Laboratory Assignment AND Assessment Requirements Specification

Version 1.0

March, 2020

Developed by:

DonisanAlexandra\_FabianRoberta

933,

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 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

## Functional Requirements

List the functional requirements (FR) of the system.

|  |  |
| --- | --- |
| Section/ Requirement ID | Requirement Definition |
| FR 0 | Implement CRUD operations for the Student entity. Only the teacher has the permissions to create, update delete; the student can only read. |
| FR 1 | Adding a laboratory theme. |
| FR 2 | 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). |
| FR 3 | 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. |
| FR 4 | 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. |
| FR 5 | 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. |
| FR 6 | The NameStudent.txt file (or its content) will be emailed to the student, weekly, with the subject "Feedback laboratory MAP". |
| FR 7 | 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. |
| FR 8 | Filtering entities based on: students with passing grade for a specified assignment, students with more than 3 labs with grades under 5. |
| FR 9 | 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. |

## 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.

The user should be informed about any I/O errors that occur.

## 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.