Walchand College of Engineering,Sangli
Computer Science & Engineering
Third Year

Course: Design and analysis of algorithm Lab

Lab course coordinator:
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Week 2 Assignment

Part: 2

Sorting Algorithm

Q) Given an array *A[0…n-1]* of *n* numbers containing repetition of some number. Given an algorithm for checking whether there are repeated element or not. Assume that we are not allowed to use additional space (i.e., we can use a few temporary variable, *O(1)* storage).

Q) Given an array *A[0…n-1]* , where each element of the array represents a vote in the election. Assume that each vote is given as an integer representing the ID of the chosen candidate. Given an algorithm for determining who wins the election.

Q) Given an array *A* of *n* elements, each of which is an integer in the range *[1, n^2]*. How do we sort the array in *O(n)* time?

Q) Let *A* and *B* tow arrays of n elements, each. Given a number *K*, give an *O (nlogn*) time algorithm for determining whether there exists $a \epsilon A$ and $b \epsilon B$ such that $a+b = K$.