**Summary**

This project simulates a scheduler scheduling a set of jobs using six scheduling algorithms FCFS, RR, SPN, SRT, HRRN, FB.

It outputs a graph representation of how the jobs are executed.

The first problem I encountered was in the input file format. The assignment does not indicate that the input file contains a header line, as well as a blanc line at the beginning.

After the input file was successfully read, the question became in which data structure the data should be stored. Considered the use of an array, ArrayList and Queue.

The choice fell on the ArrayList as the data can be added without knowing the initial size of the data. Also access to data is possible by index.

Data is better grouped into a class. The class Job that implements the interface Comparable was created. This allowed the use of class objects in the priority queue. The overrided function compareTo compares not only by priority, but also by name, if they have the same priorities.

Another class JobDone was also implemented, since it has different data. Although it was possible to use the class Job by adding additional fields to it.

The class Scheduler consists of a main function that reads information from a file, determines the command line argument and calls the corresponding methods and methods for each algorithm and print method.

All methods are static, which allowed the use of methods without creating an object of the class Scheduler.

All methods of scheduling algorithms return an ArrayList with completed (partially completed) jobs wit the name of job, starting time and end time. This makes it easy to use this data to print graphs.

FCFS and HRRN methods do not use queues and are implemented using ArrayLists.

RR and FB methods use ArrayDeque as queue.

SPN and SRT methods use PriorityQueue.

Method printGraph prints graph representation of job execution as text in console application.

A graph is drawn down the page.

While doing this assignment, I studied various scheduling algorithms, and their impact on the execution order of jobs.