MOTHER'S GLOBAL SCHOOL

COMPUTER SCIENCE SUMMER HOLIDAY HOMEWORK

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12TH A
ROLL NO.25

DESIGN:
(QUESTION NUMBER).
#QUESTION
SOURCE CODE

OUTPUT

1.
#Write a program to calculate the mean of a given list of numbers.

```
n=int(input("range:"))
j=0
for i in range(n):
    l=float(input("enter number:"))
    j+=l
mean=j/n
print("mean:",mean)
```

```
range:8
enter number:2
enter number:2
enter number:2
enter number:2
enter number:2
enter number:2
enter number:2
enter number:2.88
mean: 2.11
```

2.
#Write a program to calculate the minimum element of a given list of numbers.

```
a=[148485,8496,1.5,5,5894]
n=len(a)
print(a)
for i in range(n-1):
    for j in range(n-i-1):
        if a[j]>a[j+1]:
            a[j+1],a[j]=a[j],a[j+1]
print("minimum element:",a[0])
```

```
[148485, 8496, 1.5, 5, 5894]
minimum element: 1.5
```

3.
#Write a code to calculate and display total marks and percentage of a student from a given list storing the marks of a student.

```
n=int(input("RANGE:"))
d1={}

for i in range(n):
    l1=[1,1,1,1,1]
    a=str(input("Name:"))
    b=input("Comp.Sci. Marks:")
    c=input("Eng. Marks:")
    d=input("Math. Marks:")
    e=input("Phy. Marks:")
```

```
    f=input("Chem. Marks:")
    l1[0]=b
    l1[1]=c
    l1[2]=d
    l1[3]=e
    l1[4]=f
    d1[a]=l1
print(d1)


q=1
while q==1:
    z=input("Do you want to see marks and percentage
of student Y/N:")
    if z=="Y":
        m=input("Enter name of student:")

print("Marks","Cs:",d1[m][0],"Eng:",d1[m][1],"Math:",d
1[m][2],"Phy:",d1[m][3],"Che:",d1[m][4])

print("percentage:",(float(d1[m][0])+float(d1[m][1])+flo
at(d1[m][2])+float(d1[m][3])+float(d1[m][4]))*100/500)
    elif z=="N":
        q=0
```

```
RANGE:3
Name:siddhant
Comp.Sci. Marks:100
Eng. Marks:100
Math. Marks:100
Phy. Marks:100
Chem. Marks:100
Name:arjun
Comp.Sci. Marks:90
Eng. Marks:90
Math. Marks:90
Phy. Marks:90
Chem. Marks:90
Name:drishti
Comp.Sci. Marks:80
Eng. Marks:80
Math. Marks:80
Phy. Marks:80
Chem. Marks:80
{'siddhant': ['100', '100', '100', '100', '100'], 'arjun': ['90',
'90', '90', '90', '90'], 'drishti': ['80', '80', '80', '80', '80']}
Do you want to see marks and percentage of student
Y/N:Y
Enter name of student:siddhant
Marks Cs: 100 Eng: 100 Math: 100 Phy: 100 Che: 100
percentage: 100.0
Do you want to see marks and percentage of student
Y/N:N
```

4.

#Write a Program to multiply an element by 2 if it is an odd index for a given list containing both numbers and strings.

```
l1=[8958,88.05623,"yvyh",1,"95"]
print(l1)
for i in range(len(l1)):
    if (i%2)!=0:
        l1[i]*=2
print(l1)
```

```
[8958, 88.05623, 'yvyh', 1, '95']
[8958, 176.11246, 'yvyh', 2, '95']
```

5.

#Write a Program to count the frequency of an element in a given list.

```
l1=[]
d={}
n=int(input("enter the number of elemets:"))
for i in range(0,n):
   a=input("Enter the element:")
   l1.append(a)

print("list:",l1)
for i in l1:
   b=l1.count(i)
   d[i]=b
print("frequencies:",d)
```

```
enter the number of elemets:4
Enter the element:asa
Enter the element:asd
Enter the element:asa
Enter the element:asa
list: ['asa', 'asd', 'asa', 'asa']
frequencies: {'asa': 3, 'asd': 1}
```

6.

#Write a Program to shift elements of a list so that the first element moves to the second index and second index moves to the third index, and so on, and the last element shifts to the first position. Suppose the list is [10,20,30,40] After shifting, it should look like: [40,10,20,30]

```
l1=[10,20,30,40]
print(l1)
l1.insert(0,l1[-1])
```

```
l1.pop(-1)
print("new list:",l1)
```

```
[10, 20, 30, 40]
new list:[40, 10, 20, 30]
```

7.

```
#A list Num contains the following elements:3, 25, 13, 6,
35, 8, 14, 45.Write a function to swap the content with
the next value divisible by 5 so that the.resultant list will
look like: 25, 3, 13, 35, 6, 8, 45, 14
l1=[3, 25, 13, 6, 35, 8, 14, 45]
k=0
while k<len(l1):
   if l1[k]%5==0:
      l1[k-1],l1[k]=l1[k],l1[k-1]
      k+=1
   else:
      k+=1
print(l1)
```

```
[25, 3, 13, 35, 6, 8, 45, 14]
```

8.

```
#Write a program to accept values from a user in a
tuple. Add a tuple to it and display its elements one by
one. Also display its maximum and minimum value.

#tuple formation:
t1=()
n1=int(input("enter the no. of  values:"))
for i in range(n1):
      j=input("enter element:")
      t1+=(j,)
print("your tuple",t1)

#tuple element display
print("tuple elements:")
for i in t1:
      print(i)

#max and min:
a=list(t1)
n=len(a)
for i in range(n-1):
      for j in range(n-i-1):
            if a[j]>a[j+1]:
                  a[j+1],a[j]=a[j],a[j+1]
maximum_value=a[-1]
minimum_value=a[0]
print("maximum_value:",maximum_value)
print("minimum_value:",minimum_value)
```

```
enter the no. of  values:4
enter element:876
enter element:5296.428
enter element:48
enter element:623
your tuple ('876', '5296.428', '48', '623')
tuple elements:
876
5296.428
48
623
maximum_value: 876
minimum_value: 48
```

9.

```
#Write a program to input any values for two tuples.
Print it, interchange it and then compare them.
#tuple formation:
t1=()
n1=int(input("enter the no. of  values for both tuple 1 &
tuple 2:"))
for i1 in range(n1):
      j1=input("enter element:")
      t1+=(j1,)
print("your tuple:",t1)
#tuple formation:
t2=()
n2=n1
for i2 in range(n2):
      j2=input("enter element:")
      t2+=(j2,)
print("your tuple:",t2)
t1, t2 = t2, t1
print ("After swapping")
print ("First tuple")
print (t1)
print ("Second tuple")
print (t2)
if t1>t2:
      m="t1>t2"
elif t1==t2:
      m="t1=t2"
elif t1<t2:
      m="t1<t2"
print("comparison:",m)
```

```
enter the no. of  values for both tuple 1 & tuple 2:4
enter element:45
enter element:asd
```

```
enter element:4
enter element:a
your tuple: ('45', 'asd', '4', 'a')
enter element:53
enter element:5
enter element:5
enter element:5
your tuple: ('53', '5', '5', '5')
After swapping
First tuple
('53', '5', '5', '5')
Second tuple
('45', 'asd', '4', 'a')
comparison: t1>t2
```

10.

#Write a Python program to input ‘n’ classes and names of their class teachers to store them in a dictionary and display the same. Also accept a particular class from the user and display the name of the class teacher of that class.

```
d={}
n=int(input("Enter the number of classes:"))
for i in range(0,n):
   a=input("Enter the name of class:")
   b=input("Enter the name of class teacher:")
   d[a]=b
print(d)
b=1
while b==1:
      c=input("do you want to see specific entry now
Y/N:")
      if c=="Y":
            f=input("the entry name you want to see:")
            print(d[f])
      elif c=="N":
            b=0
```

```
Enter the number of classes:4
Enter the name of class:10
Enter the name of class teacher:nidhi maam
Enter the name of class:5
Enter the name of class teacher:shapili maam
Enter the name of class:7
Enter the name of class teacher:corona maam
Enter the name of class:5
Enter the name of class teacher:modi maam
{'10': 'nidhi maam', '5': 'modi maam', '7': 'corona
maam'}
do you want to see specific entry now Y/N:Y
the entry name you want to see:5
modi maam
do you want to see specific entry now Y/N:Y
the entry name you want to see:7
corona maam
do you want to see specific entry now Y/N:N
```

11.

#Write a program to store student names and their percentage in a dictionary and delete a particular student name from the dictionary. Also display the dictionary after deletion.

```
d1={}
n=int(input("no. of students:"))
j=1
while j<=n:
      name=input("enter name:")
      per=float(input("enter percentage:"))
      d1[name]=per
      j+=1
print(d1)
b=1
while b==1:
      c=input("do you want to delete entry now Y/N:")
      if c=="Y":
            a=input("the entry name you want to delete:")
            d1.pop(a)
            print(d1)
      elif c=="N":
            b=0
```

```
no. of students:3
enter name:siddhant
enter percentage:100
enter name:arjun
enter percentage:100
enter name:piyush jain
enter percentage:100
{'siddhant': 100.0, 'arjun': 100.0, 'piyush jain': 100.0}
do you want to delete entry now Y/N:Y
the entry name you want to delete:arjun
{'siddhant': 100.0, 'piyush jain': 100.0}
do you want to delete entry now Y/N:N
```

12.

#Write a Python program to input names of ‘n’ customers and their details like items bought, cost and phone number, etc., store them in a dictionary and display all the details in a tabular form.

```
e=dict()
n=int(input("Enter the number of customers:"))
for i in range(0,n):
```

```
    l=[]
    a=str(input("Enter the name of the customer:"))
    b=str(input("Enter the name of item bought:"))
    c=int(input("Enter the cost:"))
    d=int(input("Enter the Phone number:"))
    l.append(b)
    l.append(c)
    l.append(d)
    e[a]=l
print("Name\tItem\tCost\tPhone Number")
for i in e:
    print(i,"\t",e[i][0],"\t",e[i][1],"\t",e[i][2])
```

```
Enter the number of customers:3
Enter the name of the customer:a
Enter the name of item bought:dahi
Enter the cost:100
Enter the Phone number:100
Enter the name of the customer:arjun
Enter the name of item bought:div
Enter the cost:10000
Enter the Phone number:10000
Enter the name of the customer:sid
Enter the name of item bought:mgs
Enter the cost:1000000
Enter the Phone number:8076218888
Name    Item      Cost      Phone Number
a           dahi      100       100
arjun     div       10000    10000
sid         mgs      1000000  8076218888
```

13.

#Write a Python program to capitalize first and last letters of each word of a given string.

```
s1=str(input("Enter the string"))
a=""
l1=list(s1.split(" "))
for i in l1:
        if len(i)==1:
                a+=i[0:1].upper()+" "
        else:
                a+=i[0:1].upper()+i[1:-1]+i[-1].upper()+" "
print(a)
```

```
Enter the stringa Quick brown 69 dog jump over himalaya
A QuicK BrowN 69 DoG JumP OveR HimalayA
```

14.

#Write a Python program to remove duplicate characters of a given string.

```
a=str(input("Enter the string:"))
b=""
l=[]
for i in a:
    if i not in l:
        b+=i
        l.append(i)
print(b)
```

```
Enter the string:HEllo World i am siddhant bali
HElo Wrdiamshntb
```

15.

#Write a Python program to compute sum of digits of a given string.

```
s1=str(input("ENTER STRING:"))
#process
sums=0
for i in s1:
        if i.isdigit()==True:
                sums+=int(i)
print(sums)
```

```
ENTER STRING:111111   cd sdlkvnj1111
10
```

16.

#Write a Python program to find the second most repeated word in a given string.

```
a=str(input("Enter the string"))
l=a.split(" ")
d={}
for i in l:
    b=l.count(i)
    d[b]=i
c=list(d.keys())
c.sort()
z=c[1]
print("the element which has occure second most times is",d[z])
```

```
Enter the stringA QuicK BrowN 69 DoG JumP OveR HimalayA DoG DoG DoG DoG HimalayA
the element which has occure second most times is HimalayA
```

17.

#Write a Python program to change a given string to a new string where the first and last chars have been exchanged.

```
a=str(input("Enter the string:"))
b=len(a)
c=a[-1]+a[1:(b-1)]+a[0]
```

```
print(c)
```

```
Enter the string:sansknsakd
dansknsaks
```

18.

```
#Write a Python program to multiply all the items in a
list.
l1=[1963,82,89.665,55,8,1]
s=1
for i in l1:
    s*=i
print(s)
```

```
6350527211.6
```

19.

```
#Write a Python program to get the smallest number
from a list.
n=int(input("Enter the number of elements:"))
a=[]
for i in range(0,n):
  a1=float(input("Enter the element:"))
  a.append(a1)
#Bubble Sort
n=len(a)
print("LIST:",a)
for i in range(n-1):
    for j in range(n-i-1):
        if a[j]>a[j+1]:
            a[j+1],a[j]=a[j],a[j+1]
print("SMALLEST ELEMENT:",a[0])
```

```
Enter the number of elements:6
Enter the element:296.623
Enter the element:26
Enter the element:05
Enter the element:5
Enter the element:5
Enter the element:6
LIST: [296.623, 26.0, 5.0, 5.0, 5.0, 6.0]
SMALLEST ELEMENT: 5.0
```

20.

```
#Write a Python program to append a list to the second
list.
l1=[1,96,9,8,1,2,3,0,4,7,5,60,4]
l2=[1963,82,89.665,55,8,1]
print('first list:',l1)
print('second list:',l2)
for i in l1:
    l2.append(i)
print("now second list is:",l2)
```

```
first list: [1, 96, 9, 8, 1, 2, 3, 0, 4, 7, 5, 60, 4]
second list: [1963, 82, 89.665, 55, 8, 1]
now second list is: [1963, 82, 89.665, 55, 8, 1, 1, 96, 9, 8,
1, 2, 3, 0, 4, 7, 5, 60, 4]
```

21.

```
#Write a Python program to generate and print a list of
first and last 5 elements where the values are square of
numbers between 1 and 30 (both included).

n=int(input("Range:"))
l1=[]
for i in range(0,n):
  if i*i>=1 and i*i<=n:
    l1.append(i)
print(l1)
print("First 5 numbers are",l1[0:5])
print("Last 5 numbers are",l1[-1:-6:-1])
```

```
Range:30
[1, 2, 3, 4, 5]
First 5 numbers are [1, 2, 3, 4, 5]
Last 5 numbers are [5, 4, 3, 2, 1]
```

22.

```
#Write a Python program to get unique values from a
list.
n=int(input("Enter the number of elements:"))
a=[]
for i in range(0,n):
  a1=input("Enter the element:")
  a.append(a1)
print("ACTUAL LIST:",a)
l=[]
for i in a:
  if i not in l:
    l.append(i)
print("LIST HAVING UNIQUE ELEMENTS:",l)
```

```
Enter the number of elements:6
Enter the element:ASD
Enter the element:ADS
Enter the element:ASD
Enter the element:ASD
Enter the element:FGH
Enter the element:FGH
ACTUAL LIST: ['ASD', 'ADS', 'ASD', 'ASD', 'FGH', 'FGH']
LIST HAVING UNIQUE ELEMENTS: ['ASD', 'ADS', 'FGH']
```

23.

```
#Write a Python program to convert a string to a list.
l1=[]
a=str(input("Enter the STRING:"))
l1.extend(a)
print(l1)
```

```
Enter the STRING:SDASCDASKU KJNJSADA5662465
['S', 'D', 'A', 'S', 'C', 'D', 'A', 'S', 'K', 'U', ' ', 'K', 'J', 'N', 'J', 'S',
'A', 'D', 'A', '5', '6', '6', '2', '4', '6', '5']
```

24.

```
#Write a Python script to concatenate the following
dictionaries to create a new one: d1 = {'A':1, 'B':2, 'C':3}
d2 = {'D':4} Output should be: {'A':1, 'B':2, 'C':3, 'D':4}
d1={'A':1,'B':2,'C':3}
d2={'D':4}
for i in d2:
   d1[i]=d2[i]
print("The new list is",d1)
```

```
The new list is {'A': 1, 'B': 2, 'C': 3, 'D': 4}
```

25.

```
#Write a Python script to check if a given key already
exists in a dictionary.
n=int(input("Enter the number of elements:"))
di={}
for i in range(0,n):
   a=input("Enter the element:")
   b=input("Enter the value:")
   di[a]=b
d=list(di.keys())
a=input("Enter the key:")
if a in d:
   print("The given key exists")
else:
   print("The given key is INVAILD")
```

```
Enter the number of elements:5
Enter the element:S
Enter the value:A
Enter the element:SA
Enter the value:AS
Enter the element:AS
Enter the value:AAS
Enter the element:ASS
Enter the value:AAS
Enter the element:FF
Enter the value:DDF
Enter the key:S
The given key exists
```