# Assignment 3

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September 17, 2023

## Problem 5

### a)

Picture three jobs with payments $P_1 = 100€$, $P_2 = 150€$, and $P_3 = 100€$. If we use the proposed greedy algorithm we would choose the second job and delete the first and third jobs. The total payment would be 150€, but the optimal solution is to choose the first and third jobs which would yield a payment of 200€.

### b)

Say we have four jobs with payments $P_1 = 100€$, $P_2 = 80€$, $P_3 = 100€$, and $P_4 = 150€$. The total payment for odd and even days are 200€, and 230€, respectively. If we use the greedy algorithm we would choose the jobs on the even days (jobs 2 and 4) and get 230€. However, the optimal solution is to choose the first and fourth jobs which would give a payment of 250€. These two jobs happen on both odd and even days.