## **Requirement Analysis: Centralized Repository for Course Materials and Assignments**

This document outlines the requirements for a centralized repository to store and manage course materials and assignments within the integrated learning environment (ILE) platform.

****1. Functional Requirements:****

****1.1 Storage and Organization:****

The repository should ****centrally store**** all course materials (documents, presentations, videos, links, etc.) and assignments for the platform.

Implement a ****structured organization system**** to allow easy access and browsing of materials by lecturers and students. This might involve:

****Course folders:**** Create folders for each course to group their associated materials and assignments.

****Subfolders:**** Allow further organization within courses using subfolders for different categories of materials (e.g., lectures, readings, assignments).

****Metadata:**** Consider adding relevant metadata to files (e.g., title, description, upload date, author) for better searchability and organization.

****1.2 Uploading and Downloading:****

****Lecturers with appropriate permissions**** should be able to:

****Upload**** various types of course materials and assignments to the designated course folders.

****Edit**** existing materials and assignments within the repository.

****Delete**** materials and assignments (subject to access control and potential version control considerations).

****Students**** should be able to:

****Download**** course materials and assignments assigned to their enrolled courses.

****View**** uploaded materials and assignments directly within the platform (optional).

****1.3 Access Control:****

Implement role-based access control (RBAC) for uploading, editing, and deleting materials and assignments:

****Admins**** have full access to manage all materials and assignments in the repository.

****Lecturers**** can only manage materials and assignments within their assigned courses.

****Students**** cannot upload or edit materials/assignments, but can download assigned resources.

****2. Non-Functional Requirements:****

****Security:****

Ensure the repository uses secure storage mechanisms to protect uploaded materials and student data.

Implement appropriate access control measures to prevent unauthorized access and modifications.

****Performance:****

Uploading, downloading, and browsing of materials should be efficient and responsive.

****Scalability:****

The repository should be able to scale to accommodate a growing number of courses, materials, and users.

****3. Success Criteria:****

Users with appropriate roles can successfully upload, download, and manage course materials and assignments.

The repository effectively stores and organizes various types of course resources.

Access control mechanisms restrict unauthorized actions on materials and assignments.

The system performs storage, retrieval, and access tasks efficiently and reliably.

****4. Open Questions:****

What file formats and sizes will be supported for uploading materials and assignments?

How will version control be handled for course materials and assignments (if applicable)?

Should there be functionalities for sharing materials across courses or with external users (optional)?