OSS Lab 4

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F8

Count Frequencies using numpy

```
>>> number_list = numpy.array([1,2,3,4,5,5,4,3,2,0,9,6,5,7,6,9])
>>> (unique, counts) = numpy.unique(number_list, return_counts=True)
>>> frequencies = numpy.asarray((unique, counts)).T
>>> print(frequencies)
[[0 1]
 [1 1]
 [2 2]
 [3 2]
 [4 2]
 [5 3]
 [6 2]
 [7 1]
 [9 2]]
>>>
```

Arrange 0s and 1s

```
def segregate0and1(arr, n) :

        count = 0

        for i in range(0, n) :
                if (arr[i] == 0) :
                        count = count + 1


        for i in range(0, count) :
                arr[i] = 0

        for i in range(count, n) :
                arr[i] = 1


def print_arr(arr , n) :
        print( "Array after segregation is ",end = "")

        for i in range(0, n) :
                print(arr[i] , end = " ")

arr = [1,0,1,0,0,1,1]
print(arr)
n = len(arr)
segregate0and1(arr, n)
print_arr(arr,n)
```

```
shressth@theterrormaker in ~/Downloads/pythonfilehandling via  v3.9.5 took 1s
λ python q2.py
[1, 0, 1, 0, 0, 1, 1]
Array after segregation is 0 0 0 1 1 1 1 %
```

Remove nth character

```
def remove_char(str, n):
      first_part = str[:n]
      last_part = str[n+1:]
      return first_part + last_part
```

```
>>>
>>> q3.remove_char('HelloWorld!',6)
'HelloWrld!'
>>>
```

Check if element exists in both arrays

```
import numpy as np
def intchecker(array1,array2):
        print(np.in1d(array1, array2))
```

```
Python 3.9.5 (default, May 24 2021, 12:50:35)
[GCC 11.1.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import q4
>>> q4.intchecker([10,40,60,20,50],[0,10,20,30,70])
[ True False False  True False]
>>> q4.intchecker([0,10,40,60,20],[0,40])
[ True False  True False False]
>>>
```

Set-exclusive of 2 arrays

```
import numpy as np
def setex(array1,array2):
        print(np.setxor1d(array1, array2))
```

```
Python 3.9.5 (default, May 24 2021, 12:50:35)
[GCC 11.1.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import q5
>>> q5.setex([0,10,40,60,20,80],[10,40,30,50,70])
[ 0 20 30 50 60 70 80]
>>>
```