**Group A:Assignment No 1**

Write a Python program to store marks scored in subject “Fundamental of Data Structure” by N students in the class. Write functions to compute following:

1. The average score of class
2. Highest score and lowest score of class
3. Count of students who were absent for the test

Display mark with highest frequency

**Program:**

# Function for count of student absent for test

def absentSC(listOfStudent, numberOfStudent):

count = 0

for i in range(numberOfStudent):

if listOfStudent[i]==0:

count +=1

return count

# Function for Maximum-------------------------------------------->>

def maxMarks(listOfStudent, numberOfStudent):

max = 0

for i in range(numberOfStudent):

if max<listOfStudent[i]:

max = listOfStudent[i]

return max

# Function to calculate largest marks frequency

def largestMFreq(numberOfStudent, listOfStudent):

count = 0

check = maxMarks(listOfStudent, numberOfStudent)

for i in range(numberOfStudent):

if check == listOfStudent[i]:

count += 1

return count

# Function to calculate minimum marks frequency

def minMFreq(numberOfStudent, listOfStudent):

count = 0

check = minMarks(listOfStudent, numberOfStudent)

for i in range(numberOfStudent):

if check == listOfStudent[i]:

count += 1

return count

# Function for Minimum------------------------------------------->>>

def minMarks(listOfStudent, numberOfStudent):

min = listOfStudent[0]

for i in range(numberOfStudent):

if min>listOfStudent[i]:

min = listOfStudent[i]

return min

# Function for Average--------------------------------->>>

def averageOfMarks(listOfStudent, numberOfStudent):

sumInitialize = 0

for i in range(numberOfStudent):

sumInitialize += listOfStudent[i]

return (sumInitialize/numberOfStudent)

# main program---->>

loop = True

listOfStudent = []

numberOfStudent = int(input("Enter No of Student: "))

count = 1

for i in range(numberOfStudent):

marks = int(input(f"Enter marks for student {count}: "))

listOfStudent.append(marks)

count+=1

def showList():

print("--------------------Select Your Choice From Following list-----------------\n1) Enter 1 for Average\n2) Enter 2 for Maximum\n3) Enter 3 for Minimum\n4)Enter 4 for Largest Marks Frequency\n5)Enter 5 for minimum Marks Frequency\n6)Enter 6 for Count of absent student\n7) Enter 7 to create new list of marks\n8) Enter 8 to exit")

showList()

while loop:

choice = input("Enter your choice: ")

if choice == "1":

print("Average marks obtained by student is:",averageOfMarks(listOfStudent, numberOfStudent))

elif choice == "2":

print("Maximum marks obtained by student is: ",maxMarks(listOfStudent, numberOfStudent))

elif choice == "3":

print("Minimum marks obtained by student is: ",minMarks(listOfStudent, numberOfStudent))

elif choice == "4":

print(f"{maxMarks(listOfStudent, numberOfStudent)} is largest marks and its frequency is: ",largestMFreq(numberOfStudent, listOfStudent))

elif choice == "5":

print(minMarks(listOfStudent, numberOfStudent), " is minimum marks and its frequency is: ",minMFreq(numberOfStudent, listOfStudent))

elif choice == "6":

print("Number of absent student are: ", absentSC(listOfStudent, numberOfStudent))

elif choice == "7":

print("New list created")

listOfStudent = []

numberOfStudent = int(input("Enter No of Student: "))

count = 1

for i in range(numberOfStudent):

marks = int(input(f"Enter marks for student {count}: "))

listOfStudent.append(marks)

count+=1

print("--------------------Select Your Choice From Following list-----------------\n1) Enter 1 for Average\n2) Enter 2 for Maximum\n3) Enter 3 for Minimum\n4)Enter 4 for Largest Marks Frequency\n5)Enter 5 for minimum Marks Frequency\n6)Enter 6 for Count of absent student\n7) Enter 7 to create new list of marks\n8) Enter 8 to exit")

elif choice == "8":

loop = False

else:

print("You entered wrong choice try again")