Split Linked List in Parts

Problem	Submissions	Leaderboard	Discussions

Given the head of a singly linked list and an integer k, split the linked list into k consecutive linked list parts.

The length of each part should be as equal as possible: no two parts should have a size differing by more than one. This may lead to some parts being null. The parts should be in the order of occurrence in the input list, and parts occurring earlier should always have a size greater than or equal to parts occurring later. Return an array of the k parts.

Example 1:

Input: head = [1,2,3], k = 5

Output: [[1],[2],[3],[],[]]

Explanation:

The first element output[0] has output[0].val = 1, output[0].next = null.

The last element output[4] is null, but its string representation as a ListNode is [].

Example 2:

Input: head = [1,2,3,4,5,6,7,8,9,10], k = 3

Output: [[1,2,3,4],[5,6,7],[8,9,10]]

Explanation:

The input has been split into consecutive parts with size difference at most 1, and earlier parts are a larger size than the later parts.

Input Format

You use one of the following templates to write your code.

C template:

```
/*
 * Definition for singly-linked list.
 */

struct ListNode {

    int val;

    struct ListNode *next;

};


/**
 * Note: The returned array must be malloced, assume caller calls free().
```

```c
    */

    struct ListNode** splitListToParts(struct ListNode* head, int k, int* returnSize){

    }
```

C++ template:

```cpp
    /**
     * 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:

        vector<ListNode*> splitListToParts(ListNode* head, int k) {

        }
    };
```

Constraints

Constraints:

The number of nodes in the list is in the range [0, 1000].

0 <= Node.val <= 1000

1 <= k <= 50

Output Format

see problem description

Contest ends in 2 hours

Submissions: 0
Max Score: 3
Difficulty: Medium

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More

C

```c
#include <stdio.h>
#include <string.h>
#include <math.h>
#include <stdlib.h>

int main() {

    /* Enter your code here. Read input from STDIN. Print output to STDOUT */
    return 0;
}
```

Line: 1 Col: 1

⬆ Upload Code as File ☐ Test against custom input

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