CISC-471 WINTER 2015

HOMEWORK 9

Please work on these problems and be prepared to share your solutions with classmates in class on Thursday April 2. Assignments will not be collected for grading.

PROBLEMS

These questions come from *An Introduction to Bioinformatics Algorithms* by Neil C. Jones and Pavel A. Pevzner.

**Problem 9.8:** Design an efficient algorithm for finding the longest exact repeat within a text. (Suggestion: Use a suffix tree to solve this problem.)

**Problem 9.10:** Design an efficient algorithm for finding the longest exact repeat with at most one mismatch in a text. (Suggestion: Use a suffix tree to solve this problem.)

**Problem 9.11:** Design an efficient algorithm for finding the longest string shared by two given texts. (This is the longest common substring problem. Suggestion: Use a suffix tree to solve this problem.)