Module4-Quiz

- Due 30 May at 18:05
- Points 100
- Questions 10
- Available 30 May at 15:15 - 30 May at 18:05 2 hours and 50 minutes
- Time limit 10 Minutes

Attempt history

	Attempt	Time	Score
LATEST	[Attempt 1](#)	6 minutes	90 out of 100

⚠ Correct answers are hidden.

Score for this quiz: 90 out of 100
Submitted 30 May at 15:22
This attempt took 6 minutes.

⋮⋮

Question 1

10 / 10 pts

Which of the following scenarios is an ideal use case for a stack?

- ◉ Undo functionality in a text editor.

- ◯ Managing a list of customer orders to be processed in order of arrival.

- ◯ Storing customer records for quick search.

- ◯ Routing paths in a network.

⋮⋮

Question 2

10 / 10 pts

Which operation is more efficient in a doubly linked list compared to a singly linked list?

- ◉ Deleting a node when a pointer to the node is given.

- ◯ Finding the successor of a node.

- ◯ Inserting an element at the beginning.

- ◯ Searching for an element.

⋮⋮

Question 3

10 / 10 pts

What does the 'pop' operation do in a stack?

◯ Adds an element to the top of the stack.

◉ Removes and returns the element at the top of the stack.

◯ Removes and returns the element at the bottom of the stack.

◯ Returns the element at the top of the stack without removing it.

⋮⋮

Question 4

10 / 10 pts

What is a key advantage of using recursion?

◉ More straightforward and readable code for certain problems.

◯ Lower memory usage compared to iterative solutions.

◯ Guaranteed faster execution.

◯ Reduced time complexity in all cases.

⋮⋮

IncorrectQuestion 5

0 / 10 pts

How can a queue be implemented using two stacks?

◯ By using one stack for enqueue and the other for dequeue operations.

◯ By alternating between the two stacks for each enqueue operation.

◯ It's not possible to implement a queue using stacks.

◉ By using the second stack as a temporary buffer.

⋮⋮

Question 6

10 / 10 pts

What is the time complexity of inserting a new element at the end of a doubly linked list?

◯ O(log n), as elements are easier to locate.

◯ O(1), regardless of a tail pointer.

◯ O(n), always.

◉ O(1), if a tail pointer is maintained.

⋮⋮

Question 7

10 / 10 pts

What is the time complexity of a simple recursive algorithm for computing the nth Fibonacci number?

◯ O(log n)

◯ O(n^2)

◉ O(2^n)

○ O(n)

⣿

Question 8

10 / 10 pts

What is the purpose of a base case in a recursive function?

○ To handle exceptional input values.

○ To prevent the function from calling itself.

◉ To provide a condition for terminating the recursion.

○ To double the execution speed of the function.

⣿

Question 9

10 / 10 pts

What is the time complexity of enqueuing (adding) an element to a queue implemented using a linked list?

○ O(n log n)

○ O(n)

○ O(log n)

◉ O(1)

⣿

Question 10

10 / 10 pts

In stack operations, what do you think is the best way to check if the stack is empty?

○ Compare the top element with null.

○ Check if the top pointer is at the last position.

◉ Check if the size of the stack is zero.

○ Try to pop an element and catch any underflow error.

Quiz score: 90 out of 100