

College Admission Management System

Comprehensive Java + JDBC + MySQL Application for Admission Management

Mini Project Report - Project 14

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Introduction

The College Admission Management System is a Java-based application designed to streamline and digitize the admission process for educational institutions. It provides a unified platform for managing student registrations, processing applications, calculating merit, allocating courses, and generating official admission lists.

Traditional admission processes often involve manual verification of documents, manual merit list preparation, and tedious course allocation. This system addresses these inefficiencies by providing an automated, transparent, and accurate admission management workflow using Java, JDBC, and MySQL.

The system is flexible for administrators and user-friendly for students, ensuring that records are stored securely and results are generated efficiently.

Abstract

The application follows a modular, object-oriented design, integrating components for student registration, merit calculation, and course allocation. Data is stored in a relational MySQL database with three key tables: Students, Courses, and Applications.

The workflow begins with student registration through forms where academic and personal details are entered. The system automatically evaluates applications based on cut-off marks and generates a merit list. Administrators can approve or reject candidates and finalize course allocations.

The application also supports CSV and PDF generation of admission lists, providing officially formatted outputs for notice boards, websites, or internal records. An optional GUI-based admin panel enhances usability, though the system can also run in a console environment.

Tools Used

Programming Language: Java 21 (Oracle JDK) – Modern LTS version with JDBC support

Database: MySQL 8.x – Relational database for student, course, and application data

Database Connectivity: JDBC – Secure communication between Java application and MySQL

Output Formats: CSV & PDF – Exportable admission lists

Build Management: Apache Maven 3.x – Dependency management and build automation

Development Environment: IntelliJ IDEA / Eclipse – Professional Java IDEs

Version Control: Git & GitHub – Source code management and project submission

Steps Involved in Building the Project

1. **Project Architecture and Setup:** Designed modular Java project with JDBC and MySQL integration.
2. **Database Schema Design:** Created tables Students, Courses, and Applications with relationships.
3. **Student Registration Module:** Built input forms for capturing applicant details and academic scores.
4. **Merit Calculation Logic:** Implemented cut-off based ranking for student applications.
5. **Course Allocation:** Automated allocation of seats based on merit and seat availability.
6. **Admin Panel:** Developed console/GUI module for approving/rejecting applications.
7. **Report Generation:** Integrated CSV and PDF export functions for admission lists.
8. **Testing & Validation:** Conducted validation for cut-off logic, database operations, and report

accuracy.

Conclusion

The College Admission Management System provides a robust and transparent solution for managing student admissions. By automating registration, merit calculation, and course allocation, it reduces administrative workload, minimizes errors, and ensures fairness. With database-driven architecture and flexible output options, the project demonstrates practical implementation of Java, JDBC, and MySQL for real-world educational processes.

Project Achievements:

- Designed and implemented database schema with 3 core tables
- Developed Java modules for registration, merit list, and allocation
- Implemented CSV/PDF export for admission reports
- Built admin console/GUI for interactive management
- Applied OOP principles for modular, scalable design

College Admission Management System | Mini Project Submission

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