East West University

Department of Computer Science & Engineering
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Lab Manual: 01

Course Code: CSE 207

Course Title: Data Structures

Instructor : Dr. Maheen Islam, Associate Professor, CSE Department

Objective:

The objective of this lab is to provide knowledge about pointers, structure and dynamic memory allocations. At the end of the lab, students are able:

- To learn basics of pointer, how to use call by reference, array of pointer.
- To learn how to use structure to solve particular kind of problem.
- To learn how to allocate memory dynamically using malloc and calloc functions.

Problems:

Exercise 1:

Write a program to find Largest Number Using Dynamic Memory Allocation from a list of elements. You have to input total size of elements and depending upon the number of elements, the required size has to be allocated using DMA.

Example:

Input size of array: 5

Array element: 1 2 3 4 5

Expected Output: 5

Exercise 2:

Write a program to sort an array using Pointer. You have to write a function ***sortarray(int n, int *p)*** where n is the total array size and p is a pointer variable that have array address to solve the problem.

Input 5 number of elements in the array: 25 45 89 15 82
Expected Output: 15 25 45 8289

Exercise 3:

Write a program that will delete all negative number by using Pointer. You have to declare a pointer array and dynamically allocate memory to input elements of array.

Exercise 4:

Write a program that will input student's information (i.e. *name, id, cgpa*) who have enrolled for CSE-207 course in Summer 2020. You have to declare a pointer variable to input the information and dynamically allocate memory for storing information of each students. After taking input find out the student name who has obtained highest cgpa.