**ELEVATES LAP INTERNSHIP**

**PROJECT PHASE**

**PROJECT** **TITLE**- **College Admission Management System**

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**1. Introduction**

The College Admission Management System is a console-based Java application developed to automate and manage the admission process of students in a college. This system is designed to handle the entire workflow of student applications, course allocation, and merit-based seat allocation efficiently. By using Java, JDBC, and MySQL, the system ensures secure and reliable storage of student, course, and application data.

The primary objective of the system is to minimize manual work, reduce errors, and improve transparency in the admission process. Students can apply for courses, and the system calculates merit scores based on academic performance and entrance exam results. Administrators can approve or reject applications based on merit and course availability.

**2. Objectives**

* Automation of Admissions: To automate the student registration and course allocation process.
* Merit Calculation: To compute merit scores using a standardized formula:
* 10th Marks – 20%
* 12th Marks – 30%
* Entrance Exam – 50%
* Seat Allocation: To allocate available seats to students based on merit and course cutoff scores.
* Record Management: Maintain accurate and secure records of students, courses, and applications in MySQL.
* Reporting: Generate merit lists and export them as CSV files for administrative review.

**3. System Features**

Student Management: Add, update, delete, and view student information including name, email, date of birth, gender, and academic scores.

Course Management: Add, update, delete, and list courses with details such as course code, name, seats available, and merit cutoff.

Application Management: Students can apply to courses. The system stores applications and calculates merit scores automatically.

Seat Allocation: Allocate seats to students based on merit and course cutoff until seats are filled. Applications are approved or rejected automatically.

Merit List Generation: Generate a merit list for each course, sorted by merit scores in descending order.

CSV Export: Administrators can export merit lists in CSV format for record-keeping or reporting purposes.

**4. Technical Details**

* Programming Language: Java (JDK 1.8+)
* Database: MySQL, accessed via JDBC
* Classes Used:
  + Student – Stores student information.
  + Course – Stores course details and seat availability.
  + Application – Manages student applications to courses.
  + StudentDAO, CourseDAO, ApplicationDAO – Handles CRUD operations with the database.
  + AdmissionService – Contains business logic for merit calculation and seat allocation.
  + CSVExporter – Exports merit lists to CSV files.
  + User Interface: Console-based menu-driven interface allowing administrators to perform all operations.

**5. Conclusion**

The College Admission Management System simplifies the admission workflow and ensures fairness through merit-based seat allocation. It provides a robust, scalable, and reliable solution for colleges to manage student admissions efficiently. By automating repetitive tasks and generating reports, this system significantly reduces administrative workload and ensures accurate record-keeping.