Problem 3062: Winner of the Linked List Game

Problem Information

Difficulty: Easy
Acceptance Rate: 77.76%
Paid Only: Yes
Tags: Linked List

Problem Description

You are given the `head` of a linked list of **even** length containing integers.

Each **odd-indexed** node contains an odd integer and each **even-indexed** node contains an even integer.

We call each even-indexed node and its next node a **pair** , e.g., the nodes with indices `0` and `1` are a pair, the nodes with indices `2` and `3` are a pair, and so on.

For every **pair** , we compare the values of the nodes in the pair:

* If the odd-indexed node is higher, the `"Odd"` team gets a point. * If the even-indexed node is higher, the `"Even"` team gets a point.

Return _the name of the team with the**higher** points, if the points are equal, return_ `"Tie"`.

Example 1:

Input: head = [2,1]

Output: "Even"

Explanation: There is only one pair in this linked list and that is `(2,1)`. Since `2 > 1`, the Even team gets the point.

Hence, the answer would be `"Even"`.

Example 2:

Input: head = [2,5,4,7,20,5]

Output: "Odd"

Explanation: There are `3` pairs in this linked list. Let's investigate each pair individually:

`(2,5)` -> Since `2 < 5`, The Odd team gets the point.

`(4,7)` -> Since `4 < 7`, The Odd team gets the point.

`(20,5)` -> Since `20 > 5`, The Even team gets the point.

The Odd team earned `2` points while the Even team got `1` point and the Odd team has the higher points.

Hence, the answer would be `"Odd"`.

Example 3:

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

Output: "Tie"

Explanation: There are `2` pairs in this linked list. Let's investigate each pair individually:

`(4,5)` -> Since `4 < 5`, the Odd team gets the point.

`(2,1)` -> Since `2 > 1`, the Even team gets the point.

Both teams earned `1` point.

Hence, the answer would be `"Tie"`.

Constraints:

* The number of nodes in the list is in the range `[2, 100]`. * The number of nodes in the list is even. * `1 <= Node.val <= 100` * The value of each odd-indexed node is odd. * The value of

each even-indexed node is even.

Code Snippets

C++:

```
/**
* Definition for singly-linked list.
* struct ListNode {
* int val;
* ListNode *next;
* ListNode() : val(0), next(nullptr) {}
* ListNode(int x) : val(x), next(nullptr) {}
* ListNode(int x, ListNode *next) : val(x), next(next) {}
* };
*/
class Solution {
public:
string gameResult(ListNode* head) {

}
};
```

Java:

```
/**
* Definition for singly-linked list.
* public class ListNode {
* int val;
* ListNode next;
* ListNode() {}
* ListNode(int val) { this.val = val; }
* ListNode(int val, ListNode next) { this.val = val; this.next = next; }
* }
*/
class Solution {
public String gameResult(ListNode head) {

}
}
```

Python3:

```
# Definition for singly-linked list.
# class ListNode:
# def __init__(self, val=0, next=None):
# self.val = val
# self.next = next
class Solution:
def gameResult(self, head: Optional[ListNode]) -> str:
```