University of Illinois Springfield

My Blac   👤 Steve Halder   ▼

🏠   Module 4   **Review Test Submission: Module 4 Quiz**

Review Test Submission: Module 4 Quiz

User	Steve Halder
Course	CSC 385 D: Data Structures & Algorithms (Spring 2020)
Test	Module 4 Quiz
Started	2/10/20 9:32 PM
Submitted	2/10/20 9:41 PM
Due Date	2/10/20 11:59 PM
Status	Completed
Attempt Score	9 out of 10 points
Time Elapsed	8 minutes
Instructions	This quiz contains questions covering the material from Module 4. It is open book/notes, so you may use these materials during the quiz. The questions are presented one at a time, to allow your answers to be saved as you progress through the quiz. You will be able to backtrack to previous questions if you wish.
Results Displayed	Submitted Answers, Correct Answers, Feedback

Question 1   1 out of 1 points

A stable sort ensures that duplicate items are in the same positions relative to each other after sorting as they were before sorting.

Selected Answer: ✅ True
Correct Answer: ✅ True

Question 2   1 out of 1 points

What is the best case running time for insertion sort?

Selected Answer:

✅ $O(N)$

Correct Answer:

✅ $O(N)$

Question 3   1 out of 1 points

What is the worst case running time for quicksort?

Selected Answer:

$O(N^2)$

Correct Answer: $O(N^2)$

Question 4

1 out of 1 points

Which is the best sorting algorithm if all the items can not fit in main memory?

Selected Answer: mergesort

Correct Answer: mergesort

Question 5

1 out of 1 points

Examine the steps of the following algorithm and write the name of the algorithm described in the blank provided:

1. For each position from the beginning of an array to its end, find the least item in the remainder of the array (excluding the current position and all positions occurring before it in the array) and place it in the current position.

Selected Answer: selection sort

Correct Answer: selection sort

Question 6

1 out of 1 points

What is the average running time for quicksort?

Selected Answer: $O(N \log N)$

Correct Answer: $O(N \log N)$

Question 7

1 out of 1 points

Which sorting algorithm sorts items without comparing them?

Selected Answer: radix sort

Correct Answer: radix sort

Question 8

0 out of 1 points

In the quicksort algorithm, why is the insertion sort algorithm used when the list becomes small?

Selected Answer: Using insertion sort ensures a stable sort.

Correct Answer: Insertion sort is more efficient when the list is small.

Question 9

1 out of 1 points

Examine the steps of the following algorithm and write the name of the algorithm described in the blank provided:

1. Recursively divide an array into two equal halves.
2. Once the array can no longer be subdivided, put the halves back together; while doing so, sort the halves into a temporary array.
3. Copy the temporary array back into the original array.

Selected Answer: ✅ merge sort

Correct Answer: ✅ merge sort

Question 10

1 out of 1 points

What is the worst case running time for a selection sort?

Selected Answer: ✅ $O(N^2)$

Correct Answer: ✅ $O(N^2)$

Tuesday, May 12, 2020 11:05:45 AM CDT

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