

LEC 05

CSE 123

Linked Nodes w/Loops

Questions during Class?
Raise hand or send here

sli.do #cse123



BEFORE WE START

Talk to your neighbors:

What's the last TV show you finished?

Respond on [sli.do](#)!

Instructor: Brett Wortzman

TAs:	Arohan	Jonah	Kavya	Eeshani	Trien
	Ashar	Brice	Misha	Aidan	Evan
	Sean	Chris	Kieran	Cora	Rena
	Chloe	Elden	Sahana	Dixon	Katharine
	Jenny	Ishita	Anirudh	Nhan	Anyia
	Nate	Kuhu	Crystal		

Now playing: 🎵 [CSE 123 26wi Lecture Tunes](#) 🎵

Lecture Outline

- **Announcements** 
- ListNode practice
- Iterating over ListNodees

Announcements

- Resubmission Cycle 0 open, closes today
 - Normally resubmissions will be open Mon – Fri each week
- Creative Project 1 due Wednesday, January 28 at 11:59pm!
- Quiz 0 next week (Tuesday, January 27)
 - See [Quiz Logistics Ed announcement](#)
 - Practice Quizzes posted, solutions posted tomorrow

Lecture Outline

- Announcements
- **ListNode practice** ◀
- Iterating over ListNode

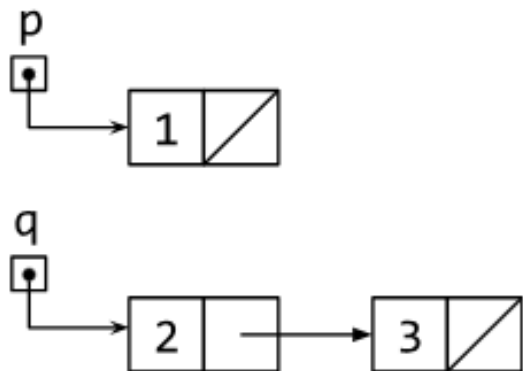


Practice : Think

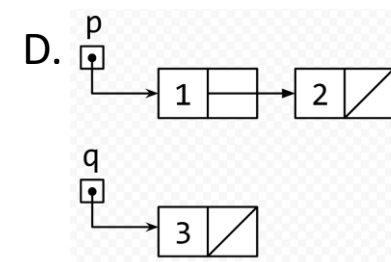
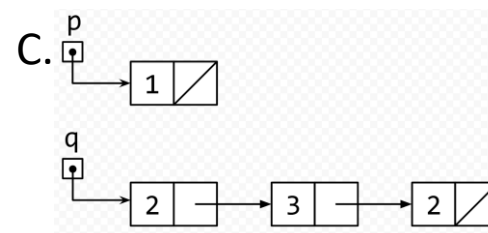
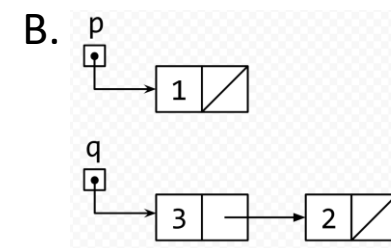
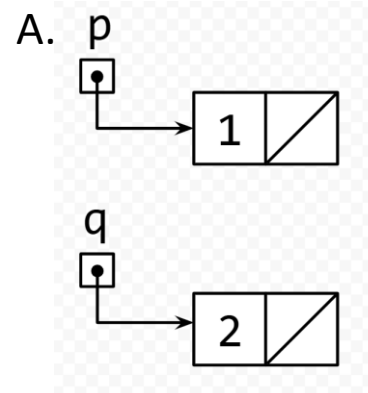
sli.do

#cse123

What is the result of running the code on the list shown in the picture?



```
q.next.next = q;  
q = q.next;  
q.next.next = null;
```

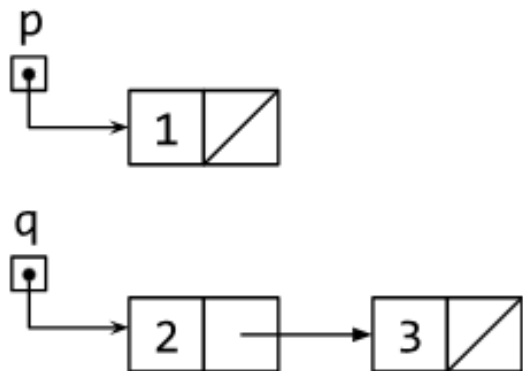


Practice : Pair

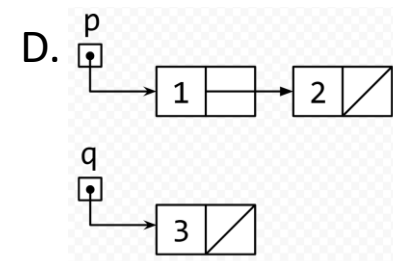
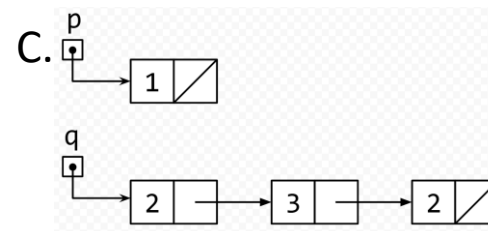
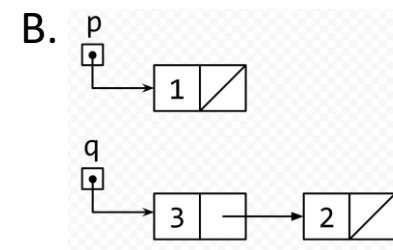
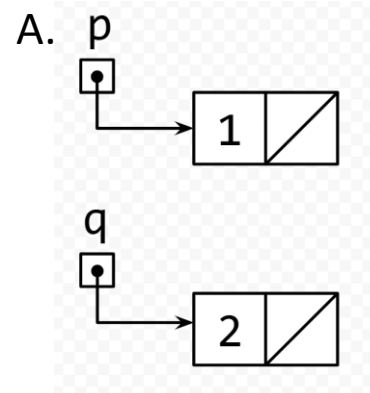


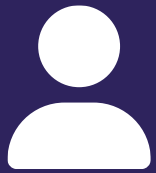
sli.do #cse123

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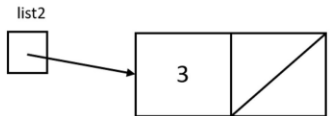
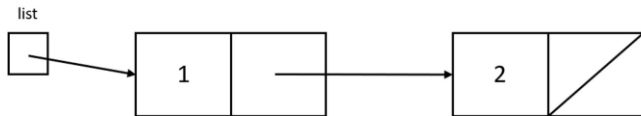
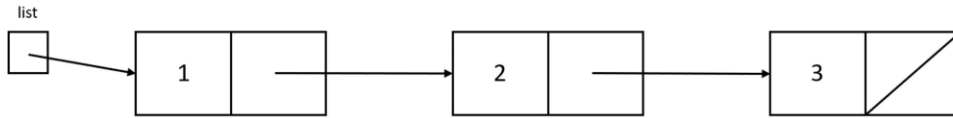


Practice : Think

sli.do

#cse123

Which code will turn the top picture into the bottom picture?



A. `ListNode list2 = list.next.next;`

B. `list.next.next = null;`
`ListNode list2 = list.next.next;`

C. `ListNode list2 = list.next.next;`
`list.next.next = null;`

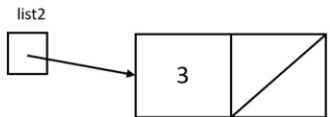
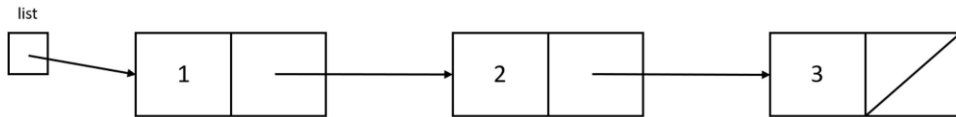
D. `ListNode list2 = list.next;`
`list.next = null;`

Practice : Pair



sli.do #cse123

Which code will turn the top picture into the bottom picture?



A. `ListNode list2 = list.next.next;`

B. `list.next.next = null;`
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C. `ListNode list2 = list.next.next;`
`list.next.next = null;`

D. `ListNode list2 = list.next;`
`list.next = null;`

Lecture Outline

- Announcements
- ListNode practice
- **Iterating over ListNode**



ListNode chains

- Recall the ListNode class:

```
public class ListNode {  
    public int data;  
    public ListNode next;  
}
```

- How would we find the fourth value in a chain?

```
node.next.next.next.data
```



ListNode chains

- Recall the ListNode class:

```
public class ListNode {  
    public int data;  
    public ListNode next;  
}
```

- How would we find the 100th value in a chain?

`node.next.next.next.next.next.next.next....`



Iterating over ListNodes

- General pattern iteration code will follow:

```
ListNode curr = front;  
while (curr != null) {  
    // Do something  
  
    curr = curr.next;  
}
```