Poker Planning Estimates for Functional and Non-Functional Requirements

Functional Requirements

Add/Edit Student Details

Description: Adding, editing, or deleting student details in the database.

Estimate: 3 points

Reason: CRUD operations for a student database are moderately complex, requiring validation and error handling.

Classroom Allocation

Description: Allocating classrooms to students based on the exam schedule and room availability.

Estimate: 8 points

Reason: Involves algorithm development to ensure optimal allocation, considering constraints like room capacity and schedule conflicts.

Exam Schedule Management

Description: Managing and updating the exam schedule and timings.

Estimate: 3 points

Reason: Creating a flexible system for inputting and updating schedules, with error checking for conflicts.

Notification System

Description: Sending notifications to students and faculty about their allocated rooms and seat numbers.

Estimate: 2 points

Reason: Implementing a notification system that integrates with the main application and supports multiple notification methods (email, SMS).

Seat Search by Students

Description: Allowing students to search for their allocated seat using their roll number.

Estimate: 2 points

Reason: Developing a search functionality that queries the database and displays results to the user.

Faculty Viewing Seating Arrangements

Description: Allowing faculty members to view the seating arrangements for exams they are supervising.

Estimate: 2 points

Reason: Simple read-only interface to display seating arrangements to faculty members.

Report Generation

Description: Generating reports of the allocated seating arrangements.

Estimate: 3 points

Reason: Involves aggregating data and formatting it into reports, which can be reviewed and printed.

Conflict Resolution

Description: Identifying and resolving conflicts in seating arrangements (e.g., overbooked rooms).

Estimate: 5 points

Reason: Requires logic to detect conflicts and a user interface to resolve them.

Multiple Exam Handling

Description: Managing seating arrangements for multiple exams happening simultaneously.

Estimate: 5 points

Reason: Increased complexity due to simultaneous scheduling and room allocation considerations.

Seating Arrangement Review

Description: Reviewing the seating arrangement before finalizing it.

Estimate: 2 points

Reason: Interface to review and approve seating arrangements, including displaying any detected issues.

Non-Functional Requirements

System Security

Description: Ensuring strong encryption for passwords and sensitive data.

Estimate: 3 points

Reason: Implementing encryption mechanisms and secure data handling practices.

System Performance

Description: Handling a large number of concurrent users during peak exam times without performance degradation.

Estimate: 5 points

Reason: Requires performance optimization, load testing, and possibly infrastructure scaling.

Data Backup and Recovery

Description: Implementing regular data backup and recovery processes.

Estimate: 3 points

Reason: Setting up automated backups, ensuring data integrity, and creating recovery plans.

User-Friendly Interface

Description: Designing an intuitive and easy-to-navigate application interface.

Estimate: 2 points

Reason: UX/UI design for ease of use, with feedback loops for continuous improvement.

Scalability

Description: Ensuring the system scales easily as the number of students and exams increases.

Estimate: 3 points

Reason: Designing for scalability, including database optimization and modular architecture.

Reliability

Description: Ensuring the system is reliable with minimal downtime.

Estimate: 3 points

Reason: High availability setup, failover mechanisms, and monitoring.

Response Time

Description: Ensuring the system responds quickly to user requests.

Estimate: 3 points

Reason: Performance optimization and efficient query handling.

Accessibility

Description: Making the application accessible from various devices and platforms.

Estimate: 2 points

Reason: Responsive design and cross-platform compatibility.

Compliance

Description: Ensuring the system complies with relevant data protection and privacy regulations.

Estimate: 2 points

Reason: Implementing compliance measures and regular audits.

Maintainability

Description: Ensuring the codebase is well-documented and maintainable.

Estimate: 2 points

Reason: Writing comprehensive documentation and following coding standards.

Total Estimate: 58 points