

1- Install python interpreter on your machine.

Solution: Done

```
(omar@kali)-[~]  
$ python --version  
Python 3.10.5
```

2- Write a program that counts up the number of vowels [a, e, i, o,u] contained in the string.

Solution:

```
x = input("Enter a string: ").lower()  
print(x)  
print("The number of a: " + str(x.count("a")))  
print("The number of e: " + str(x.count("e")))  
print("The number of i: " + str(x.count("i")))  
print("The number of o: " + str(x.count("o")))  
print("The number of u: " + str(x.count("u")))
```

```
Enter a string: omarioklIoUA  
omarioklioua  
The number of a: 2  
The number of e: 0  
The number of i: 2  
The number of o: 3  
The number of u: 1
```

3- Fill an array of 5 elements from the user, Sort it in descending and ascending orders then display the output.

Solution:

```
x = []  
for i in range(5):  
    x.append(int(input("Enter a number: ")))  
print("The array in descending order: " + str(sorted(x, reverse=True)))  
print("The array in ascending order: " + str(sorted(x)))
```

```
Enter a number: 5  
Enter a number: 10  
Enter a number: 8  
Enter a number: 9  
Enter a number: 3  
The array in descending order: [10, 9, 8, 5, 3]  
The array in ascending order: [3, 5, 8, 9, 10]
```

4- Write a program that prints the number of times the string 'iti' occurs in any string.

Solution:

```
x = input("Enter a string: ").lower()
print (x.count("iti"))
```

```
Enter a string: idflfitifsf ItI ddfdiTi
3
```

5- Write a program that remove all vowels from the input word and generate a brief version of it.

Solution:

```
x = input("Enter a string: ").lower()
y = x.replace("a", "")
y = y.replace("e", "")
y = y.replace("i", "")
y = y.replace("o", "")
y = y.replace("u", "")
print (y)
```

```
Enter a string: omararaaouiIIu00
mrr
```

6- Write a program that prints the locations of 'i' character in any string you added.

Solution:

```
x = input("Enter a string: ").lower()
y= x.index("i")
print (y)
```

```
Enter a string: omarioma
4
```

7- Write a program that generate a multiplication table from 1 to the number passed.

Solution:

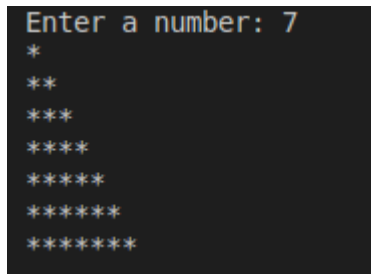
```
num = int(input("Enter the number you want to generate a multiplication table for: "))
result=[]
table=[]
for i in range(1,num+1):
    for j in range(1,i+1):
        result.append(i*j)
    table.append(result)
    result=[]
print(table)
```

```
Enter the number you want to generate a multiplication table for: 5
[[1], [2, 4], [3, 6, 9], [4, 8, 12, 16], [5, 10, 15, 20, 25]]
```

8- Write a program that build a Mario pyramid like below:

Solution:

```
n = input("Enter a number: ")
def marioPyramid(n):
    for i in range(0, n):
        for j in range(i+1):
            print("*", end="")
        print("")
marioPyramid(int(n))
```



```
Enter a number: 7
*
**
***
****
*****
*****
*****
```