arg4=5):
    print(arg1, arg2, arg3, arg4)
```

Now answer the outputs of the following. If you can answer these without writing the code, you are the boss. If you can't, run, understand and answer. Don't google. You'll also become a boss.

#	Case	Answer
a	`func(6, 7)`	?
b	`func(4, 5, arg3=6)`	?
c	`func()`	?
d	`func(3, 4, arg2=1)`	?

7. Write a Python class to get all possible unique subsets from a set of integers.

```
Input  : [4, 5, 6]
Output : [[], [6], [5], [5, 6], [4], [4, 6], [4, 5], [4, 5, 6]]
```

8. Write a Python class to find a pair of elements (indices of the two numbers) from a given array whose sum equals a specific target number.

```
Input:
numbers= [10,20,10,40,50,60,70]
target=50
Output: 3, 4
```

9. Write a class with two instance variables **X, n** . Add two methods **sum()** and **pow()** to get the sum of X+n and exponential/power of X^n .

10. Write a Python class named Distance constructed by two points **(x1, y1), (x2, y2)** and a method which will compute the distance between those points.