

Given a linked list and a value x , partition it such that all nodes less than x come before nodes greater than or equal to x .

You should preserve the original relative order of the nodes in each of the two partitions.

C++:

```
1  /**
2  * Definition for singly-linked list.
3  * struct ListNode {
4  *     int val;
5  *     ListNode *next;
6  *     ListNode() : val(0), next(nullptr) {}
7  *     ListNode(int x) : val(x), next(nullptr) {}
8  *     ListNode(int x, ListNode *next) : val(x), next(next) {}
9  * };
10 */
11 class Solution {
12 public:
13     ListNode* partition(ListNode* head, int x) {
14
15     }
16 };
```

Sample input:

$head = 1 \rightarrow 4 \rightarrow 3 \rightarrow 2 \rightarrow 5 \rightarrow 2, x = 3$

Sample output:

$1 \rightarrow 2 \rightarrow 2 \rightarrow 4 \rightarrow 3 \rightarrow 5$