

**Data Structure Assignments \_2 Feb 20**

1. Differentiate between file and structure storage structure.
2. When is a binary search best applied?
3. What is a linked list?
4. How do you reference all the elements in a one-dimension array?
5. In what areas do data structures are applied?
6. What is LIFO?
7. What is a queue?
8. What are binary trees?
9. Which data structures are applied when dealing with a recursive function?
10. What is a stack?
11. Explain Binary Search Tree
12. What are multidimensional arrays?
13. Are linked lists considered linear or non-linear data structures?
14. How does dynamic memory allocation help in managing data?
15. What is FIFO?
16. What is an ordered list?
17. What is merge sort?
18. Differentiate NULL and VOID
19. What is the primary advantage of a linked list?
20. What is the difference between a PUSH and a POP?
21. What is a linear search?
22. How does variable declaration affect memory allocation?
23. What is the advantage of the heap over a stack?
24. What is a postfix expression?
25. What is Data abstraction?
26. How do you insert a new item in a binary search tree?
27. How does a selection sort work for an array?
28. How do signed and unsigned numbers affect memory?
29. What is the minimum number of nodes that a binary tree can have?
30. What are dynamic data structures?
31. In what data structures are pointers applied?
32. Do all declaration statements result in a fixed reservation in memory?
33. What are ARRAYS?
34. What is the minimum number of queues needed when implementing a priority queue?
35. Which sorting algorithm is considered the fastest?
36. Differentiate STACK from ARRAY.
37. Give a basic algorithm for searching a binary search tree.
38. What is a dequeue?

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39. What is a bubble sort and how do you perform it?
40. What are the parts of a linked list?
41. How does selection sort work?
42. What is a graph?
43. Differentiate linear from a nonlinear data structure.
44. What is an AVL tree?
45. What are doubly linked lists?
46. What is Huffman's algorithm?
47. What is Fibonacci search?
48. Briefly explain recursive algorithm.
49. How do you search for a target key in a linked list?