Algorithms and Data Structures
WS 2018 / 2019

`http://www.bioinf.uni-freiburg.de/Lehre/`

Exercise sheet 14

Deadline: Tuesday, 5.02.2019 12:00 noon

Exercise 1 (10 points)
Implement the function *compute_ed_via_table* inside the source code file *edit_distance.py* from the website. This function should calculate the edit distance between two strings x and y in time and space $O(|x| \cdot |y|)$, using the dynamic programming table approach from the lecture.

Exercise 2 (10 points) **!BONUS EXERCISE!**
In addition to computing the optimal alignment cost in Exercise 1, we would like to output all the optimal alignments of the two strings x and y based on the computed dynamic programming table. Use the provided source code file *output_optimal_alignments.py* from the website and implement the missing functionality. Note that you can reuse your code from the first exercise here, since you already computed the table.

Commit
Commit your code into the SVN in a new subdirectory **uebungsblatt_14**. Commit your feedback in a text file *erfahrungen.txt* as usual. Please specify: The length of time needed for the exercise. Which tasks have been difficult for you and where did you have problems? How much time did you spend to solve the problems?