

**CEBU INSTITUTE OF TECHNOLOGY – UNIVERSITY
COLLEGE OF COMPUTER STUDIES**

**Software Requirements Specifications
for
STUDENT CLEARANCE SYSTEM (SCS)**

Change History

Version	Date	Description	Author
1.0	June 19, 2025	Initial Draft	Francis Garry Nillama
1.1	TBD	Final Review & Update Team SCS	

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1. Introduction

1.1. Purpose

The purpose of this document is to specify the requirements of the **Student Clearance System (SCS)**—a centralized web application that facilitates student clearance workflows in a digital, efficient, and trackable format. This document serves as a reference for the development team, project stakeholders, and testers.

1.2. Scope

The SCS is a full-stack web application built using **ReactJS**, **Spring Boot**, and **MySQL**. It supports multiple user roles and allows clearance tasks to be submitted, approved, rejected, or commented on by various departments. It features OAuth authentication, dashboard views, and real-time notification mechanisms.

1.3. Definitions, Acronyms and Abbreviations

Term	Definition
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SCS	Student Clearance System
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OAuth	Open Authorization
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API	Application Programming Interface
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Term Definition

UI User Interface

ERD Entity-Relationship Diagram

CRUD Create, Read, Update, Delete

1.4. References

- Student Clearance System Project Charter (CIT-U, 2025)
 - Google OAuth Documentation: <https://developers.google.com/identity>
 - Swagger Documentation: <https://swagger.io/>
 - Spring Boot Reference Guide
 - MySQL Documentation: <https://dev.mysql.com/doc/>
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2. Overall Description

2.1. Product Perspective

The system replaces the traditional paper-based clearance system with a secure digital solution. It integrates with Google OAuth for authentication and offers role-based dashboards, REST APIs, and visual clearance progress indicators.

2.2. User Characteristics

- **Students:** Submit clearance tasks and track progress.
- **Department Heads:** Approve, reject, and comment on tasks.
- **Registrar:** Monitors overall student clearance.
- **Admin (optional):** Configure clearance flows per department.

2.4. Constraints

- Development duration: 3 weeks only.
- Deployment limited to web (no mobile app).
- Requires stable internet connection.
- Google OAuth support is required.
- University server limitations may affect hosting.
- Budget does not include paid third-party services.

2.5. Assumptions and Dependencies

- Departments will actively test and provide feedback.
 - Students and faculty have Gmail accounts.
 - The university allows OAuth access and necessary firewall permissions.
 - End-users are familiar with basic web usage.
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3. Specific Requirements

3.1. External Interface Requirements

3.1.1. Hardware Interfaces

- Web client supported on desktops/laptops with internet access.
- Backend hosted on a university/staging server.
- No special hardware peripherals required.

3.1.2. Software Interfaces

- Google OAuth 2.0
- Spring Boot backend
- ReactJS frontend
- MySQL database
- Swagger or Postman for API documentation

3.1.3. Communications Interfaces

- HTTPS communication for secure API requests
 - Email server for email notifications (optional SMTP)
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3.2. Functional Requirements

Module 1: Authentication and User Roles

1.1 Login with Google OAuth

- Use Case Diagram
- Use Case Description
- Activity Diagram
- Wireframe

1.2 Role Assignment (Student, Department Head, Registrar)

- Use Case Diagram
 - Use Case Description
 - Activity Diagram
 - Wireframe
-

Module 2: Clearance Workflow Management

2.1 View Clearance Tasks (Student)

- Use Case Diagram
- Use Case Description
- Activity Diagram
- Wireframe

2.2 Approve/Reject/Comment on Tasks (Department Head)

- Use Case Diagram
- Use Case Description
- Activity Diagram
- Wireframe

2.3 Track Clearance Status (Registrar)

- Use Case Diagram
 - Use Case Description
 - Activity Diagram
 - Wireframe
-

Module 3: Notifications and Comments

3.1 In-app and Email Notifications

- Use Case Diagram
- Use Case Description
- Activity Diagram
- Wireframe

3.2 Commenting on Clearance Tasks

- Use Case Diagram
 - Use Case Description
 - Activity Diagram
 - Wireframe
-

Module 4: Dashboards and Tracking

4.1 Student Dashboard with Progress View

- Use Case Diagram
- Use Case Description
- Activity Diagram
- Wireframe

4.2 Registrar Overview Dashboard

- Use Case Diagram
 - Use Case Description
 - Activity Diagram
 - Wireframe
-

3.4 Non-functional Requirements

Performance

- The system must support at least 200 concurrent users.
- All API requests should respond within 2 seconds under normal load.

Security

- Google OAuth will handle authentication.
- HTTPS will secure all data in transit.
- Access to dashboards and actions is role-restricted.

Reliability

- The system should be operational 99% during academic periods.
- All data changes should be logged and traceable.
- Backups will be taken weekly.

Student Clearance System

1. Login Page

Sign In

Email

your.email@cit.edu

Password

Log In

Or login with Google OAuth

2. Student Dashboard

Student Info: [Name], [ID]

Graduation Year: [Year]

Overall Status

In Progress

Updated: [Date/Time]

Notifications

New notification 1

New notification 2

Clearance Progress Table

Department	Status	Comments	Action
Dept A	Approved	Comment text here.	View
Dept B	Pending	Comment text here.	View

Submit Clearance Request

Select type:

Option 1

Upload docs:

Choose File

No file chosen

Submit Request

3. Department Head Dashboard

Your Dept: [Name]

Overview of departmental clearances.

Dept Notifications

- New request for review.
- Reminder for pending tasks.

Pending Requests for Review

Student Name	Student ID	Date	Status	Action		
Student A	ID123	2025-06-19	Pending	Approve	Reject	Comment
Student B	ID456	2025-06-18	Pending	Approve	Reject	Comment

Processed Requests

List of approved/rejected requests.

4. Registrar Dashboard

Registrar Overview

Monitor all clearance processes.

System Alerts

- No new alerts.

Overall Student Clearance Status

Student Name	Student ID	Overall Status	Progress	Action
Student C	ID789	Completed	100%	Generate
Student D	ID012	In Progress	50%	View

Audit Logs

Searchable list of system activities.

Generate Reports

Report generation options.

Generate Report

API Documentation

Link to API docs.

Go to API Docs

