CS476 Exercises 3 Description: Experimenting with EMBOSS

This homework is intended to get you accustomed to experimenting with online **EMBOSS pairwise alignment tools** to help you get more testing options for your first project, as well as to allow you to experiment with a wider range of alignment variations (e.g. local affine, variations of endgap penalizations, etc.). You have independence and flexibility as to how you will proceed in your experimentation, and all that I want to see is evidence that you have tried out EMBOSS with appropriate parametric settings for any pairs of sequences you choose on all four pairwise alignment variations: **local, global, semiglobal, and affine**.

Write a simple report using some word processing or text editing program, and include snapshots of your EMBOSS runs.

You may do literally what I have done in the video demo entitled DemoEMBOSS.mp4 except using different pairs of sequences as input and turning in your experimental runs in exported PDF document format. What I am looking for is the following:

- Exhibit a pair of sequences for which global and semi-global behave differently even on the same gap penalty and substitution matrix parameters.
- Exhibit a pair of sequences and gap penalty schemas for which global linear and global affine first start out the same (by setting gap start to zero) but then at a higher gap start penalty show a difference in the optimal alignments.
- Exhibit a pair of sequences for which the local alignment solution differs from both the global and semiglobal solutions (even with same parameter settings).
- Anything else you would like to add and observe about running EMBOSS (freeform).

Please do include some screenshots of your runs (not necessarily the whole screen but relevant portions).