Linked List Loop:

import java.util.HashSet;

class ListNode {

int val;

ListNode next;

ListNode(int val) {

this.val = val;

this.next = null;

}

}

public class LinkedListLoop {

public static boolean hasLoop(ListNode head) {

HashSet<ListNode> visited = new HashSet<>();

while (head != null) {

if (visited.contains(head)) return true;

visited.add(head);

head = head.next;

}

return false;

}

public static void main(String[] args) {

ListNode head = new ListNode(1);

head.next = new ListNode(3);

head.next.next = new ListNode(4);

head.next.next.next = head.next;

System.out.println("Contains loop: " + hasLoop(head));

}

}