

CS266: Software Engineering  
**Software Requirements Specification**

Version 1.1

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**Student Grading System**

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## 1.0 Introduction

### 1.1 Purpose

This document outlines the functionality and system requirements for a Student Registration System. The document also explains the purpose, key features, and various use cases of the system. It provides detailed steps and information about its functionalities.

### 1.2 Scope of Project

This website will function as a portal for student registration into academic courses, eliminating the need for manual form submission. The primary objective is to provide a seamless and user-friendly interface for students to efficiently complete their registration process. The system aims to enhance operational efficiency while improving the overall experience for both students and faculty.

### 1.3 Glossary

<i>s.no</i>	<i>Terms</i>	<i>Definition</i>
1.	<b><i>Student registration</i></b>	The process by which students enroll in courses for a particular academic term or program, often done online through the system
2.	<b><i>User Authentication</i></b>	The method of verifying the identity of users (students, administrators, faculty) to grant secure access to the system.
3.	<b><i>Course Management</i></b>	The process of creating, updating, and managing courses offered by the institution, including setting course prerequisites and enrolment limits.

### 1.4. References

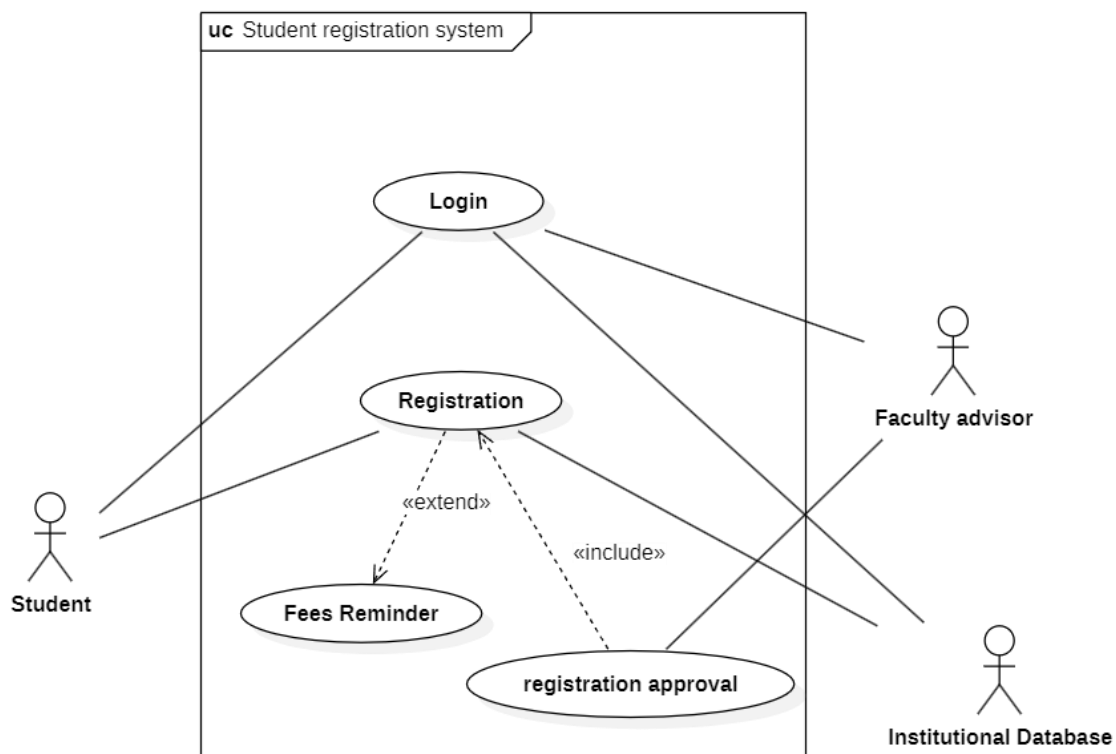
IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

### 1.5. Overview of Document

The next chapter, the Overall Description section, provides an overview of the product's functionality. It outlines the informal requirements and serves to establish the context for the detailed technical requirements specification presented in the following chapter. The third chapter, the Requirements Specification section, is primarily aimed at developers and describes the product's functionality in technical terms.

## 2.0 Overall Description

### 2.1 System Environment



### 2.2 Functional Requirement Specification

#### 2.2.1 Student Use Case

Use Case: Log in For Registration

Diagram:



#### Brief Description:

The student accesses the website and logs in with his/her account to complete his/her registration.

#### Initial Step-By-Step Description:

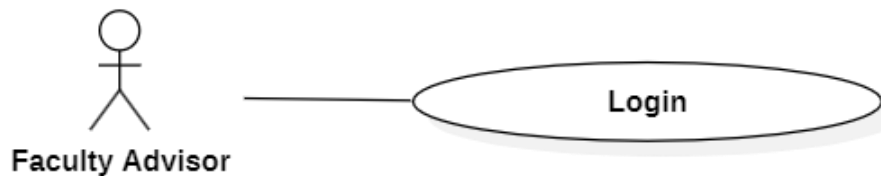
Before this use case can be initiated, the student has already accessed the website.

1. The student selects to login as a student.
2. The system asks for the student ID and password.
3. The student enters the details.
4. The system verifies the details from the Institutional Database.
5. If student details are correct, the system presents a blank registration form.
6. The student fills the form and submits it.

### **2.2.2 Faculty Advisor Use Case**

**Use Case:** Login

**Diagram:**



**Brief Description:**

The faculty advisor logs in with his/her registered account.

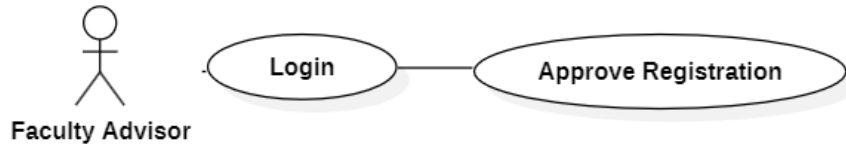
**Initial Step-By-Step Description:**

Before this use case is initiated, the faculty advisor has already accessed the website.

1. The faculty advisor selects to login as a faculty advisor.
2. The system asks for the faculty advisor ID and password.
3. The faculty advisor enters the details.
4. The system verifies the details from the Institutional Database.
5. If faculty advisor details are correct, the system allows a successful login.

**Use Case:** Review Registration Forms

**Diagram:**



### **Brief Description:**

The faculty advisor accesses the website and reviews the information of the students' profiles who have logged in to confirm and allow their registration.

### **Initial Step-By-Step Description**

Before this use case can be initiated, the faculty advisor has already accessed the website and logged in.

1. The faculty advisor selects to verify registration forms.
2. The system shows the list of submitted forms.
3. The faculty advisor selects a form.
4. The faculty advisor accepts the registration

### **2.3 User Characteristics**

Students are expected to have basic computer literacy and have access to the internet. Faculty members and advisor are expected to be familiar with the grading structure and course management. They are also expected to have access to the internet and have basic computer literacy.

### **2.4 Non-functional Requirements**

**2.4.1 Performance Requirements:** The system should handle simultaneous logins by many users simultaneously.

**2.4.2 Usability Requirements:** The interface should be user friendly and easy to use.

**2.4.3 Scalability Requirements:** The system should be able to accommodate the addition of new courses and users.

## **3.0 Requirements Specifications**

### ***3.1 External Interface Requirements***

The institutional database is the only external system for verifying the details of the students, faculty and the faculty advisor. The fields of interest in the database are namely the student/faculty ID and the password.

### ***3.2 Functional Requirements***

### 3.2.1 Login

<i>Use Case Name</i>	<i>Login</i>
<b>XRef</b>	Section 2.2.1, login : student use case
<b>Trigger</b>	The student / faculty/ faculty advisor selects the login option on the homepage.
<b>Precondition</b>	The student/faculty/faculty advisor has registered an account with the system.
<b>Basic Path</b>	<ul style="list-style-type: none"><li>• The system presents a login screen where the user can enter their credentials (Student / Faculty ID and password).</li><li>• The student or faculty enters their ID and password.</li><li>• The system verifies the credentials by checking them against the institutional database.</li><li>• If the credentials are correct, the system redirects the student or faculty to their respective dashboard (Student Dashboard or Faculty Dashboard).</li><li>• If the credentials are incorrect, the system displays an error message and prompts the user to try again.</li></ul>
<b>Postcondition</b>	The user gets logged in

### 3.2.2 Registration

<i>Use Case Name</i>	<i>Registration Process</i>
<b>XRef</b>	Section 2.2.1 login for registration and section 2.2.2, Review registration
<b>Trigger</b>	The student selects the "Registration" option from their dashboard.
<b>Precondition</b>	The student has logged in already.
<b>Basic Path</b>	<ul style="list-style-type: none"><li>• The system displays a list of available courses for the semester with details.</li><li>• The student selects courses.</li><li>• The system verifies eligibility, confirms the registration.</li></ul>

<b><i>Postcondition</i></b>	The form is sent to faculty advisor for approval.
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