

5961. Maximum Twin Sum of a Linked List

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Back to Contest (/contest/biweekly-contest-69/)

In a linked list of size n , where n is **even**, the i^{th} node (**0-indexed**) of the linked list is known as the **twin** of the $(n-1-i)^{\text{th}}$ node, if $0 \leq i \leq (n / 2) - 1$.

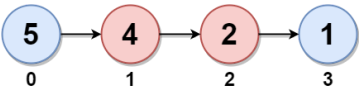
- For example, if $n = 4$, then node 0 is the twin of node 3 , and node 1 is the twin of node 2 . These are the only nodes with twins for $n = 4$.

The **twin sum** is defined as the sum of a node and its twin.

Given the `head` of a linked list with even length, return *the maximum twin sum of the linked list*.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:



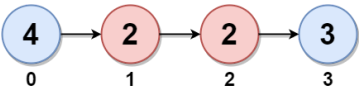
Input: head = [5,4,2,1]

Output: 6

Explanation:

Nodes 0 and 1 are the twins of nodes 3 and 2, respectively. All have twin sum = 6. There are no other nodes with twins in the linked list. Thus, the maximum twin sum of the linked list is 6.

Example 2:



Input: head = [4,2,2,3]

Output: 7

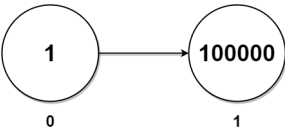
Explanation:

The nodes with twins present in this linked list are:

- Node 0 is the twin of node 3 having a twin sum of $4 + 3 = 7$.
- Node 1 is the twin of node 2 having a twin sum of $2 + 2 = 4$.

Thus, the maximum twin sum of the linked list is $\max(7, 4) = 7$.

Example 3:



Input: head = [1,100000]

Output: 100001

Explanation:

There is only one node with a twin in the linked list having twin sum of $1 + 100000 = 100001$.

Constraints:

- The number of nodes in the list is an **even** integer in the range $[2, 10^5]$.
- $1 \leq \text{Node.val} \leq 10^5$

JavaScript

```
1  /**
2   * Definition for singly-linked list.
3   * function ListNode(val, next) {
4   *     this.val = (val===undefined ? 0 : val)
5   *     this.next = (next===undefined ? null : next)
6   * }
7   */
8  /**
9   * @param {ListNode} head
10  * @return {number}
11  */
12  var pairSum = function(head) {
13
14  };
```

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