

Middle of the Linked List

Try to solve the Middle of the Linked List problem.

We'll cover the following ^

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

Statement

Given the `head` of a singly linked list, return the middle node of the linked list. If the number of nodes in the linked list is even, there will be two middle nodes, so return the second one.

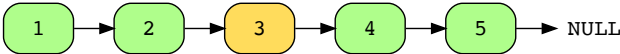
Constraints:

- `head` \neq NULL


Examples

Sample example 1

Input



Output



1 of 3



Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Middle of the Linked List

1

What is the output if the following linked list is given as input?

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2 → 4 → 6 → 8 → 10 → NULL

A) 4

B) 6

C) 2

D) 8

Submit Answer



Question 1 of 3
0 attempted



Reset Quiz ↻

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.



Drag and drop the cards to rearrange them in the correct sequence.

Create two pointers, **slow** and **fast**, initially at the head of the linked list.

Traverse the linked list while moving the **slow** pointer one step forward and the **fast** pointer two steps forward.

When the **fast** pointer reaches the last node or NULL, the **slow** pointer will point to the middle node of the linked list.

Return the node that the **slow** pointer points to.

Reset

Show Solution

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Try it yourself

Implement your solution in `MiddleNode.java` in the following coding playground. We have provided a few

Java

MiddleNode.java

LinkedList.java

LinkedListNode.java

LinkedListReversal.java

LinkedListTraversal.java

```
1 import java.util.*;
2
3 // The code in "LinkedList.java" can be used to create a linked list out of a
4 // The code in "LinkedListTraversal.java" can be used to traverse the linked
5 // The code in "LinkedListReversal.java" can be used to reverse the linked li
6
7 public class MiddleNode{
8     public static LinkedListNode middleNode(LinkedListNode head) {
9
10    // Your code will replace this placeholder return statement
11    return head;
12    }
13 }
```

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Test Cases

Results

Case 1

Case 2

Case 3

Input #1

[1,2,3,4,5]

Middle of the Linked List

← Back

Next →

Solution: Linked List C...

Solution: Middle of the...

☒ Mark as Completed

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