Software Design Document - Internship Management System

# 1. Introduction

## 1.1 Purpose

The purpose of this system is to manage internships where:  
- Admin can manage HRs, Companies and Internships.  
- HR can post internships and manage applications.  
- Students can apply for internships and view the status of their applications.

## 1.2 Scope

This system enables easy communication between students and HRs, streamlining the internship application and selection process.

# 2. System Overview

Actors:  
- Admin  
- HR (Human Resources)  
- Student

Major Functionalities:  
Admin: Manage HRs, Manage Companies, and Manage Internships   
HR: Post Internship, View Applications, Accept/Reject Applications  
Student: Apply for Internship, View Application Status (Accepted/Rejected)

# 3. System Design

## 3.1 Use Case Description

- Admin: Add HR, Delete HR, Delete Student  
- HR: Post Internship, View Applications, Accept/Reject Applications  
- Student: Apply for Internship, View Application Status

## 3.2 Class Diagram (Textual Description)

Class Admin: addHR(), deleteHR(), deleteStudent()  
Class HR: postInternship(), reviewApplication(), acceptApplication(), rejectApplication()  
Class Student: fillApplication(), viewStatus()  
Class Internship: title, description, requirements, postedBy (HR)  
Class Application: internshipID, studentID, status (Pending / Accepted / Rejected)

# 4. Sequence Diagrams (Textual)

1. Student Applying for Internship  
- Student -> System: View Internships  
- Student -> System: Fill Application  
- System -> HR: Notify New Application  
  
2. HR Reviewing Application  
- HR -> System: View Applications  
- HR -> System: Accept/Reject Application  
- System -> Student: Notify Application Status  
  
3. Admin Adding HR  
- Admin -> System: Add HR Details  
- System -> DB: Save HR

# 5. Database Design

Users Table:  
- user\_id (PK), name, email, role (admin/hr/student), password  
  
Internships Table:  
- internship\_id (PK), title, description, hr\_id (FK)  
  
Applications Table:  
- application\_id (PK), internship\_id (FK), student\_id (FK), status (pending/accepted/rejected)

Company Table:  
- Hr\_id (FK)

NotificationTable:  
- Student\_id (FK)

# 6. Technology Stack

- Frontend: React (optional)  
- Backend: Spring Boot  
- Database: MySQL   
- Authentication: JWT

# 7. Conclusion

This SDD provides the necessary structure to implement an Internship Management System where each user type has defined roles. It improves the efficiency of managing internships, reviewing applications, and simplifying the interaction between HR and students.