**HOTEL MANAGEMENT SYSTEM PROJECT GUIDELINES (- ZANE)**

Week-by-Week Implementation Plan

Week 1: Planning and Setup

* Create project structure
* Design database schema
* Create basic HTML templates for all pages
* Set up authentication system (login/register)

Week 2: User Authentication

* Implement User class
* Create login/registration forms with validation
* Set up session management
* Implement basic RBAC

Week 3: Room Management

* Implement Room class with CRUD operations
* Create admin interface for managing rooms
* Add basic room listing for guests

Week 4: Booking System

* Implement Booking class
* Create booking form with date validation
* Implement availability checking
* Add guest booking history page

Week 5: Advanced Features

* Implement client-side encryption
* Set up audit logging
* Add admin dashboard with summary statistics

Week 6: UI/UX Improvements

* Implement real-time search and filtering
* Add responsive design
* Improve form validation and error handling

Week 7: Testing and Debugging

* Test all features
* Fix bugs
* Optimize performance
* Prepare sample data

Week 8: Documentation and Finalization

* Write user guide
* Prepare technical documentation
* Create presentation
* Final testing and deployment

Testing Scenarios

1. **Authentication Test**
   * Register new user
   * Login with correct credentials
   * Attempt login with wrong password
   * Try to access admin pages as guest
2. **Room Management Test**
   * Add new room as admin
   * Try to add room with duplicate number
   * Edit room details
   * Delete room and verify bookings are cancelled
3. **Booking Test**
   * Book available room
   * Try to book already booked room
   * Check booking history
   * Cancel booking
4. **Security Test**
   * Verify data is encrypted in database
   * Check audit logs for all actions
   * Test CSRF protection
   * Attempt SQL injection
5. **Edge Cases**
   * Book room with check-out before check-in
   * Book room for past dates
   * Try to book when no rooms available
   * Bulk room operations

Deployment Notes

1. **Server Requirements**
   * PHP 7.4+
   * MySQL 5.7+
   * Web server (Apache/Nginx)
2. **Installation Steps**
   * Clone repository to web server
   * Create database and import schema
   * Update config.php with database credentials
   * Set up web server to point to project directory
   * Create initial admin user directly in database
3. **Security Considerations**
   * Store encryption keys securely (not in code)
   * Use HTTPS for all connections
   * Regularly backup database
   * Keep server software updated