Quiz

It's quiz time! Test yourself by solving these questions about singly linked lists.

1 Which of the following is the correct implementation of the `Node` class?

A)

```
class Node:
   def __init__(self, data):
    self.head = data
    self.next = None
```

B)

```
class Node:
   def __init__(self):
    self.head = None
```

C)

```
class Node:
   def __init__(self, data):
    self.data = data
    self.head = None
```

D)

```
class Node:
   def __init__(self, data):
    self.data = data
    self.next = None
```

2

Given that you have access to the head node of a singly linked list containing n elements, what is the time complexity to access an element in a singly linked list?

- A) $O(1)$
- B) $O(logn)$
- C) $O(n)$
- D) $O(nlogn)$

3

Elements of a linked list may or may not be stored consecutively in memory?

- A) True
- B) False

4

What will be the output of the following code?

```
class LinkedList:
  def __init__(self):
    self.head = None
```

```
def append(self, data):

  new_node = Node(data)
  last_node = self.head
  while last_node.next:
    last_node = last_node.next
  last_node.next = new_node

llist = LinkedList()
llist.append("A")
llist.append("B")
llist.print_list()
```

A) A B

B) A

C) No output

D) Error

5

For a singly linked list containing n elements, what is the time complexity to delete the head node given that you have access to the head node?

A) $O(1)$

B) $O(logn)$

C) $O(n)$

D) $O(n^2)$

CHECK ANSWERS