



University of Engineering & Management, Kolkata
Course: B.Tech (CSE / CSE(AIML) / CSE(IOT-CYS-BCT)
Semester: 3rd
Paper Name: Data Structure & Algorithm Laboratory
Paper Code: PCC - CS391
Date of Assignment- 04.08.2022
Date of Submission - 11.08.2022
Section: B

Assignment – I

(All programs to be implemented in C Programming Language)

Topic : Dynamic Array

1. Write a C program to search an element in an Array using dynamic memory allocation.
2. Write a C program to find the 3rd/user defined position based maximum element in an array using dynamic memory allocation.
3. Write a C program to find the minimum element in an array using dynamic memory allocation.
4. Write a C program to search an element in a 2D-Array using dynamic memory allocation.
5. Write a C program to find the maximum element in a 2D-array using dynamic memory allocation.
6. Write a C program to find the minimum element in a 2D-array using dynamic memory allocation.
7. Write a C program to merge two sorted dynamic array.
8. Write a C program to merge two unsorted dynamic array in sorted order.
9. Write a C program to delete a range of data from a dynamic array.
10. Write a C program to modify the size of an array and utilize that during run time.

ASSIGNMENT 1

(Python)

(All programs to be implemented in Python Programming Language)

1. Write a Python program to create an array of 5 integers and display the array items. Access individual elements through indexes.
2. Write a Python program to append a new item to the end of the array.
3. Write a Python program to reverse the order of the items in the array.
4. Write a Python program to get the number of occurrences of a specified element in an array.
5. Write a Python program to create an array containing six integers. Also, print all the members of the array.
6. Write a Python program to insert a new item before the second element in an existing array.
7. Write a Python program to remove a specified item using the index from an array.
8. Write a Python program to remove the first occurrence of a specified element from an array.
9. Write a Python program to convert an array to an ordinary list with the same items.
10. Write a Python program to find whether a given array of integers contains any duplicate element. Return true if any value appears at least twice in the said array and return false if every element is distinct.
11. Write a Python program to find a pair with the highest product from a given array of integers.
12. Write a Python program to get the length of an array.
13. Write a Python program to remove all duplicate elements from a given array and returns a new array.
14. Write a Python program to find the missing number in a given array of numbers between 10 and 20.
15. Write a Python program to create a 2D array containing 12 integers. Also print all the members of the array.

Instruction:

1. Mention the following thing using A4 pages:
 - a. Program Objective
 - b. Algorithm (if it is asked)
 - c. Program Code.
 - d. Output

NB: For assignment1, only mention a, c and d.

2. Handwritten assignment solutions are required. **No printout is allowed.**
3. Submit all the assignments using the channel file.
4. One Index page must be attached there.
5. **Late submission will not be entertained. Maintain the deadline.**