Quiz 17

Due Jun 6 at 11:59pm **Points** 13 **Questions** 13
Available until Jun 6 at 11:59pm **Time Limit** None

Instructions

Answer the following questions.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	41 minutes	13 out of 13

Score for this quiz: **13** out of 13
Submitted Jun 6 at 6:15pm
This attempt took 41 minutes.

Question 1 — 1 / 1 pts

A list consists of elements that are required to sit in adjacent memory cells.

- ○ True
- ◉ False

Correct!

Question 2

1 / 1 pts

Singly-linked list is a list where

Correct!

- every node has a single link to the next node
- the list has a single node
- every node has a link to the next node, and another link to the previous node
- head and tail of the list are the same

Question 3

1 / 1 pts

How can you say if a singly-linked list is empty?

- Head is null, whereas tail points to a node
- Head points to a node, whereas tail is null.

Correct!

- Head and tail are set to null.

Question 4

1 / 1 pts

In appending a node to an empty list which pointer gets updated?

- Tail
- Head
- Both head and tail

Correct!

Question 5

1 / 1 pts

In appending a node to a non-empty list which pointer gets updated?

- Both head and tail
- Head
- Tail

Correct!

Question 6

1 / 1 pts

In prepending a node to an empty list which pointer gets updated?

- Head
- Tail
- Both head and tail

Correct!

Question 7

1 / 1 pts

In prepending a node to a non-empty list which pointer gets updated?

- Tail
- Head
- Both head and tail

Correct!

Question 8

1 / 1 pts

Consider the singly-linked list search algorithm as follows:

```
ListSearch(list, key) {
   curNode = list→head
   while (curNode is not null) {
      if (curNode→data == key) {
         return curNode
      }
      curNode = curNode→next
   }
   return null
}
```

What is the timing complexity of this algorithm in the worst case, if there are N items in the list?

- $O(N^2)$
- No answer text provided.
- O(N) — Correct!
- O(N log N)

Question 9

1 / 1 pts

Consider an empty list. Which pointers are updated if a node with data 5 is inserted to that list?

- Both head and tail — Correct!
- Tail

- Head
- No answer text provided.

Question 10

1 / 1 pts

Consider the following **list** in order: 3, 6, 8.

Which pointers get updated in **InsertAfter(list, node 8, node 5)** is invoked.

- No answer text provided.
- tail
- tail -> next
- Both tail and tail -> next

Correct!

Question 11

1 / 1 pts

Consider the following **list** in order: 3, 6, 8.

Which pointers get updated if **InsertAfter(list, node 6, node 5)** is invoked.

- node 5 -> next

Correct!

- (•) Both node 5 -> next and node 6 -> next
- node 6 -> next

Question 12

1 / 1 pts

Consider the following list of numbers in order: 3, 6, 8.

How the list changes after the execution of the following two statements?

ListRemoveAfter(list, nullptr);

ListRemoveAfter(list, nullptr);

- 6, 8
- 3, 6

Correct!

- (•) 8
- 3, 6, 8

Question 13

1 / 1 pts

Consider the following list of numbers in order: 3, 6, 8.

Which pointers get updated if **ListRemoveAfter(list, node 3)** is invoked.

- node 6 -> next
- **Correct!** node 3 -> next
- Head
- Tail

Quiz Score: **13** out of 13