CSL 356: Analysis and Design of Algorithms **Date:** August 22, 2011
Instructor: Ragesh Jaiswal

1. Discuss homework 1 problems.

3.1 Divide and Conquer

1. Given a sorted array of distinct integers you have to check if there is an index i such that $A[i] = i$. Design a divide-and-conquer algorithm that runs in time $O(\log n)$.

2. You are asked to design an algorithm that multiplies two $n \times n$ matrices A and B. You may assume that the entries of these matrices are small (say < 100). Try designing an algorithm that runs time time $O(n^{\log_2 7})$.