

ALGORITHMICS

ASSIGNMENT – 1 (Due: 12 February 2016)

The objective of this assignment is to appreciate the notions of best case, worst case for some of the standard sorting algorithms.

Implement (i) Bubble Sort (ii) Insertion Sort and (iii) Selection Sort algorithms and output the number of comparisons involved. . Run the algorithms on 3 different types of input lists a) sorted b) sorted in reverse order and c) randomly ordered.

Run your program on inputs of different sizes : 100, 1000, 10,000, 1 MB and tabulate your results.
(use command line arguments for input file name and output file name)
(You can plot with size along X-axis and the number of comparisons taken by the different algorithms on sorted input, random input and reversely sorted input)