

**Algorithms in Genome Research
Winter 2019/2020**

Exercises

Number 1, Discussion: 2019 October 25

1. For “reads” 1-8 from the following list, build the overlap graphs (a) with a minimum overlap of 2, and (b) with a minimum overlap of 3.

1 ATCCA
2 AGAGC
3 AAGAT
4 GAGCA
5 CCATA
6 GCAAG
7 AGATC
8 TAGAG
9 AGAGC
10 GAGCA

2. Find a shortest common superstring (error-free) for “reads” 1-10 of Exercise 1 above. Is the coverage uniform? If not, find a layout with a more uniform coverage.
3. Discuss the main experimental problems that make sequence assembly difficult in practice.