Medical Record System

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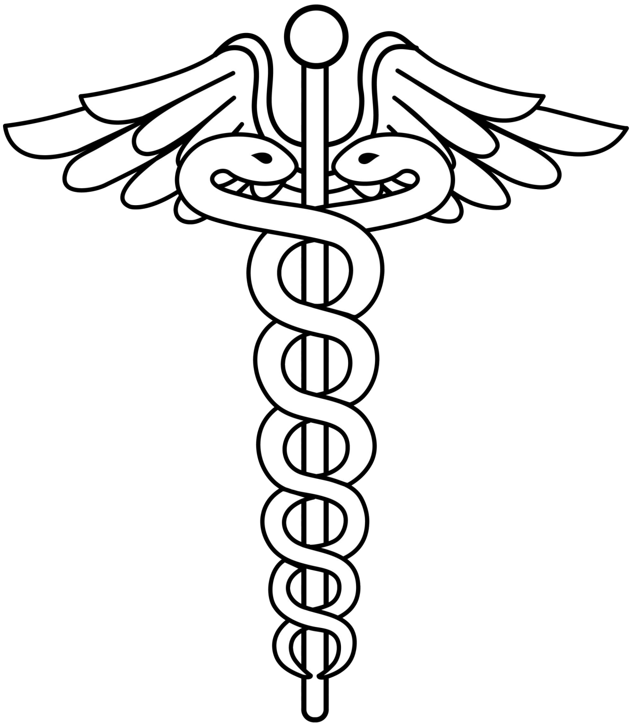

MEDICAL RECORD SYSTEM

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Introduction

- **Purpose:** To develop a simple yet functional Medical Record System using Java and MySQL, demonstrating database integration and advanced query usage.

- **Background:** Efficient medical record ensures accuracy and quick access to patient information. This project demonstrates integrating Java with MySQL for storing and retrieving such records.

- **Scope:** The project handles basic patient data, appointment scheduling, and retrieval of medical histories.

Objectives

- Implement secure and efficient database interactions using PreparedStatement to prevent SQL injection.

- Include robust error handling for database connectivity and query execution.

- Manage and retrieve patient and appointment records effectively.

System Overview

Modules:

- Patient Management: Add, view, update, and delete patient records.
- Appointment Management: Add and view appointments for patients.

Key Users:

- Admin/Staff: Manage patient and appointment records.

Technology Stack

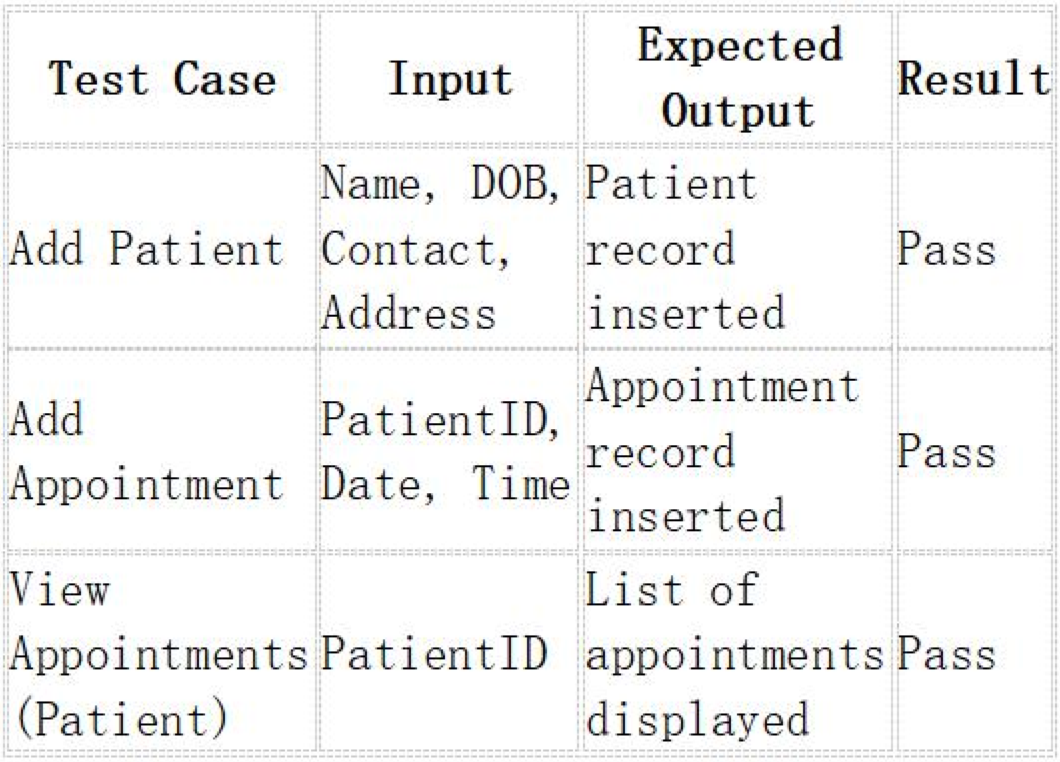
- Programming Language: Java
- Database: MySQL
- Integration: JDBC (Java Database Connectivity)
- Tools: Apache Netbeans, MySQL Workbench

Features

- Secure Patient Management: Add, view, update, and delete patient records using PreparedStatement.
- Secure Appointment Management: Add and view patient appointments.

Testing and Result

Test Plan:



Test Case	Input	Expected Output	Result
Add Patient	Name, DOB, Contact, Address	Patient record inserted	Pass
Add Appointment	PatientID, Date, Time	Appointment record inserted	Pass
View Appointments (Patient)	PatientID	List of appointments displayed	Pass

Challenges and Limitations

Challenges:

- Managing foreign key constraints during deletions.
- Debugging and testing for various edge cases (e.g., invalid inputs).

Limitations:

- No user authentication or role-based access.
- Limited scalability for larger datasets.

References

- https://dev.mysql.com/doc/
- https://docs.oracle.com/javase/tutorial/jdbc/
- https://youtu.be/BzJpjejk9u8?si=93WdfTvpcx3c-jGv
- https://youtu.be/o736tas0wus?si=rjxgf3_4PdX-k-Q3