Foundations of Sequence Analysis
Winter semester 2003/2004

Exercises

Exercise 7, Discussion: 01/19/2004.

1. Given two string S_1 and S_2. Develop an algorithm to find the longest common substring of the two sequences S_1 and S_2 in $O(|S_1| + |S_2|)$ time.

2. Consider a generalized suffix tree built for a set of k strings. Additional strings may be added to the set, or entire strings may be deleted from the set.

   (a) Discuss the problem of maintaining the generalized suffix tree in this dynamic setting.

   (b) Explain why this problem has a much easier solution than when arbitrary substrings represented in the suffix tree are deleted.