**Lab Experiment: 02** **Batch: 1 & 2**
**Subject: Data Structures Lab** **MCA**
**Semester: 1st**

**Lab Assignment 1: Understanding Union vs Structure**

Problem Statement: Write a program to define a union and structure to store employee information (name, employee ID, and salary). Demonstrate the difference in memory usage and behavior between a union and structure when storing the same set of data.

Assignment Tasks:

- Define a union and a struct for employee information.
- Initialize and display values stored in both the union and struct.
- Calculate and display the memory size occupied by each using sizeof().

**Lab Assignment 2: Dynamic Memory Allocation with malloc() and free()**

Problem Statement: Write a program to dynamically allocate memory for an array of integers. Perform the following operations:

1. Input the number of elements (n).
2. Allocate memory dynamically using malloc().
3. Input n elements into the array.
4. Find the sum and average of the elements.
5. Release the memory using free().

Assignment Tasks:

- Use malloc() for dynamic memory allocation.
- Input values into the dynamically allocated array.
- Calculate sum and average.
- Use free() to release the allocated memory.