**# Group A - Assignment 1**

print("Group A :- 'Assignment No. 1'")

def Problem\_Statement():

"""

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:

a) The average score of class

b) Highest score and lowest score of class

c) Count of students who were absent for the test

d) Display mark with highest frequency

"""

print(Problem\_Statement.\_\_doc\_\_)

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

# Creating an empty list for taking input of FDS student marks.

marks = []

def student\_info():

n = int(input("\nEnter number of students in Fundamental of Data structures: "))

for i in range(n):

M = int(input(f"Enter the marks for {i+1} students: (Write -1 for absent studnet)" ))

marks.append(M) # adding the marks of students

print("Original mark-list of students in FDS : " + str(marks))

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

# Calculate Average score of class

def average\_marks():

total = 0

cnt = 0

for i in range(len(marks)):

if marks[i] != -1:

total = total + marks[i]

cnt += 1

print("Total is: ", total)

print("Average Score of the class is (in integer): ",total//cnt)

print("Average Score of the class is (in decimal): ",total/cnt)

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

# Calculating MInimum and Maximum Score of Class

def max\_min():

temp = marks[0]

for i in range(len(marks)):

if temp < marks[i]:

temp = marks[i]

print("Highest Marks: ", temp)

temp = marks[0]

for i in range(len(marks)):

if temp > marks[i]:

temp = marks[i]

print("Lowest Marks: ", temp)

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

# Counting number of students who are absent for the test

def count\_abs():

cnt=0

for i in range(len(marks)):

if marks[i] == -1:

cnt+=1

print("Number of students absent for the test are: ", cnt)

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

#Calulating Marks with Highest Frequency

def high\_freq():

freq = []

for i in range(len(marks)):

if marks[i] != -1:

freq.append(marks.count(marks[i]))

print(freq)

k = max(freq)

print("Highest frequency: ", k)

print("Highest Marks: ",marks[k])

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>

#main()

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

print("=\_\_\_\_-----\_\_\_\_\_TAKE INPUT\_\_\_\_\_-----\_\_\_\_=")

student\_info()

while(True):

print("\n\n1. The average score of class")

print("2. Highest score and lowest score of class")

print("3. Count of students who were absent for the test")

print("4. Display mark with highest frequency")

print("5. Exit\n\n")

choice = int(input())

if (choice==1):

average\_marks()

if (choice==2):

max\_min()

if (choice==3):

count\_abs()

if (choice==4):

high\_freq()

if (choice==5):

exit()

#<\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*>