Q)In a given list of elements,all elements are equal except the one.write a code to find the odd man out(stray number)

-->def stray(arr):

key = arr[0]

for i in range(1, len(arr)):

if key == arr[i]:

pass

elif i == len(arr)-1:

return arr[i]

elif arr[i] != arr[i+1]:

return arr[i]

else:

return key

Q)In a given list of elements find the element which is close to its mean in python

-🡪lst = [1, 2, 3, 4, 5]

n = len(lst)

get\_sum = sum(lst)

mean = get\_sum / n

print("Mean / Average is: " + str(mean))

def closest(lst, mean):

return lst[min(range(len(lst)), key=lambda i: abs(lst[i] - mean))]

print(closest(lst, mean))

Q) find the average speed of vehicle given the distance travelled for fixed time intervals

🡪def cal\_speed(dist, time):

    print(" Distance(km) :", dist);

    print(" Time(hr) :", time);

    return dist / time;

def cal\_dis(speed, time):

    print(" Time(hr) :", time) ;

    print(" Speed(km / hr) :", speed);

    return speed \* time;

def cal\_time(dist, speed):

    print(" Distance(km) :", dist);

    print(" Speed(km / hr) :", speed);

    return speed \* dist;

print(" The calculated Speed(km / hr) is :",

                     cal\_speed(45.9, 2.0 ));

print("");

print(" The calculated Distance(km) :",

                   cal\_dis(62.9, 2.5));

print("");

print(" The calculated Time(hr) :",

              cal\_time(48.0, 4.5));

Q)Find the missing no from the given list and modified list

-->def getMissingNo(a, n):

    i, total = 0, 1

    for i in range(2, n + 2):

        total += i

        total -= a[i - 2]

    return total

# Driver Code

arr = [1, 2, 3, 5]

print(getMissingNo(arr, len(arr)))

Q)Find difference between to lowest number in a given list

-->NumList = []

Number = int(input("Please enter the Total Number of List Elements: "))

for i in range(1, Number + 1):

value = int(input("Please enter the Value of %d Element : " %i))

NumList.append(value)

for i in range (Number):

for j in range(i + 1, Number):

if(NumList[i] > NumList[j]):

temp = NumList[i]

NumList[i] = NumList[j]

NumList[j] = temp

print("Element After Sorting List in Ascending Order is : ", NumList)

print(NumList[0]-NumList[1])

Q)In a given list count no. of elements smaller than their mean

-->lst = [1, 2, 3, 4, 5]

n = len(lst)

get\_sum = sum(lst)

mean = get\_sum / n

print("Mean / Average is: " + str(mean))

count = 0

for i in lst:

if i < mean:

count = count + 1

print("The numbers smaller than mean : " + str(count))

Q)Compute the word frequency in a given message

-->def freq(str):

    str = str.split()

    str2 = []

    for i in str:

        # checking for the duplicacy

        if i not in str2:

            # insert value in str2

            str2.append(i)

    for i in range(0, len(str2)):

        print('Frequency of', str2[i], 'is :', str.count(str2[i]))

def main():

    str ='apple mango apple orange orange apple guava mango mango'

    freq(str)

if \_\_name\_\_=="\_\_main\_\_":

    main()

Q) Check whether given string is isogram or not

-->def is\_isogram(word):

    # Convert the word or sentence in lower case letters.

    clean\_word = word.lower()

    # Make an empty list to append unique letters

    letter\_list = []

    for letter in clean\_word:

        # If letter is an alphabet then only check

        if letter.isalpha():

            if letter in letter\_list:

                return False

            letter\_list.append(letter)

    return True

if \_\_name\_\_ == '\_\_main\_\_':

    print(is\_isogram("Machine"))

    print(is\_isogram("isogram"))

    print(is\_isogram("GeeksforGeeks"))

    print(is\_isogram("Alphabet "))

Q) Given a string find the Mexican wave

-->s='python'

new=[]

for i, val in enumerate(s[:]):

up=s[i].upper()

c=s[:i] + up + s[i+1:]

new.append(c)

print(new)

Q) Given a number find the largest number by deleting single digit (order of digits will remain same)

-->def maxnumber(n, k):

    for i in range(0, k):

        ans = 0

        i = 1

        while n // i > 0:

            temp = (n//(i \* 10))\*i + (n % i)

            i \*= 10

            if temp > ans:

                ans = temp

        n = ans

    return ans;

n = 6358

k = 1

print(maxnumber(n, k))

Q) Given a number find the largest number by shuffling the digits

-->def printMaximum(inum):

    count = [0 for x in range(10)]

    string = str(num)

    # Updating the count array

    for i in range(len(string)):

        count[int(string[i])] = count[int(string[i])] +  1

    result = 0

    multiplier = 1

    for i in range(10):

        while count[i] > 0:

            result = result + ( i \* multiplier )

            count[i] = count[i] - 1

            multiplier = multiplier \* 10

    return result

num = 38293367

print printMaximum(num)

Q) rgb to hex conversion and vice versa

-->def rgb\_to\_hex(rgb):

return '%02x%02x%02x' % rgb

rgb\_to\_hex((255, 255, 195))

Q) Generate accumulated string

-->test\_list = ['gfg-is-all-best']

# printing original list

print("The original list is : " + str(test\_list))

# initializing Split char

spl\_char = "-"

# Cummulative List Split

# Using loop

res = []

for sub in test\_list:

    for idx in range(len(sub)):

        if sub[idx] == spl\_char:

            res.append([ sub[:idx] ])

    res.append([ sub ])

# printing result

print("The Cummulative List Splits : " + str(res))

Q)Convert ip address from “a.b.c.d” format into integer and vice versa

-->def IP2Int(ip):

o = map(int, ip.split('.'))

res = (16777216 \* o[0]) + (65536 \* o[1]) + (256 \* o[2]) + o[3]

return res

def Int2IP(ipnum):

o1 = int(ipnum / 16777216) % 256

o2 = int(ipnum / 65536) % 256

o3 = int(ipnum / 256) % 256

o4 = int(ipnum) % 256

return '%(o1)s.%(o2)s.%(o3)s.%(o4)s' % locals()

Q)Find the no.of people in a bus ,given the data of people onboarding &alighting at each station.

-->bus\_array = [(10,0), (2,1), (1,11)]

passengers\_left = sum([entered - left for entered, left in bus\_array])