Sure! Below is a list of Use Cases for the Learning Management System (LMS) project based on the provided ERD, without any code. These Use Cases represent the key functionalities and business processes that the system should support, aligned with Clean Architecture principles.

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### Use Cases for the LMS Project

1. \*\*EnrollUserInCourseUseCase\*\*

- \*\*Purpose\*\*: Allows a user to enroll in a course and records their enrollment status.

- \*\*Description\*\*: Verifies the user and course existence, checks course availability (e.g., published status), and creates an enrollment record if conditions are met.

2. \*\*SubmitAssessmentUseCase\*\*

- \*\*Purpose\*\*: Enables a student to submit an assessment and records their score.

- \*\*Description\*\*: Validates the assessment and user, processes the submission, updates the score, and optionally adjusts the user’s progress.

3. \*\*GetUserProgressUseCase\*\*

- \*\*Purpose\*\*: Retrieves a user’s progress details for a specific course.

- \*\*Description\*\*: Fetches the user’s progress data, including completed modules and lessons, and returns it for display or further processing.

4. \*\*SendNotificationUseCase\*\*

- \*\*Purpose\*\*: Sends a notification to a user (e.g., about new courses or deadlines).

- \*\*Description\*\*: Validates the user, creates a notification with a message, and saves it for the user to view later.

5. \*\*CreateCourseUseCase\*\*

- \*\*Purpose\*\*: Allows an instructor to create a new course.

- \*\*Description\*\*: Validates the instructor, creates a course with a title, description, and status, and saves it to the system.

6. \*\*UpdateLessonContentUseCase\*\*

- \*\*Purpose\*\*: Updates the content or details of a lesson within a module.

- \*\*Description\*\*: Verifies the lesson exists, allows the instructor to update content (e.g., URL, type), and saves the changes.

7. \*\*GetCourseAssessmentsUseCase\*\*

- \*\*Purpose\*\*: Retrieves all assessments associated with a specific course.

- \*\*Description\*\*: Fetches the list of assessments for a course, including their titles and related questions, for review or assignment.

8. \*\*AssignRoleToUserUseCase\*\*

- \*\*Purpose\*\*: Assigns a role (e.g., student, instructor) to a user.

- \*\*Description\*\*: Validates the user and role, creates a record in the user\_roles junction table, and updates the user’s permissions.

9. \*\*UpdateUserProgressUseCase\*\*

- \*\*Purpose\*\*: Updates a user’s progress after completing a lesson or module.

- \*\*Description\*\*: Verifies the user and course, calculates the new progress (e.g., completed lessons), and saves the updated progress.

10. \*\*ViewUserSubmissionsUseCase\*\*

- \*\*Purpose\*\*: Allows an instructor to view a student’s assessment submissions.

- \*\*Description\*\*: Retrieves all submissions for a specific user and assessment, including scores and submission timestamps.

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These Use Cases cover the core functionalities of the LMS, such as user management, course enrollment, progress tracking, assessment handling, and notifications. Each Use Case focuses on a single responsibility and can be implemented independently, adhering to Clean Architecture principles. Let me know if you’d like to expand on any of these or add more!