

CS 577 - Homework 5  
Sejal Chauhan, Vinothkumar Siddharth, Mihir Shete

## 1 Graded written problem

**Input:** In a city there are  $n$  bus drivers. There are also  $n$  morning bus routes and  $n$  afternoon bus routes, each with various lengths. Each driver is assigned one morning route and one evening route. For any driver, if his total route length for a day exceeds  $d$ , he has to be paid overtime for every hour after the first  $d$  hours at a fixed rate per hour.

**Output:** Assign one morning route and one evening route to each bus driver so that the total overtime amount that the city authority has to pay is minimized.