**List-1**

Q.1)

l = [5,5,5,5,5,5,5,6]

l.sort()

print(l[-1])

Q.2)

l=[10,21,35,11,78,2,5,1,65,69,87]

s = 0

for i in l:

s+=i

avg = s/len(l)

print(avg)

l.sort()

print(l)

if avg in l:

i = l.index(avg)

print(l[i-1],l[i+1])

else:

for x in l:

if avg<x:

b=x

break

print(l[l.index(b)-1],l[l.index(b)])

Q.6

l=[10,21,35,11,78,2,5,1,65,69,87]

l.sort()

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

Q.7

l = [1,2,3,4,5,6,7,8,9];

len\_list = len(l)

sum = 0;

for i in range(len\_list):

sum = l[i]+sum;

avrg = sum/len\_list;

#print(avrg);

l\_counter = 0;

for i in range(len\_list):

if(l[i]<avrg):

l\_counter = l\_counter+1;

print(l\_counter);

**List-2**

Q-3) Convert ip address from “a.b.c.d” format into integer and vice versa

# importing the module  
  
import ipaddress  
  
# converting IPv4 address to int  
  
addr1 = ipaddress.ip\_address('191.255.254.40')  
  
addr2 = ipaddress.ip\_address('0.0.0.123')  
  
print(int(addr1))  
  
print(int(addr2))  
  
# converting IPv6 address to int  
  
addr3 = ipaddress.ip\_address('2001:db7:dc75:365:220a:7c84:d796:6401')  
  
print(int(addr3))  
  
print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")  
# importing the module  
  
import ipaddress  
  
# converting int to IPv4 address  
  
print(ipaddress.ip\_address(3221225000))  
  
print(ipaddress.ip\_address(123))  
  
# converting int to IPv6 address  
  
print(ipaddress.ip\_address(42540766400282592856903984001653826561))

Q-4) Check whether given string is isogram or not

def check\_isogram(string):  
 string = string.lower()  
 a = [x for x in list(set(list(string))) if x != ' ']  
 b = [x for x in list(string) if x != ' ']

if len(a) == len(b):  
 return string + " is an Isogram"  
 else:  
 return string + " is not an Isogram"  
print(check\_isogram("document"))

Q-5) given a string , find the mexican wave

s='hello'  
new=[]  
for i, val in enumerate(s[:]):  
 up=s[i].upper()  
 c=s[:i] + up + s[i+1:]  
 new.append(c)  
print(new)

Q-7. Largest number by shuffling

a = 23546354723  
  
strng\_list = str(a)  
  
digit\_map = map(int,strng\_list)  
  
digit\_list = list(digit\_map)  
  
##print(digit\_list)  
  
digit\_list.sort(reverse=True)  
  
##print(digit\_list)  
  
for i in digit\_list:  
 print(i, end= "")

Q-8) Word frequency

word = 'Ajay Ajayajayaajaya '  
data = {}  
for iin word:  
if iin data:  
 data[i] = data[i] + 1  
else:  
 data[i] = 1  
print(data)

Q-9) RGB to HEX and HEX to RGB

# Change the value of r,g and b as per requirement  
r = 128  
g = 96  
b = 194  
hexColor = '#%02x%02x%02x' % (r, g, b)  
  
print(hexColor)  
# Change the value of hex color as per requirement  
hexColor = '#8060c2'  
r = int(hexColor[1:3], 16)  
g = int(hexColor[3:5], 16)  
b = int(hexColor[5:7], 16)  
  
print(str(r) + ',' + str(g) + ',' + str(b))

Q-10) accumulated string

mylist = ("accumalated string")  
num = 0  
for iin mylist:  
num = num+1  
str1 = num\*i  
print(str1)