

# CSE221: Algorithms

## Lab-03

### Fall 2025

#### Assignment-03 Links:

##### codeforces Invitation Link:

<https://codeforces.com/contestInvitation/79ed1217900aad814fcffca59c6b0853bfd4a7e8>

Alternative Link: <https://codeforces.com/contests/647079>

[The alternative link will **only work** after you have successfully registered using the first link.]

**Deadline:** Nov 9, 2025 2:00 PM

**No submission can be considered after the deadline ends.**

#### Learning Outcome:

In this lab, we will explore the **Divide and Conquer** paradigm, which is a fundamental algorithmic technique for solving problems efficiently by breaking them into smaller subproblems. Through hands-on problem-solving, students will develop a deeper understanding of recursion, algorithm design, and optimization.

#### Understanding the Divide and Conquer Approach

- Learn how to break a problem into **smaller independent subproblems**, solve them recursively, and combine the results.
- Understand when and why **Divide and Conquer** is preferable over brute-force approaches.
- Apply recurrence relations and the Master Theorem to analyze time complexity.

