# Reflection – Anda Matomela

## Subsystem Description

The File Upload and Collaboration subsystem is a core feature of the Task Management System. It allows users to securely attach relevant files to individual tasks and enables team members to communicate directly within task threads through comments and @mentions. This ensures documentation and dialogue remain task-focused and centralized. The subsystem is integrated with authentication, task management, and notifications to support access control, task association, and real-time collaboration.

## Business Rules

### File Upload Rules

1. Users must be authenticated to upload files.

2. Each file must be linked to a specific task ID.

3. Supported file formats: PDF, DOCX, PNG, JPG (others will be rejected).

4. Max file size: 10MB per file; Max 5 files per task.

5. Files are virus-scanned before upload confirmation.

6. Files are encrypted and stored in secure cloud storage.

7. Users may view/delete only their own uploads.

8. Admins may view/delete any file within the system.

9. Upload actions (upload, delete, view) are logged.

### Comments & Mentions

1. Any project member can comment on a task.

2. @mentions trigger real-time notifications to the tagged user.

3. Comments are editable for 15 minutes post-submission but cannot be deleted.

### Task Dependencies & Subtasks

1. A task with subtasks cannot be marked complete unless all subtasks are completed.

2. Circular dependencies are restricted (e.g., A → B → A is invalid).

## What Still Needs to Be Done

Design wireframes for the file upload interface and comment section.  
Implement file validation, encryption, and virus scanning features in the backend.  
Connect file uploads with task IDs using the database schema.  
Set up cloud storage and access permission structure.  
Finalize UI/UX layout for comments and file preview/download.

## Data Used

Task ID (foreign key reference to the Tasks table)  
User ID (to track ownership of the file or comment)  
File metadata (file name, size, type, upload timestamp)  
Comment content (text, timestamp, @mentioned user ID)  
Audit trail data (actions performed, by whom, and when)

## Communication Challenges

Our group sometimes took long to respond on WhatsApp, and it was difficult to find a time when everyone was available for meetings. We shared updates through documents, but it was still hard to work together at the same time. Having fixed weekly meetings and letting different people lead could help us communicate and work better.

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