

Find anagrams in linked list

Given a linked list of characters and a string S. Return all the anagrams of the string present in the given linked list. In case of overlapping anagrams choose the first anagram from left.

Example 1:

Input: a -> b -> c -> a -> d -> b -> c -> a

S = bac

Output: [a -> b -> c, b -> c -> a]

Explanation: In the given linked list, there are three anagrams:

1. a -> b -> c -> a -> d -> b -> c -> a

2. a -> b -> c -> a -> d -> b -> c -> a

3. a -> b -> c -> a -> d -> b -> c -> a

But in 1 and 2, a -> b -> c and b -> c -> a are overlapping. So we take a -> b -> c as it comes first from left. So the output is:

[a->b->c, b->c->a]

Example 2:

Input: a -> b -> d -> c -> a

S = bac

Output: -1

Explanation: There is no anagrams, so output is -1

Your Task:

You don't need to read input or print anything. Your task is to complete the function **findAnagrams()** which takes head node of the linked list and a string S as input parameters and returns an array of linked list. If there is no anagram in the linked list, return -1.

Expected Time Complexity: $O(N)$, where N is length of LinkedList

Expected Auxiliary Space: $O(1)$

Constraints:

$1 \leq N \leq 10^5$

$1 \leq |S| \leq 10^5$