CSE3063 PROJECT 1 GROUP 3 ITERATION 2

REQUIREMENT ANALYSIS DOCUMENT

1 Introduction

1.1 Purpose

To fix the problems with course management, we propose to develop an extensive online course registration and management system simulation that complies with Marmara University rules.

1.2 Product Scope

This project aims to overcome the challenges of students and advisors in selecting and managing courses by following the conditions set out in the Marmara University regulation. This system will include functions such as course selection, management of courses received, sending selected courses to advisor approval, managing enrolled students and creating student transcripts.

2 Overall Description

2.1 Product Functions

This system's purpose is to allow students to register to courses under some restrictions which is controlled by the system itself. After the student selects a course, the system controls the restrictions for that student to register to that particular course and decides to approve or reject the registeration process. A transcript is created for each student that can be accessed by them.

2.2 User Constraints and Characteristics

All students and advisors will be able to use this software but, students won't have access permission to all parts of it.

Students: They can enroll to courses in new semesters and access their transcripts.

Advisors: They can control their students' course enrolling period. They can approve or disapprove students' schedule for the semester.

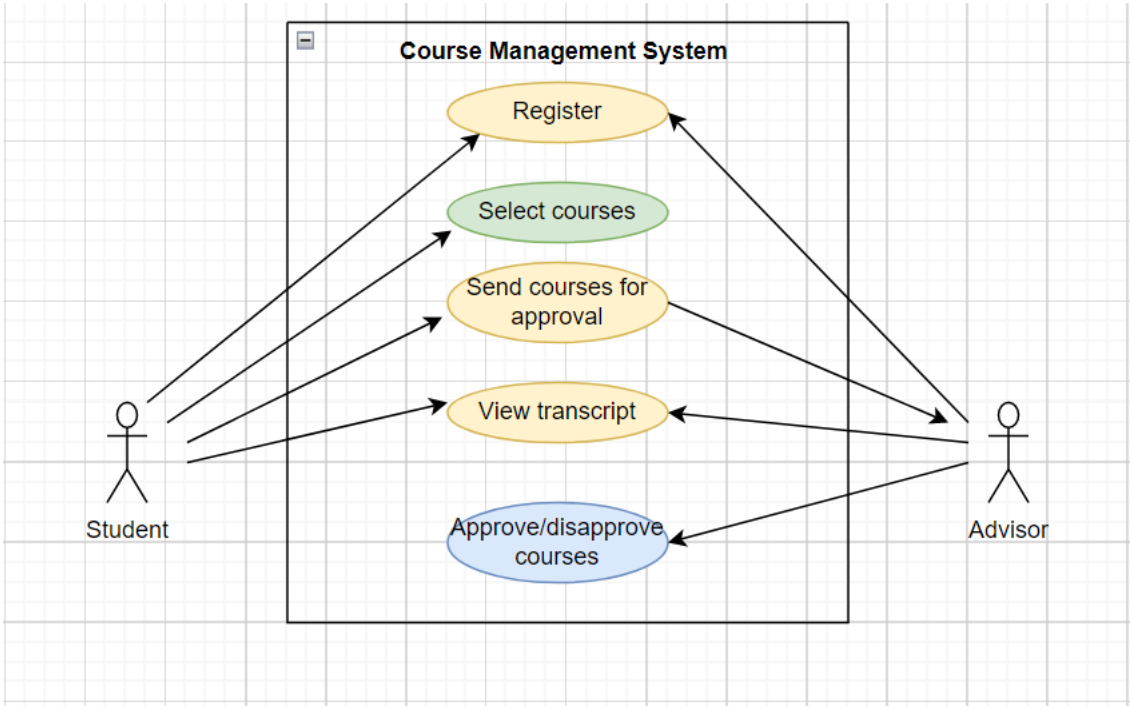

Figure 1 : Use case diagram

3 Requirements

3.1 Functional Requirements

FR1 - The system shall provide the transcript

FR2 - The system shall enable students to subscribe/unsubscribe to courses

FR3 - The system shall provide a notification in case there is a collision

FR4 - The system shall provide a notification in case a requested prerequisite is not met

FR5 - The system shall provide a notification in case of lack of sufficient capacity

FR6 - The system shall enable advisors to approve/disapprove the courses

FR7 - The system shall enable users to view timetable for classes

3.2 Nonfunctional Requirements

Course management system will be a software product produced in Java programming language. It runs on the ide console and can be used on many platforms such as: Intellij, NetBeans, Eclipse, Visual Studio Code. The operating environments for development and product use is as follows:

- Development environment of the product: Java
- Database: consists of JSON files that contain data of students and courses.

- Operating Systems: Windows and Linux

The number 1 requirement for users is a computer with a Java program, they can run the software with its help.A mouse is optional but a keyboard is a mandatory need.

The user needs a computer which can edit a json file, a simple text editor which comes alongside with operating systems like Windows, Mac or Linux will be enough.

The code will be customizable according to the user's request. Every part can be changed and improved using ide or a code editor.This feature gives the user full authority, so this situation can lead to some dangers.The user may unintentionally cause very large errors and may not be able to solve the problem, so they should be very careful.

Just like the source code, JSON files which contain properties of students and courses will be available to change. Users can change anything about any student's information, they can be created, changed, or deleted. This feature is also vulnerable to any bad intentions. Users can see and observe everything but the system could get corrupted at any moment.

Glossary

JSON Configuration file: It is a modifiable input file that contains information of department, curricilum, lecturers & teaching assistants, students and courses.

Registration Message: Registration message is a simple message that states whether the student registered successfully or not, if the registration is unsuccessful it states the reason.

JSON Output file: JSON Output file: There is an output file for each student that uses the registration system. The name of the file is the student number and it contains student transcript that contains all the necessary information.

Advisor: Advisors are selected among department lecturers. Each student is assigned a random advisor who can approve or dismiss student’s course registration requests.

Department Rule: Department rules determine if a student can register to the chosen course.

Prerequisites: A course can have many prerequisites and be prerequisite to many courses, as well as having no prerequisites or not being prerequisite to any courses.

Course Types: A course can be one of the following: mandatory course, elective course or lab course. Lab courses and elective courses have a capacity. Lab courses have sections ans are teached by teaching assistants

References

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