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 | GoianTudor | 23.02.2020 |
| 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 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

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.

## 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 | Implement CRUD operations for the 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. |
| FR11.0 | Reports |
| FR11.1 | Average grade for a student |
| FR11.2 | Hardest homework (lowest average grade for taking all students into account) |
| FR11.3 | Exam eligible students (whose average grade is at least 4) |
| FR11.4 | Students without delays |

## 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.

# 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.