

## CS196-1 HW6

*Due: Thursday, April 10th 2:30pm*

### 0 Reading

- Myers EW. The fragment assembly string graph. *Bioinformatics*. 2005 Sep 1;21 Suppl 2:ii79-ii85.

### 1 Local Alignment Statistics(20)

- Given parameters  $match = 1$ ,  $mismatch = -\infty$ ,  $gap = 0$  how does the length of the alignment grow as the sequence length increases. Explain your answer.
- Given parameters  $match = 1$ ,  $mismatch = -\infty$ ,  $gap = -\infty$  how does the length of the alignment grow as the sequence length increases. Explain your answer.
- Given parameters  $match > 0$ ,  $mismatch < 0$ ,  $gap = -\infty$  how does the length of the alignment grow as the sequence length increases. Explain your answer.

### 2 Genome Assembly Simulator(80)

See Assembler Specification located in supplement materials.