

## 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**

## 2. Tasks, Dependencies, and Timeline

### Phase 1: Planning and Requirements Gathering

- **Task 1.1:** Define Requirements (2 days)
  - Identify user needs, key features, and technical requirements.
  - **Dependency:** None.
- **Task 1.2:** Set Up Development Environment (1 day)
  - Install necessary tools (e.g., Visual Studio, SQL Server).
  - **Dependency:** Completion of Task 1.1.

**Total Time:** 3 days

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### Phase 2: System Design

- **Task 2.1:** Design Database Schema (2 days)
  - Design tables, relationships, and data types for storing books and PDFs.
  - **Dependency:** Completion of Phase 1.
- **Task 2.2:** Design Application Architecture (3 days)
  - Define the MVC structure, including models, views, and controllers.
  - **Dependency:** Completion of Task 2.1.
- **Task 2.3:** Design User Interface Mockups (2 days)
  - Create wireframes or mockups for the GUI layout.
  - **Dependency:** Completion of Task 2.2.

**Total Time:** 7 days

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### Phase 3: Development

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

- Create the database and implement the schema.
  - **Dependency:** Completion of Phase 2.
- **Task 3.2:** Develop Models (3 days)
  - Implement the models to handle data for books, including PDF storage.
  - **Dependency:** Completion of Task 3.1.
- **Task 3.3:** Develop Controllers (5 days)
  - Implement the controllers to manage interactions between the user interface and models.
  - **Dependency:** Completion of Task 3.2.
- **Task 3.4:** Develop Views (5 days)
  - Implement the user interface, including forms for adding/editing books and displaying the bookshelf.
  - **Dependency:** Completion of Task 3.3.
- **Task 3.5:** Integrate PDF Viewer (2 days)
  - Integrate an embedded PDF viewer into the application (optional feature).
  - **Dependency:** Completion of Task 3.4.

**Total Time:** 17 days

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#### Phase 4: Testing

- **Task 4.1:** Unit Testing (3 days)
  - Test individual components (models, controllers) to ensure they work as expected.
  - **Dependency:** Completion of Phase 3.

**Total Time:** 3 days

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#### Phase 5: Deployment

- **Task 5.1:** Prepare Deployment Environment (2 days)
  - Set up the server or local environment for deploying the application.
  - **Dependency:** Completion of Phase 4.
- **Task 5.2:** Deploy the Application (1 day)
  - Deploy the app to the chosen environment and perform final checks.
  - **Dependency:** Completion of Task 5.1.

**Total Time:** 3 days

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#### **Phase 6: Documentation and Handover**

- **Task 6.1:** Write User Documentation (3 days)
  - Create documentation that explains how to use the app.
  - **Dependency:** Completion of Phase 5.
- **Task 6.2:** Write Technical Documentation (3 days)
  - Document the codebase, architecture, and deployment steps.
  - **Dependency:** Completion of Task 6.1.
- **Task 6.3:** Handover and Training (2 days)
  - Provide training or a handover session for the client or stakeholders.
  - **Dependency:** Completion of Task 6.2.

**Total Time:** 8 days

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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:** 41 days (approximately 6 weeks)