

CSE 2216

Data Structure Laboratory

Trimester: **Summer 2021**

Section: **B**

Instructor: **Md. Rafi Ur Rashid**

Before Jumping into the list of lessons, Let's talk about the **Course Outcome** at first. Why should we spend our time with this course? 🤖

First of all, data structures are like the lungs for a software project. They store data and disseminate them throughout the program just like the way lungs collect oxygen and circulate all over the human body. Hence, each of the data structures, we are going to learn and practice in this course is a **building block** of every small to large scale software projects. These are some of the most **fundamental** and 'must learn' items you need to excel, if you want to be a software engineer in your future career. Even if you intend for the faculty post or research work, knowledge of these basic data structures is a must in every respect.

Now let's see, what we will learn in this exciting course-

Topic 1: Sorting algorithms: Bubble Sort, Selection Sort, Insertion Sort

Topic 2: Divide & Conquer: Merge sort, Quick sort

Topic 3: Linked List

Topic 4: Stack & Queue

Topic 5: Binary Search Tree

Topic 6: Heap and Priority Queue

Topic 7: Graph Implementation

Topic 8: Graph Traversal: BFS, DFS

Topic 9: Hashing

Class	Topic	Assessment
1	Sorting algorithms	n-hour
2	Divide and Conquer	N/A
3	Linked list	Assignment
4	Stack and Queue	Class-time problem solve
5	Binary Search Tree	Assignment
6	Heap and priority Queue	Class-time problem solve
7	Graph implementation	n-hour
8	Graph Traversal: BFS, DFS	Class-time problem solve
9	Hashing	n-hour

Attendance: 10%

n-hour challenge: 20% (Best 2 count)

assignment: 30%

Class-time problem solve: 20% (Best 2 count)

Quiz: 20%

Okay, I hope you got an insight of the course contents. It's a tentative plan, some inclusion-exclusion may happen based on the situation.

Now it's the time to decide how we will understand our **progress**. 😊

Here's how-

We will have:

- Class-time Problem Solving – 5/6 times
- **n-hour Challenge** (What's that!!) - 5/6 times as well
- assignments – 2/3 times perhaps
- And.....**A suspense for the daredevils during the last week!**

Now, **THE MOST IMPORTANT PART**. If you honestly want to be a software engineer in your future career, you will not merely try to extort the contents of this course for improving your CGPA. Rather you will enjoy every single moment of learning in this course, like a kid learns its mother tongue during its childhood. Because these are like the 'ABCD's of a software engineer's life; and you dream of living this.

So, please don't disappoint this awesome course by merely bothering about your CGPA. Just stay focused on learning the contents, Mr. CGPA will grow up automatically.

Always Good luck. 👍

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