# Department of Computing

# School of Electrical Engineering and Computer Science

**CS-250: Data Structure and Algorithms**

**Class: BEEE** **13 (Grp1+2)**

**Lab 13:  Open Ended Lab**

**Date: 6th May, 2024**

**Time: 10:00 am – 12:50 am**

# Lab Engineer: Anum Asif

# Lab 13: Open Ended Lab

**Introduction**

This is an open ended lab where you have to choose your own unique dataset and implement your own methodology based on your understanding of the problem.

**Objectives**

Objective of this open ended lab is to implement a problem using the methodology of your choice.

**Tools/Software Requirement**

Visual Studio C++

**Helping Material**

Lecture slides, text book

**Description**

The basic idea of the task is that you have to take the grades of the courses you took in previous semester. The grades should be taken for a number of students, means for every individual course e.g., OOP, the list of grades will be created for a total of e.g., 40 students. Then you have to sort each individual list of grades, corresponding to each course. Once the individual lists are sorted, you have to merge all the lists.

**Lab Tasks**

Implement the problem described above. Make sure to use your own and unique dataset and sorting algorithm. An appropriate choice of **data structure to store grades** is required. Also, **efficient and appropriate sorting algorithm** is to be used for sorting purpose.

**Note:** Mention the **reasoning** for the choice of data structure and sorting algorithms used.

**Deliverables**

Insert the solution/answer in this document. You must show the implementation of the tasks in the designing tool, along with your complete Word document to get your work graded. You must also submit this Word document on the LMS.

**Note:** Students are required to upload the lab on LMS before deadline.

Use proper indentation and comments. Lack of comments and indentation will result in deduction of marks.