



链滴

[每日 LeetCode] 561. Array Partition I

作者: [Hanseltu](#)

原文链接: <https://ld246.com/article/1554041911911>

来源网站: [链滴](#)

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Description:

Given an array of $2n$ integers, your task is to group these integers into n pairs of integer, say $(a_1, b_1), (a_2, b_2), \dots, (a_n, b_n)$ which makes sum of $\min(a_i, b_i)$ for all i from 1 to n as large as possible.

Example 1:

Input: [1,4,3,2]

Output: 4

Explanation: n is 2, and the maximum sum of pairs is $4 = \min(1, 2) + \min(3, 4)$.

Note:

1. n is a positive integer, which is in the range of $[1, 10000]$.
2. All the integers in the array will be in the range of $[-10000, 10000]$.

思路：本题要求对数组中的元素两两分组，取每组的最小值，最后把每组最小值相加，求如何组合得最大的和。细想本题，我们只需使每个组的两个元素相差尽量小，以免浪费较大的数字。先对数组排序，从第一个元素开始，隔一个元素取一个数字，再相加即可。

C++代码

```
class Solution {
public:
    int arrayPairSum(vector<int>& nums) {
        int ret =0;
        sort(nums.begin(), nums.end());
        for (int i=0; i<nums.size(); i = i+2){
            ret += nums[i];
        }
        return ret;
    }
};
```

运行时间：92ms

运行内存：11.4M