Laboratory Assignment AND Assessment Requirements Specification

Version 1.0

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Version History

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| --- | --- | --- | --- |
| **Version** | **Description of Change** | **Author** | **Date** |
| V01 | Initial/Modification of document | Birtalan Csaba-Adrian, Blajan Denisa | 19.03.2023 |
| V02 | Completion of document | Birtalan Csaba-Adrian, Blajan Denisa | 19.03.2023 |

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# Introduction

The application is written in Java and is designated for teachers to monitor the assignment and assessment of the MAP discipline. It provides an easy way to manage the students’ grades and their assignments. The application keeps track of the deadlines and automatically calculates the grade for an assignment delivered late, considering the penalty. Information about students can be updated and also there is the possibility to remove a student, an assignment or a grade.

## Purpose

The application allows the user to perform CRUD operations for Student, Assignment and Grade entities. The main purpose of the application is to reduce the teacher’s headache of writing the students’ grades on paper and also keeping them up to date regarding the change of deadlines.

## Scope

The scope of the document is to give information about the system: regarding the users, functionalities, purpose, usability, data management and user scenarios.

## Definitions, Acronyms, and Abbreviations

MAP = Metode Avansate de Programare

CRUD = Create/Read/Update/Delete

## Document Overview

The document is organized in chapters and subchapters describing the general purpose and scope of the document, the product description and requirements such as functional and user interface requirements.

# Product/Service Description

The application allows the user to manage data rapidly, by performing CRUD operations on three different entities: Students, Grades and Assignments. Data can be read from a file, which contains various information about the entities that will help the teacher grade the students, assign homework and change deadlines for the assignments.

## Product Context

The product is independent and self-contained.

## User Characteristics

Users that will be using this product are teachers that want an easier way to manage the information regarding students’ grades and assignments dates.

# Requirements

Add here the requirements from the “initial” requirement document and details about each identified requirement.

## Functional Requirements

List the functional requirements (FR) of the system.

|  |  |
| --- | --- |
| Section/ Requirement ID | Requirement Definition |
| FR1.0 | Implement CRUD operations for the Student entity |
| FR1.1 | Adding a laboratory theme |
| FR2.0 | Adding a grade for a particular student to a laboratory topic; |
| FR3.0 | Extending the term of delivery for an existing subject |
| FR4.0 | When adding a new laboratory theme, as well as modifying the delivery date of a theme, all students will be notified by email |
| FR5.0 | The NameStudent.txt file (or its content) will be emailed to the student, weekly, with the subject "Feedback laboratory MAP". |
| FR6.0 | 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. |
| FR7.0 | Filtering entities based on criteria. |

## User Interface Requirements

The user should be presented a menu where each option is describing one of the functional requirements. After choosing an option the program should ask the user to enter the needed information. The interface is user friendly and will help the teacher manage his work.

## Usability

* The user documentation and help should be complete
* The help should be context sensitive and explain how to achieve common tasks
* The system should be easy to learn.

## Data Management

The data should be stored in file(XML or CSV) in order to have data persistence of the application.

|  |  |
| --- | --- |
| Student | |
| Field | Data Type |
| Id | Integer |
| Name | String |
| Group | String |
| Email | String |
| ProfessorName | String |
| Assignment | |
| Field | Data Type |
| Id | Integer |
| Description | String |
| Deadline | DateTime |
| AssignationDate | DateTime |
| ThemeNumber | Integer |
| Grade | |
| Field | Data Type |
| studentId | Integer |
| assignmentId | Integer |
| value | Float |
| DeliverDate | DateTime |
| Feedback | String |

# User Scenarios/Use Cases

The application allows the user to print the list of students, print the list of assignments, print the list of grades, add a new student, add a new assignment, add grade for a student for an assignment, delete an existing student, delete an existing assignment, update a student and extend the deadline for an assignment. In case of invalid data input from the user, the application should throw an exception and show it on the screen. Exceptions include invalid data formatting, invalid data type conversions (ex: string to int).

When filtering the entities, the criteria is by specifying some fields of the entities.

The teacher is allowed to upload the motivation in pdf format by specifying the location of the motivation.