

Bachelor's Project

Interactive Visualization of Exam Data

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The goal of this project is to develop a web-based program in JavaScript (D3.js) that allows the visualization and the interactive exploration of data about exams. It should be used for monitoring things such as failure rates, number of registrations, and average marks per exam. The data is provided in anonymized form.

For every course in every semester in which it happened the following data should be computed and visualized in a compact form:

- course name
- number of registrations for this course
- number of graded students (separately for each exams)
- average grade
- failure rate (passed exams / total exams)
- distribution of grades

It should be possible to globally filter the courses by curriculum, by mandatory and elective courses, and by semester in which the courses took place. It should also be possible to sort the courses according to different criteria (e.g., number of course registrations, number of graded students, average grade, failure rate).

For every course there should be a details view with the following filtering options:

- by the field of study of the students who took the exam
- by the semester in which the students started to study (2 digits from the student ID number)

The progress of the thesis should be discussed regularly with the supervisor. A rough time schedule is to be submitted 3 weeks after the project started. The final thesis (about 20-30 pages) should be submitted until September 30, 2021.