

## Quiz-4

- Due No due date
- Points 10
- Questions 7
- Time Limit 10 Minutes

## Attempt History

	Attempt	Time	Score
LATEST	<a href="#">Attempt 1</a>	2 minutes	4 out of 10

Score for this quiz: 4 out of 10

Submitted Nov 13 at 10:07am

This attempt took 2 minutes.



Question 1

0 / 2 pts

For numbers in the range 0 to  $n^2 + 2n$ , what is the number of digits required to represent the numbers in base  $n + 1$ ?

☐ 1

Correct Answer

☐ 2

You Answered

☒ n

☐ 3



Question 2

1 / 1 pts

Which of the following sorting algorithms is NOT comparison-based?

☐ Merge Sort

☐ Quick Sort

☐ Insertion Sort

Correct!

☒ Counting Sort



Question 3

0 / 1 pts

What is the worst-case time complexity of Quick Sort?

☐  $O(1)$ 

Correct Answer

☐  $O(n^2)$ ☐  $O(n)$ 

You Answered

☒  $O(n \log n)$ 

Question 4

1 / 1 pts

Bucket Sort is most effective when:

Correct!

☒ The input elements are uniformly distributed over a known range.☐ The input size is very large.☐ The input is already sorted.☐ The input elements are strings.

Question 5

0 / 1 pts

Radix Sort is most commonly used for:

You Answered

☒ Sorting integers with a small range of values.

Correct Answer

☐ Sorting integers with a wide range of values.☐ Sorting large strings.☐ Sorting floating-point numbers.

Question 6

2 / 2 pts

What is the lower bound for the time complexity of comparison-based sorting algorithms?

☐  $O(\log n)$ ☐  $O(n^2)$

☐  $O(n)$

Correct!

☒  $O(n \log n)$



Question 7

0 / 2 pts

Which sorting algorithm typically requires additional space for auxiliary arrays?

☐ Quick Sort

Correct Answer

☐ Merge Sort

You Answered

☒ Selection Sort

☐ Heap Sort

Quiz Score: 4 out of 10