Lab Experiment: 01   **Batch: 1 & 2**
Subject: Data Structures Lab   **MCA**
Semester: 1st

Lab Assignment 1: Basic Array Operations

Problem Statement: Write a program in C that performs the following operations on an array of integers:

1. Input n elements from the user.
2. Find the largest and smallest element in the array.
3. Sort the array in ascending order.
4. Find the sum and average of the array elements.

Assignment Tasks:

•   Implement an integer array of size n entered by the user.
•   Perform the operations of finding the largest, smallest elements, sorting, and calculating sum and average.
•   Print the array after sorting.

Lab Assignment 2: Array of Structures

Problem Statement: Write a program to create an array of structures to store information about n students (name, age, and marks). The program should allow the following:

1. Input details for all students.
2. Display the details of all students.
3. Sort students based on marks in descending order.
4. Find and display the student with the highest marks.

Assignment Tasks:

•   Define a structure Student with fields for name, age, and marks.
•   Implement functions to input, display, sort, and find the student with the highest marks.
•   Display the sorted list of students based on marks.