DM898 Parameterized Algorithms
Fall 2025

Exercise Sheet 5

No preparation aside from the project this week

Exercise 1 (Solved together during class)**.** Recall the Closest String problem from the lecture. Assume a binary alphabet $\Sigma = \{0, 1\}$. By modelling this problem as an ILP and applying Eisenbrand and Weismantel's algorithm, show that Closest String on binary alphabet can be solved in FPT time in the number of strings k.
Using an extension of Eisenbrand and Weismantel's algorithm, one can also achieve such a result for an arbitrary alphabet, which we omit here.