Universität Bielefeld
Technische Fakultät

AG Genominformatik
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Algorithms in Genome Research
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Exercises

Number 4, Discussion: 2018 November 23

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.