This lecture explains homework 10.

This homework is similar to the problem in homework 3: Who gets the cake.

The problem is that we need to remove people in a group by following a rule. Suppose there are N. people and they are lined up. A number K is selected. Start from 1, 2, count to K. . This person is removed from the group. Then, keep counting. If the counting reaches the end of the group, wrap around from the beginning.

In homework 3, an array is used. In homework 10, a linked list is used. You are encouraged to review what you have done for homework 3 and use your solution for homework 3 as a reference.

This lecture will go through an example using N equal to 6 and K equal to 3.

At the beginning a linked list is created. To be consistent with homework 3, the first node is marked 0. The second node is marked 1. The last node is marked 5.

Start from the first node, we count 1, 2, and 3. The node whose value is 2 is deleted. To delete this node, modify the link in front of this node to bypass this node. Please be careful that we need to mark where counting will continue. This up arrow marks where counting will continue.

The bottom of this slide shows the new linked list after one node has been removed. The up arrow marks where counting should continue.

From that node, we count 1, 2, and 3. The last node is removed.

The bottom of this slide shows the new linked list after one node has been removed. The up arrow marks where counting should continue.

We start counting 1, 2, and 3 again.

Remove one node. The up arrow shows where to continue counting.

This time, counting needs to wrap around to the beginning of the linked list.

The node that counts for 3 is removed.

Only two nodes are left.

Count 1, 2, and 3. Another node is removed.

Finally, one node is left.

Please read the Makefile and the expected output files to understand how your program will be graded.