

## Advanced Java for bioinformatics.

WS 2015/16

### Getting started!

Due: 21 October 2015

## 1 Setting up

- Download and install newest JDK (Java SE Development Kit 8u60).
- Download and install newest IntelliJ IDEA - Java IDE we will be using during the course (<https://www.jetbrains.com/idea/>).
- If you have not used version control before read about it (even on Wikipedia), and make sure you know basic git functionalities (one of the many online git tutorials: <https://www.atlassian.com/git/tutorials/>).
- Install git and create a GitHub account.

## 2 Java reminder (5 points)

Write a command line tool called **FastaReader** in Java. **FastaReader** should be able to read multi fasta files and fasta alignment files, containing RNA sequences and print them formatted on the screen. For the exemplary file (**exemplary\_RNA\_aln.fa**) the formatting should look like this:

```
AB003409.1/96-167      1                                     60
AB009835.1/1-71        GGGCCCAU-A-GCUCAGU---GGU---AGAGUG-C-CUCCU-UUGCAAGGAG-GAU----
AB013372.1/8-81        CAUUAGAU-G-ACUGAA----AG----CAAGUA-C-UGGUC-UCUAAAACCA-UUU----
AB013373.1/3754-3825   GCGCCCGU-A-GCUCAAUU--GGAU--AGAGCG-U-UUGAC-UACGGAUCAA-AAG----
                        GCGGAAGU-A-GUUCAGU---GGU---AGAACA-C-CACCU-UGCCAAGGUG-GGG----

AB003409.1/96-167      61                                     119
AB009835.1/1-71        -----GC--CCUG-GGU-UCG-AA--UCCCA-G-UGGGUCC-A
AB013372.1/8-81        -----AA--UAGUAAAU-UAG-CA--CUUAC-U-UCUAAUG-A
AB013373.1/3754-3825   -----GU--UAGG-GGU-UCG-AC--UCCUC-U-CGGGCGC-G
                        -----GU--CGCG-GGU-UCG-AA--UCCCG-U-CUCCGC-U
```

**FastaReader** should take the file name from the parameter list. The tool should consist of at least four classes: **Nucleotide**, **Sequence**, **FastaReader**, **CommandLine**.

## Handing in

In order to hand in the assignment - send address of your repository on **GitHub** to [anna.gorska@student.uni-tuebingen.de](mailto:anna.gorska@student.uni-tuebingen.de), I will check out the repository and grade your code.