DATA STRUCTURE USING C (ASSIGNMENT - 1)

AI. 3rd SEMESTER of 2019

Asst. Prof.: Ashwini Mathur (CSSP)
Official mail. ashwinimathur@inurture.co.in

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Note: Use the same separate class notebook for all the assignments.

Reference: Class notes and lecture slides.

QUESTIONS

1. Explain the terminology data structure with the help of a suitable example? Exemplify the types of Data structure in brief?
2. What are the various operations that can be performed on different Data Structures?
3. What is the difference between declaration and definition of a variable/function.
4. How will you print “Hello World” without semicolon ?
5. Why should we use the pointers in C ? Write the short notes with the help of referential example : NULL pointer and Dangling Pointer.,
6. Mention the difference Array and pointers ? along with the help of C program demontrate both.
7. Distinguish between malloc() & calloc() memory allocation.

8. With the help of example, Explain the synatax for while loop and for loop in C.
9. Can a pointer access to the array ? What are the valid operation in pointers ?
10. Exemplify the meaning of base address of the array ? What are the valid operation in Arrays.
11. Illustrate the term “ADT (Abstract data type)” with the help of example.
12. Write the initialization and declaration syntax for followings : Array , 3D - array, Pointers and Structures in C ? (Briefly with examples)
13. With the help of Algorithm, Explain Insertion sort and Bubble sort. Also write the program in C of above mentioned sorting algorithm.
14. List all the methods of Dynamic memory allocation and Explain any 2 with the help of C program.
15. Illustrate the string implementation in C (Basic (Store your name in the array))? What the valid operations performed in Strings. Explain any one with the help of C program.
16. Explain the multidimensional arrays with the help of example?
17. Differentiate NULL and VOID
18. What are dynamic data structures?
19. Differentiate between illustrative and recursive problem to solve the problem. (Use any one example in C).
20. Differentiate between searching and sorting problem with the help of referential examples. How to solve Sorting problem and searching problem with the help of Data structure.(Explain with the help of only

one example each. Like bubble sort , insertion sort, Linear seach , Radix sort …etc.. (Take any example as per your choice)).

All the best !!

#Never leave the problem in half # Always remember