

## Department of Computer Science & Engineering Academic Year 2022-23 | B.Tech. | Semester-III Lab Extra Program (v1.0) | 2101CS301 - Data Structure

Sr.	Practical
1	WAP to convert seconds into hours, minutes & seconds and print in HH:MM:SS [e.g. 10000 seconds mean 2:46:40 (2 Hours, 46 Minutes, 40 Seconds)].
2	WAP to convert number of days into year, week & days [e.g. 375 days mean 1 year, 1 week and 3 days].
3	WAP to find the sum of $1 + (1+2) + (1+2+3) + (1+2+3+4) + + (1+2+3+4++n)$ .
4	WAP to print Armstrong number from 1 to 1000.
5	WAP to print Pascal triangle.
6	WAP to find the largest two numbers in a given array.
7	WAP to sort the N names in an alphabetical order.
8	Write a program to insert a number at a given location in an array.
9	Write a program to delete a number from a given location in an array.
10	Write a program to insert a number in an array that is already sorted in an ascending order.
11	Write a program to delete a number from an array that is already sorted in an ascending order.
12	Write a program to merge two unsorted arrays.
13	WAP to replace lowercase characters by uppercase & vice-versa in a user specified string.
14	How stack can be used to recognize strings aca, bcb, abcba, abbcbba? Write a C program using stack which takes string as input and checks whether it follows above mentioned rule or not.
15	WAP to identify whether the given string is palindrome or not using stack.
16	Write a program to check nesting of parentheses using stack.
17	Implement Priority Queue using array that performs following operations: INSERT, DELETE, DISPLAY
18	Implement Dequeue (Double Ended Queue) using array that performs following operations: INSERT, DELETE, DISPLAY
19	WAP to print node information of a singly linked list in reverse.
20	WAP to check whether 2 singly linked lists are same or not.



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21	WAP to remove duplicate elements from a singly linked list.
22	WAP to swap K <sup>th</sup> node from beginning with K <sup>th</sup> node from end in a singly linked list.
23	Write a program to count the number of nodes in a singly circularly linked list.
24	WAP to split a circular linked list into two halves.
25	WAP to delete alternate nodes of a doubly linked list.
26	WAP to find the smallest and largest elements in the Binary Search Tree.