Laboratory Assignment AND Assessment Requirements Specification

Version 1.0

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Version History

| **Version** | **Description of Change** | **Author** | **Date** |
| --- | --- | --- | --- |
| V01 | Initial/Modification of document | Brinza Alina  Hostiuc Robert | 19 March 2023 |
| V02 | Completion of document | Brinza Alina  Hostiuc Robert | March 2023 |

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# Introduction

The application is written in Java and is designated for teachers to be able to assign themes to students and keep track of them for the MAP discipline.

## Purpose

The application allows the user to easily manage a list of students (display, add a student, delete a student), assign themes to them, mark grades for each theme, extend deadlines, manage delays, delete themes and delete grades.

## 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

## 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 teacher to add students and themes. Also, he/she can assign a mark for a student on a theme or delete a mark. The user can modify at any time the student or delete it. The user can delete an existing theme and can display all students, themes, grades.

## Product Context

The product is independent and self-contained.

## User Characteristics

Users that will be using this product are university teachers teaching MAP subject.

# Requirements

When the program starts, the input data is read from the following text files:

* Students.txt file, which contains information about idStudent (student's number), name, group, email, name of the professor
* Assignment.txt file, which contains the following information: laboratory number (unique identifier), brief description of the requirement, deadline – the week of the semester in which the assignment should be delivered (1. 14), the week in which the theme was received (1..14).

The teacher should be able to see all students and themes, add a student or a theme, delete, find or edit any information about a student.

Also, the teacher can assign a grade from 1 to 10 for each assignment. Each week of delay will be penalized by 2.5 points.

An assignment can be delivered at most 2 weeks after its deadline, otherwise it will be marked with 1.

The file Catalog.txt will store information about the grades. For each grade, it will contain the id of the grade, the name of the student, the lab id and the value of the mark given.

## Functional Requirements

List the functional requirements (FR) of the system.

| Section/ Requirement ID | Requirement Definition |
| --- | --- |
| FR1.0 | Implement CRUD operations for the Student entity |
| FR2.0 | Manage laboratory themes and subjects. |
| FR2.1 | Extend the deadline for an existing subject |
| FR2.2 | Add a new laboratory theme |
| FR2.3 | Notify students by email when adding a new laboratory theme or modifying the delivery date of an existing subject |
| FR2.4 | Add a grade to a particular laboratory theme to a particular student |
| FR2.5 | Save theme number, delivery week, deadline and feedback for each added grade |
| FR2.6 | Automatically compute the delay for a grade |
| FR2.7 | Unsubscribe from notifications |
| FR3.0 | Filter students based on different criteria |
| FR4.0 | Generate reports |
| FR4.1 | Send weekly reports by email |
| FR4.2 | Report: laboratory grade for each student |
| FR4.3 | Report: hardest theme (smallest average of grades) |
| FR4.4 | Report: students who can enter the exam |
| FR4.5 | Report: students who have delivered all the themes on time |
| FR5.0 | Give the possibility of having no delay if the student has motivation |

## 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.

## 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 an adequate database.

# User Scenarios/Use Cases

The application allows the user to:

* Add a student
* Add a lab theme
* Assign a grade to a student on a theme
* Update student
* Delete student
* Find student
* Show all students
* Show all themes
* Filter student
* Notify students when adding a new laboratory theme or modifying the delivery date of an existing subject
* Extend a deadline

Please refer to Analysis and Design Document.