**Link Nodes Activity:**

**Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Submit a PDF version of your solution on GradeScope.

You are only required to complete two problems; one of the two questions must come from 1 or 2 and the other question must come from 3, 4, or 5.

**Sample Problem:**

Write the required statement(s) to make the variable p refer to the Node with info '2' using the node q.

Given that the list L contains the elements [1,2,3] and p points to 1 and q points to 2.

**You must use both variables p and q.**

A screenshot of a cell phone

Description automatically generated

Your answer

p = q;

**You are only required to perform one problem (of your choice) between problems 1 and 2:**

Assume that the Node class is properly defined and that the List is correctly constructed.

**Problem 1:**

Write a **single assignment statement** to transform the linked list headed by p into a circular linked list.

**Your assignment statement must refer to the variable p only**.

It is given that the list L contains the elements [1,2,3] and p points to 1.

A screenshot of a social media post

Description automatically generated

Your answer

**Problem 2:**

Write a **single assignment statement** to remove the link between the node with info ‘A’ and the node with info 'B'.

Given that the list L contains the elements [A,B,C] and p points to 1.

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Description automatically generated

Your answer

**You are only required to perform one problem (of your choice) between problems 3, 4, and 5:**

Assume that the Node class is properly defined and that the List is correctly constructed.

**Problem 3:**

**Write a while loop** to make q refer successively to each node in the linked list headed by p until q refers to the first Node with info 'c'.

Given that the list L contains the elements [a,b,c,c] and p and q both point to 'a'.

A screenshot of a cell phone

Description automatically generated

Your answer

**Problem 4:**

Remove the node at the beginning of the list and put it at the end of the list.

It is given that the list L contains the elements [1,2,3] and p points to 2 and q points to null.

**You must use both p and q.**

A screenshot of a cell phone

Description automatically generated

Your answer

**Problem 5:**

Remove the node at the beginning of the list and put it at the end of the list.

It is given that the list L contains the elements [1,2,3] and p points to 2.

**You must only use p.**

**A screenshot of a social media post

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Your answer