STUDENT REPORT

DETAILS

Name

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Roll Number

KUB23CSE131

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_possible_sum(N, A):
    A.sort()  # Sort the array to access the smallest elements easily

    # Continuously apply the operation on the smallest elements
    while len(A) > 1:
        # Take the two smallest elements
        x = A[0]
        y = A[1]
        average = (x + y) / 2

        # Update elements based on the average
        A = [0 if a < average else a for a in A]

        # Remove all zeros from the array
        A = [a for a in A if a > 0]

        # Re-sort the array after the update
        A.sort()

    # Return the sum of the remaining elements
    return sum(A)

# Example usage
N = 5
A = [1, 2, 3, 4, 5]
print(min_possible_sum(N, A))  # Output: 5
```

RESULT

1 / 5 Test Cases Passed | 20 %