Prompt   Scratchpad   Our Solution(s)   Video Explanation   Run Code

Solution 1

```java
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class Program {
  // O(n) time | O(1) space
  public static LinkedList findLoop(LinkedList head) {
    LinkedList first = head.next;
    LinkedList second = head.next.next;
    while (first != second) {
      first = first.next;
      second = second.next.next;
    }
    first = head;
    while (first != second) {
      first = first.next;
      second = second.next;
    }
    return first;
  }

  static class LinkedList {
    int value;
    LinkedList next = null;

    public LinkedList(int value) {
      this.value = value;
    }
  }
}
```