Logo

STUDENT REPORT

DETAILS

Name

ABDUL KHUDDUS KHAZI

Roll Number

KUB23CSE002

EXPERIMENT

Title

MINIMUM ARRAY SUM

Description

Paul is given an array A of length N. He must perform the following Operations on the array sequentially:

* Choose any two integers from the array and calculate their average.

* If an element is less than the average, update it to 0. However, if the element is greater than or equal to the average, he need not update it.

Your task is to help Paul find and return an integer value, representing the minimum possible sum of all the elements in the array by performing the above operations.

Note: An exact average should be calculated, even if it results in a decimal.

Input Format:

input1: An integer value N, representing the size of the array A.

input2: An integer array A.

Output Format:

Return an integer value, representing the minimum possible sum of all the elements in the array by

Sample Input

5
1 2 3 4 5

Sample Output

5

Source Code:

```
def min_sum_after_operations(N, A):
    if N < 2:
        return sum(A)  # If there's one or no elements, return the sum as is.

    # Sort the array to easily calculate averages
    A.sort()

    # The minimum sum will be achieved by reducing all elements
    # less than the average of the two largest elements to 0.
    average = (A[-1] + A[-2]) / 2  # Average of the two largest elements

    # Calculate the sum after applying the operation
    total_sum = sum(x if x >= average else 0 for x in A)

    return total_sum

# Input reading
N = int(input())
A = list(map(int, input().split()))
print(min_sum_after_operations(N, A))
```

RESULT

5 / 5 Test Cases Passed | 100 %