

Laboratory Assignment AND Assessment Requirements Specification

Write an app that helps teachers to monitor the assignment and assessment of the MAP discipline.

Student data is read from the **Students.txt** file and includes the following information: idStudent (student's number), name, **group**, email, name of the professor.

The data on the laboratory topics are read from the Assignment.txt file, which contains information such as: laboratory number (unique identifier), brief description of the requirement, deadline - week of the semester (1..14), the week in which the theme was received (1..14). The teacher assigns a grade of 1 to 10 for each laboratory theme. Delivery of the assignment after the delivery week leads to a reduction of the mark by 2.5 points for each week of delay. After 2 weeks of delay in delivery the assignment, the assignment will be automatically marked with 1.

Information about the grades will be **saved** in the **Catalog.txt** (Register) file.

The application will provide the teacher with the following features:

- F0: Implement **CRUD** operations for the Student entity **errors?**
- F1: **adding a laboratory theme;**
- F2: Extending the term of delivery for an existing subject (if the current week number is less than or equal to the number of weeks with the assignment deadline).
- F3: When adding a new laboratory theme, as well as modifying the delivery date of a theme, all students will be notified by email. The app will offer the ability to unsubscribe from these notifications
- F4: **adding a grade** for a particular student to a laboratory topic; any delays due to delays in delivery of a theme will be automatically calculated, showing the student's maximum mark on the topic. Important: A student, on a laboratory theme, has only one grade;
- F5: When adding a grade, the following information will be retained in the NameStudent.txt file: a "Theme:" ThemeNumber
 - **"Delivered in the week:"** NumberOfTheDeliveredWeek
 - **"Deadline:"** NumberOfDeadlineWeek
 - **"Feedback:"** feedback, suggestions, and explanations in connection with the reduced made regarding the grade.
- F6: The NameStudent.txt file (or its content) will be emailed to the student, weekly, with the subject "Feedback laboratory MAP".
- F7: The delays will not be considered if the student has **motivation**. Also, if the teacher did not enter the notes in time, it will be possible to specify the week in which the subject was delivered.
- F10: Filtering entities based on **criteria**.
- F11: Reports –
 - Laboratory grade for each student (the weighted average of grades from the lab topics; weight share = number of weeks allocated to the topic).
 - The hardest the theme: the average of the grades on the theme is the smallest.
 - Students who can enter the exam (average greater than or equal to 4).
 - Students who have delivered all the themes on time.

Note: Examples for reports are indicative. You are encouraged to propose other relevant reports.