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 | Student X | 16.03.2020 |
| V02 | Completion of document | Student Y | 16.03.2020 |

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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 there is the possibility to remove a student, an assignment, or a grade.

## Purpose

The application allows the user to perform the necessary 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 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 add operations on three different entities: Students, Grades and Assignments. While also providing the user with the option to delete an assignment or a grade and to perform an update operation for the student. Data can be read from a file, which contains various information about the entities that will help the teacher grade the students, assign their 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 the students grades and the deadlines for the assignments.

# Requirements

The application will have to have all the features described in section 4. Use cases, while implementing data persistence through xml repositories for the corresponding entities and provide the user with a basic command line based UI.

## Functional Requirements

List the functional requirements (FR) of the system.

|  |  |
| --- | --- |
| Section/ Requirement ID | Requirement Definition |
| FR1.0 | Implement add, delete, and update operations for the student entity. |
| FR1.1 | Adding a laboratory assignment. |
| 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 assignment, 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 doesn’t have a certificate for a medical leave. Also, if the teacher did not enter the grades 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 persistence of the application is managed by xml repositories for grade, student, and assignment. These repositories automatically load the data stored in the corresponding files at startup.

# 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.