

1. Write a function which checks if string is palindrom

A phrase is a palindrome if, after converting all uppercase letters into lowercase letters and

removing all non-alphanumeric characters, it reads the same forward and backward.

Alphanumeric characters include letters and numbers.

Given a string *s*, return true if it is a palindrome, or false otherwise.

Example 1:

Input: *s* = "A man, a plan, a canal: Panama"

Output: true

Explanation: "amanaplanacanalpanama" is a palindrome.

Example 2:

Input: *s* = "race a car"

Output: false

Explanation: "raceacar" is not a palindrome.

Example 3:

Input: *s* = " "

Output: true

Explanation: *s* is an empty string "" after removing non-alphanumeric characters.

Since an empty string reads the same forward and backward, it is a palindrome.

2. Given five positive integers, find the minimum and maximum values that can be

calculated by summing exactly four of the five integers. Then print the respective minimum

and maximum values as a single line of two space-separated long integers.

Example

arr = [1, 3, 5, 7, 9]

The minimum sum is $1 + 3 + 5 + 7 = 16$ and the maximum sum is $3 + 5 + 7 + 9 = 24$. The function prints

```
16 24
```

Hint: sort the array first

3. Complete the aVeryBigSum function, It must return the sum of all array elements.

Sample Input

```
5
10000000001 10000000002 10000000003 10000000004 10000000005
```

Output

```
50000000015
```

4. Climbing Stairs

You are climbing a staircase. It takes n steps to reach the top.

Each time you can either climb 1 or 2 steps. In how many distinct ways can you climb to the top?

Example 1:

Input: $n = 2$

Output: 2

Explanation: There are two ways to climb to the top.

1. 1 step + 1 step
2. 2 steps

Example 2:

Input: $n = 3$

Output: 3

Explanation: There are three ways to climb to the top.

1. 1 step + 1 step + 1 step
2. 1 step + 2 steps
3. 2 steps + 1 step