PROJECT PLAN

1. Project Phases

1. **Phase 1: Planning and Requirements Gathering**

2. **Phase 2: System Design**

3. **Phase 3: Development**

4. **Phase 4: Testing**

5. **Phase 5: Deployment**

6. **Phase 6: Documentation and Handover**

Tasks, Dependencies, and Timeline

Phase 1: Planning and Requirements Gathering

Total Time: **3 days**

Objective: Understand the full scope of the CMCS system, defining technical and functional requirements for all user roles (Lecturer, Coordinator, Manager, HR).

- **Task 1.1: Define Requirements (2 days)**

  - **Description**: Identify the user needs, key features (claim submission, approval, document upload), and technical requirements (database, user roles, UI).

  - **Deliverables**: Detailed list of system features for all roles.

  - **Dependency**: None.

- **Task 1.2: Set Up Development Environment (1 day)**

  - **Description**: Install necessary tools like Visual Studio, SQL Server, and version control systems (GitHub).

  - **Deliverables**: Fully set up environment, connected to GitHub repository.

  - **Dependency**: Completion of Task 1.1.

Phase 2: System Design

Total Time: **7 days**

Objective: Design the architecture, database, and UI for the CMCS system, with clear separation between different user roles and features.

- **Task 2.1: Design Database Schema (2 days)**

  o **Description**: Define tables and relationships, including Lecturer, Manager, Claim, Document, and Approval. Specify attributes and data types, including relationships between entities.

  o **Deliverables**: UML class diagram of the database structure.

  o **Dependency**: Completion of Phase 1.

- **Task 2.2: Design Application Architecture (3 days)**

  o **Description**: Define the overall MVC structure of the application, including models, views, and controllers. Ensure that each user role (Lecturer, Coordinator, Manager, HR) has its respective interface and functionality.

  o **Deliverables**: Application architecture document, outlining interactions between models, views, and controllers.

  o **Dependency**: Completion of Task 2.1.

- **Task 2.3: Design User Interface Mockups (2 days)**

  o **Description**: Create wireframes for all views (claim submission, approval screens, HR data management). Ensure each role has a user-friendly and intuitive interface.

  o **Deliverables**: Wireframes/mockups for GUI layout for each user role.

  o **Dependency**: Completion of Task 2.2.

Phase 3: Development

Total Time: **17 days**

Objective: Develop the back-end and front-end of the system, implementing all core functionality and ensuring that the database is fully functional.

- **Task 3.1: Implement Database (2 days)**

  o **Description**: Create the database and implement the schema designed in Phase 2. Populate with sample data for testing.

  o **Deliverables**: Functional database with tables for users, claims, documents, approvals.

  o **Dependency**: Completion of Phase 2.

- **Task 3.2: Develop Models (3 days)**

  o **Description**: Implement models to handle data for claims, approvals, and user details. Ensure data validations are applied.

  o **Deliverables**: Functional models with defined relationships between entities.

  o **Dependency**: Completion of Task 3.1.

- **Task 3.3: Develop Controllers (5 days)**

  o **Description**: Implement controllers to manage interactions between users and the system (e.g., claim submission, claim approval, HR data management).

  o **Deliverables**: Fully functional controllers for all user roles.

  o **Dependency**: Completion of Task 3.2.

- **Task 3.4: Develop Views (5 days)**

  o **Description**: Develop front-end views for submitting claims, approving claims, uploading documents, and tracking status.

o **Deliverables**: Complete set of views for each role (Lecturer, Coordinator, Manager, HR).

o **Dependency**: Completion of Task 3.3.

- **Task 3.5: Integrate File Uploads (2 days)**

  o **Description**: Integrate functionality for lecturers to upload supporting documents for claims. Ensure proper file handling and storage in the database.

  o **Deliverables**: Working document upload system linked to claims.

  o **Dependency**: Completion of Task 3.4.

Phase 4: Testing

Total Time: **8 days**

Objective: Ensure all functionality works as expected, identifying and fixing bugs or performance issues.

- **Task 4.1: Unit Testing (3 days)**

  o **Description**: Test individual components (models, controllers) to ensure they work correctly and interact with the database without issues.

  o **Deliverables**: Unit test results with passed/failed status for each component.

  o **Dependency**: Completion of Phase 3.

- **Task 4.2: User Acceptance Testing (5 days)**

  o **Description**: Test the application's functionality from the user's perspective, ensuring smooth navigation and error handling for all roles.

  o **Deliverables**: User feedback and bug reports from testing, applied fixes.

  o **Dependency**: Completion of Task 4.1.

Phase 5: Deployment

Total Time: **3 days**

Objective: Deploy the application to the desired environment (local server or cloud).

- **Task 5.1: Prepare Deployment Environment (2 days)**

  - **Description**: Set up the server or local environment for deploying the CMCS application.

  - **Deliverables**: Configured server ready for deployment.

  - **Dependency**: Completion of Phase 4.

- **Task 5.2: Deploy the Application (1 day)**

  - **Description**: Deploy the application and perform final checks to ensure it works as expected in the live environment.

  - **Deliverables**: Live application ready for users.

  - **Dependency**: Completion of Task 5.1.

Phase 6: Documentation and Handover

Total Time: **8 days**

Objective: Provide detailed documentation and training materials for future users and developers.

- **Task 6.1: Write User Documentation (3 days)**

  - **Description**: Create user documentation explaining how to use the system (submitting claims, approving claims, tracking statuses).

  - **Deliverables**: User manual.

  - **Dependency**: Completion of Phase 5.

- **Task 6.2: Write Technical Documentation (3 days)**

  - **Description**: Document the codebase, database structure, and deployment steps for developers.

  - **Deliverables**: Technical documentation.

- o **Dependency**: Completion of Task 6.1.

- **Task 6.3: Handover and Training (2 days)**

  - o **Description**: Provide training or a handover session for the client or stakeholders, ensuring they understand the system's functionality and maintenance.

  - o **Deliverables**: Training materials and completed handover session.

  - o **Dependency**: Completion of Task 6.2.

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3. Summary Timeline

- **Phase 1: Planning and Requirements Gathering**: 3 days

- **Phase 2: System Design**: 7 days

- **Phase 3: Development**: 17 days

- **Phase 4: Testing**: 8 days

- **Phase 5: Deployment**: 3 days

- **Phase 6: Documentation and Handover**: 8 days
  Total Project Duration: **46 days** (approximately 7 weeks)