

## Detecting the First Node of a Loop in a Linked List

```
class Node {
  constructor(data) {
    this.data = data;
    this.next = null;
  }
}

class Solution {

  detectFirstNodeLoop(head) {
    let tortoise = head;
    let hare = head
    while(hare!==null && tortoise.next !== null){
      tortoise = tortoise.next;
      hare = hare.next.next
      if(tortoise === hare){
        break
      }
    }
    if(hare === null) return 'No Loop Found'

    let newTortoise = head
    while(hare!==newTortoise){
      newTortoise = newTortoise.next
      hare = hare.next
    }
    return "Loop Found At ==>" + newTortoise.data
  }
}

let head = new Node(1);
let second = new Node(2);
let third = new Node(3);
let fourth = new Node(4);

head.next = second;
second.next = third;
third.next = fourth;
fourth.next = second;

let solution = new Solution();
console.log(solution.detectFirstNodeLoop(head));
```