

# Leetcode:

```
bool hasCycle(struct ListNode *head) {  
    // If list is empty or has only one node, cycle is impossible  
    if (head == NULL || head->next == NULL)  
        return false;  
  
    struct ListNode *slow = head;  
    struct ListNode *fast = head;  
  
    // Move fast pointer by 2 and slow pointer by 1  
    while (fast != NULL && fast->next != NULL) {  
        slow = slow->next;  
        fast = fast->next->next;  
  
        // If slow and fast meet, there is a cycle  
        if (slow == fast)  
            return true;  
    }  
  
    // Fast reached the end → no cycle  
    return false;  
}
```

```
Code
C Auto
1 bool hasCycle(struct ListNode *head) {
2     // If list is empty or has only one node, cycle is impossible
3     if (head == NULL || head->next == NULL)
4         return false;
5
6     struct ListNode *slow = head;
7     struct ListNode *fast = head;
8
9     // Move fast pointer by 2 and slow pointer by 1
10    while (fast != NULL && fast->next != NULL) {
11        slow = slow->next;
12        fast = fast->next->next;
13
14        // If slow and fast meet, there is a cycle
15        if (slow == fast)
16            return true;
17    }
18
19    // Fast reached the end - no cycle
20    return false;
21}
22
```

Saved

Ln 1, Col 1

# OUTPUT:

Testcase | Test Result

Accepted Runtime: 2 ms

Case 1 Case 2 Case 3

Input

```
head =
[3,2,0,-4]
```

Output

```
true
```

Expected

```
true
```

Contribute a testcase

A screenshot of a programming test interface. At the top, there are navigation icons (back, forward, search) and toolbars for running, submitting, and sharing code. On the right, user statistics are shown: 00 solved problems, 00 submissions, 00 points, and a Premium badge. Below the toolbar, the title "Test Result" is displayed above the status "Accepted" and runtime "2 ms". Under "Accepted", there are three checked boxes labeled "Case 1", "Case 2", and "Case 3". The "Input" section shows "head = [1,2]" and "pos = 0". The "Output" section shows "true". The "Expected" section also shows "true". A "Contribute a testcase" button is at the bottom.

A screenshot of a programming test interface, identical in layout to the first one. It shows the "Test Result" section with "Accepted" status and runtime "2 ms". The "Input" section shows "head = [1]" and "pos = -1". The "Output" section shows "false". The "Expected" section also shows "false". A "Contribute a testcase" button is at the bottom.

# OBSERVATION:

21/12/25

Pg-7b.

Leet code:

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## Linked List Cycle.

Code:-

```
bool hasCycle (struct ListNode *head) {  
    if (head == NULL || head->next == NULL)  
        return false;  
  
    struct ListNode *slow = head;  
    struct ListNode *fast = head;  
  
    while (fast != NULL && fast->next != NULL)  
    {  
        slow = slow->next;  
        fast = fast->next->next;  
  
        if (slow == fast)  
            return true;  
    }  
    return false;  
}
```

O/p: If  $\rightarrow$  head = [3, 2, 0, -4]

pos = 1

O/p = true.