CS2009 - Design and Analysis of Algorithm
Fall 2023
Project Description
Due Date: 20th Nov 2022
Total Marks: 100 (Weightage 10)
You need to work as a Group of 3

In this project, you are required to implement the following problems using geometric algorithms with various Big Oh complexities. User can either draw objects in screen or you can also design best way to take input from user e.g. through files You need to show a very nice user interface steps of used algorithms and all various steps of algorithms must be clearly shown. In addition, you need to show steps how to calculate Time and Space complexities of each algorithm.

- Given two-line segments, do they intersect? Two ways were discussed during the lecture. You also need to do research for another idea [20 Points through Demo]
- Convex Hull Solution [50 Points through Demo]
    - Brute Force
    - Jarvis March
    - Graham scan
    - Quick Elimination
    - 1 more from research papers

You are required to submit a 2-page report (pdf must be generated through LaTeX) with the following sections with 1 page maximum as Appendix [Times New Roman, 2 Columns and 10 font size] [30 Points]

(a) Abstract
(b) Introduction
(c) Your programming design (Programming Language used etc, make a clear diagram of your system here along with discussion)
(d) Experimental Setup
(e) Results and Discussion (Here, show screen shots etc along with discussion) You can also show execution time etc and compare various algorithms)
(f) Conclusion
(g) References