CS2009 - Design and Analysis of Algorithm
Fall 2022
Project Description
Due Date: 21st Nov 2022
Total Marks: 10. You need to work as a Group of 2

1. In this project, you are required to implement the following sorting algorithms. Input will be numbers from a file. You need to show a very nice user interface where user can select any input file and then steps of sorting algorithms are clearly shown. In addition, you need to show steps how to calculate Time and Space complexities of each algorithm [7 Points]
   - Insertion sort
   - Bubble sort
   - Merge Sort
   - Heap Sort
   - Quick sort
   - Radix Sort
   - Bucket Sort
   - Courting sort
   - 7.4.5. from book
   - 8.2.4. from book

You are required to submit a 2-page report with the following sections

   (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 results from text files, screen shots etc.) You can also show execution time etc. and compare various algorithms)
   (f) Conclusion
   (g) References

2. Read the attached paper "Fast Parallel Sorting Algorithms". Write one-page reflective summary of the paper [3 Points];
   Bonus: 2 Points for the implementation of this algorithm