Lab7

Initialize an array to any 10 integer/float numbers

```
array=[1,2,3,4,5,6,7,8,9,`0`]
```

change 5th value to `500` using single line and assignment ope

```
array[4]=500
```

Print all numbers using single print statement

```
print(array)
```

Remove all elements from array using .remove(...) function. Us

```
for x in array:
c=a.remove(x)
print(c)
```

Insert/Add 5 numbers in same array using .append(...) functio take input

```
array=[1,2,3,500,5,6,7,8,9,10]
b=int(input("enter a number"))
x=0
while x < 5:
        b=int(input("enter a number"))
        b=array.append(b)
```

Print all numbers using loop statement

```
print(array)
```

Write a program to find out max and min numbers in an a

Example:

Input: Array = [30,55,2,22,11,80,98,47,96,21]

Output: 98 at 7 position is Max & 2 at 3 position is Min

```
a=[1,2,3,4,5,6,7,8,9,10]
print(max(a))
print(min(a))
```

Write a program to count +ve/-ve even/odd in an array

Example:

Input: Array = [5, -3, -4, -6, 8, -7, 10]

Output: +ve even = 2 & -ve even = 2

+ve odd = 1 & -ve odd = 2

```
list1 = [10, -21, 4, -45, 66, -93, 1]

pos_count, neg_count = 0, 0


for num in list1:


    if num >= 0:
        pos_count += 1

    else:
        neg_count += 1

print("Positive numbers in the list: ", pos_count)
print("Negative numbers in the list: ", neg_count)

odd=0
even=0
for x in list1:
    if x % 2 ==0:
        even +=1
    else:
```

```
    else:
        odd +=1
print(even)
print(odd)
```

Write a program to count numbers that are divisible by

```
Array=[4,2,3,5,20,21,19,5]
```

```
Array=[4,2,3,5,20,21,19,5]
count=0
for x in Array:
  if x % 2==0:
    count+=1
```

Write a program to find, how many times number N occurs where N is input from user.

```
Example:
    Input: Array = [20, 22, 38, 74, 38, 55, 45], N is 38
    Output: 38 is 2 times present
```

Write a program to find, how many times numbers from 1 an array.

```
Example:
Input: Array=[10,2,3,6,4,1,1,10,2,6,3,3,3,9]
Output: 1: 2 times
        2: 2 times
        3: 4 times
        4: 1 times
        5: 0 times
        6: 2 times
```

```
7: 0 times
8: 0 times
9: 1 times
10:2 times
```

```
lst = [8, 6, 8, 10, 8, 20, 10, 8, 8]
x = 8
print('{} has occurred {} times'.format(x, count(lst, x)))
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-4-17485e117705> in <module>()
      1 lst = [8, 6, 8, 10, 8, 20, 10, 8, 8]
      2 x = 8
----> 3 print('{} has occurred {} times'.format(x, countX(lst, x)))

NameError: name 'countX' is not defined
```

SEARCH STACK OVERFLOW

Reverse the elements of the following array

```
arr=[5,3,1,8,9,2,4]
Output=[4,2,9,8,1,3,5]
```

```
a=[1,2,3,4]
a.reverse()
print(a)
```

Insert values into a 3x3 Array that are given by the us

Print histogram represented by * for the given array

```
arr=[2,3,4,5,2,1]
```

Print diagonal values in an array

Example:

```
Array= [[3,5,6,1] ,[9,4,1,8] ,[19,11,12,23] , [3,1,5,10]]
Output: 3
        4
        12
        10
```

Write a program to calculate matrix-vector product

Write a program that take number of rows, number of col elements at each position from user and then display th

Write a program to create string array of 10 names of y choice. Ask user input n and print name according to fi of name.

```
Example:

names = ["Taimoor Ali","Muhammad Mustafa","Adeel Ahmed","Kumail","Abdul Haseeb","Muhammad Suffian","A

Input: user_input = "ahm"
Output: Ahmed Raza

Input: user_input = "adEe"
```

```
Output: Adeel Ahmed

Input: user_input = "Ali"
Output: No suggestions

Input: user_input = "MuhamMad"
Output: Muhammad Suffian and Muhammad Mustafa
```