Molecular and Neural Computation (CSE P 590)
Homework 2

1. caDNAno
For this problem you will need cadnano: http://cadnano.org/.

Watch the cadnano video tutorial here:
Tutorial 1: http://youtu.be/cwj-4Wj6PMc
Tutorial 2: http://youtu.be/EabqNaYAI7o

Note that the video illustrates an older version of cadnano, so there are a few notable differences:
- cadnano2 does not have a 3D view
- scaffold can be drawn using the "pen" tool
- there is no erase tool, but you can select ("v") and delete

a) Make a simple hexagonal tube like the one in the tutorial using the "Honeycomb" scaffold. Turn in the JSON file that cadnano generates.

b) Use the "Square" lattice to make a toothed track that is two helices wide, and four helices tall. That is, the cadnano 2D slice view of your scaffold should look like this:
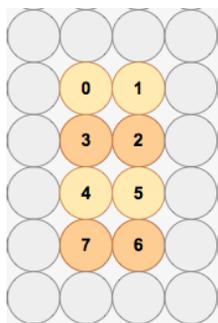
And the structure you are engineering should look something like this:
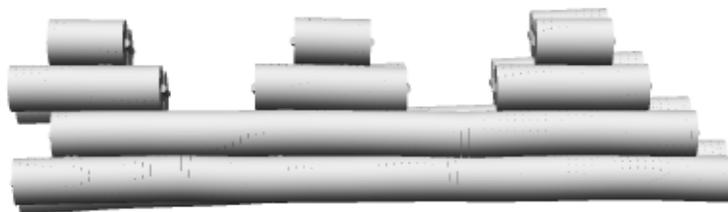
Sign up for an account at http://cando-dna-origami.org/ and use CanDo and visualize your origami. Turn in your JSON file and a picture of your structure generated by CanDo.