

## 1. Title Page

**Project Title:** College Management System

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**Internship / Course Name:** Java Full Stack

**Company / Institution Name:** Fortune IT Pvt Ltd

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## CMS Project Documentation Draft

**1. Abstract:** The College Management System (CMS) is a comprehensive digital solution designed to streamline and automate the administrative, academic, and operational processes of an educational institution.

### 2. Introduction

- **Project overview:** The CMS serves as a centralized platform connecting administrators, faculty, and students.
- **System purpose and scope:** It aims to eliminate manual paperwork, reduce data redundancy, and provide real-time access to academic records and schedules.
- **User roles and responsibilities:** Defines access controls and specific capabilities for Admins, Faculty, and Students.

**3. Objectives:** To build a scalable, secure, and user-friendly web application that centralizes college data and improves communication between departments.

**4. Requirements:** This section covers the Technology Stack Overview.

- **Frontend:** HTML5, CSS3, JavaScript.
- **Backend:** Java, Spring Boot.
- **Database:** MySQL.
- **Authentication:** JWT (JSON Web Tokens) for secure login.

### 5. System Design (All diagrams):

- **System Architecture:** Outlines the Model-View-Controller (MVC) pattern used.
- **Use Case Diagram:** Illustrates user interactions with the system.
- **Data Flow Diagram (Level 0, Level 1, Level 2):** Maps the flow of information.
- **ER Diagram & Class Diagram:** Details entity relationships and object-oriented structure.

### 6. Module Description:

- **Admin Dashboard:** Features include user management, course creation, and system configuration.

- **Faculty Dashboard:** Features include grading, attendance tracking, and material uploads.
- **Student Dashboard:** Features include viewing grades, checking schedules, and submitting assignments.

**7. Database Design:** Applying your SQL knowledge here to outline the relational schemas will be highly effective. For each table, we will define the specific fields, primary/foreign keys, data types, and relationships.

**8. Implementation Overview:** A brief description of how the system was coded, integrating the Spring Boot backend with the React frontend and MySQL database.

**9. Testing:** Details on unit testing, integration testing, and user acceptance testing (UAT) to ensure the system is bug-free.

**10. Conclusion:** A summary stating that the CMS successfully meets all initial requirements and modernizes the college's infrastructure.

**11. Future Scope:** Potential future enhancements, such as adding a mobile app, integrating payment gateways for fee collection, or adding an AI chatbot for student queries.