

Project and Presentation

Project

Each group will build a small project to demonstrate the ability to solve a real-world problem using data structure. The group will decide a topic and submit a brief proposal. On the approval of the proposal, group will start working on the project. The final submission will be before lab exams. A viva will be conducted to evaluate the performance of individual group members.

Presentation

Each group has to make a presentation from given list of advances data structures. The presentation will highlight the working and usage of respective data structure.

Group Size

Each group can consist of two (minimum) to three (maximum) students.

Selection of Topic:

Each group has to decide at least three topics and submit at <https://goo.gl/forms/73uUHpC2v1dOZ6Wp1>. Kindly research your topic before submission as assigned topics will not be changed. On the approval, group will start working on the project. The final submission will be before lab exams. A viva will be conducted to evaluate the performance of individual group members.

The last date to submit your topic(s) is December 8, 2017.

List of topics:

1. Finger Search tree
2. Cartesian Tree Sorting
3. BogoSort or Permutation Sort
4. Gnome Sort
5. Sleep Sort – The King of Laziness / Sorting while Sleeping
6. Bitonic Sort
7. Pancake sorting
8. TimSort
9. Comb Sort
10. Pigeonhole Sort
11. Cycle Sort
12. Cocktail Sort
13. Interpolation Search
14. Jump Search
15. Exponential Search
16. Sublist Search
17. The Ubiquitous Binary Search
18. Searching for Patterns (Naive Pattern Searching)
19. Suffix Array
20. The Knight's tour problem
21. Rat in a Maze
22. N Queen Problem

23. Tug of War
24. Job Sequencing Problem
25. Coin Change
26. Box Stacking Problem
27. Boyer Moore Algorithm – Bad Character Heuristic
28. Hamiltonian Cycle
29. Huffman Coding
30. Run-length encoding
31. Burrows Wheeler transform
32. Red Black Tree
33. Redix Tree / Trie
34. Quadtree
35. Octree
36. Skip list
37. Scapegoat trees

Evaluation Criteria:

- The rubric for project and presentation will be shared later.