

```
1 #include <stdio.h>
2 #define MAX 100
3 struct Node {
4     char data;
5     int next;
6 };
7 struct Node nodes[MAX];
8 int nodeCount = 0;
9 int head = -1;
10 int createNode(char data) {
11     nodes[nodeCount].data = data;
12     nodes[nodeCount].next = -1;
13     return nodeCount++;
14 }
15 void append(char data) {
16     int newNode = createNode(data);
17     if (head == -1) {
18         head = newNode;
19     } else {
20         int temp = head;
21         while (nodes[temp].next != -1)
22             temp = nodes[temp].next;
23         nodes[temp].next = newNode;
```

```
24     }
25 }
26 int reverse(int start) {
27     int prev = -1, curr = start, next;
28     while (curr != -1) {
29         next = nodes[curr].next;
30         nodes[curr].next = prev;
31         prev = curr;
32         curr = next;
33     }
34     return prev;
35 }
36 int compare(int h1, int h2) {
37     while (h1 != -1 && h2 != -1) {
38         if (nodes[h1].data != nodes[h2].data)
39             return 0;
40         h1 = nodes[h1].next;
41         h2 = nodes[h2].next;
42     }
43     return 1;
44 }
```

```
45 int isPalindrome() {
46     int slow = head, fast = head, prev = -1;
47     while (fast != -1 && nodes[fast].next != -1) {
48         fast = nodes[nodes[fast].next].next;
49         prev = slow;
50         slow = nodes[slow].next;
51     }
52     int secondHalf = (fast == -1) ? slow : nodes[slow].next;
53     nodes[prev].next = -1;
54     secondHalf = reverse(secondHalf);
55
56     return compare(head, secondHalf);
57 }
```

```
58 int main() {
59     append('R');
60     append('A');
61     append('D');
62     append('A');
63     append('R');
64     if (isPalindrome())
65         printf("Yes\n");
66     else
67         printf("No\n");
68     return 0;
69 }
70
```

Yes