Lecture Models Documentation

1. DefaultLectureRules

Purpose: This class defines the default settings for lectures. These settings apply to all lectures unless overridden by individual rules.

Attributes:

- enableQuizzes: Controls whether quizzes are enabled.

- enableHomework: Controls whether homework is enabled.

- enableInteractions: Controls whether interactions are allowed.

- recordLectures: Controls whether lectures are recorded.

- dynamicRules: Supports dynamic rules stored in a map.

Methods:

- enableAllRules: Enables all rules.

- disableAllRules: Disables all rules.

- addDynamicRule: Adds a dynamic rule to the map.

2. IndividualLectureRules

Purpose: This class allows for customization of lecture settings on a per-lecture basis, overriding the default rules if necessary.

Attributes:

- enableQuiz: Controls whether quizzes are enabled.

- enableHomework: Controls whether homework is enabled.

- enableInteractions: Controls whether interactions are allowed.

- isRecorded: Controls whether the lecture is recorded.

- dynamicRules: Supports dynamic rules stored in a map.

Methods:

- addDynamicRule: Adds a dynamic rule specific to an individual lecture.

3. LectureContent

Purpose: Represents the detailed content of a lecture, including its title, topic, associated teacher, study materials, and rules.

Attributes:

- title: Title of the lecture.

- topic: Topic of the lecture.

- teacher: Associated teacher.

- studyMaterial: Linked study material.

- defaultRules: References DefaultLectureRules for general settings.

- individualRules: References IndividualLectureRules for customized settings.

- tags: Tags for categorization.

- contentBody: Main lecture content.

- format: Enum representing lecture format (MONOLOGUE, DIALOGUE, HYBRID).

- scheduledTime: Scheduled time of the lecture.

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- isActive: Active status of the lecture.

- isInteractive: Interaction availability.

Methods:

- applyGeneralRules: Applies default rules if no individual rules are set.

- toggleActive: Toggles the active state of the lecture.

- addTag: Adds a tag to the lecture.

4. Interaction Between Classes

- Rule Application: LectureContent uses DefaultLectureRules for general settings unless IndividualLectureRules are provided.

- Dynamic Rules: Both DefaultLectureRules and IndividualLectureRules support dynamic rules for customization.

- Audit and Logging: All classes log their creation and updates, ensuring traceability.

In summary:

- DefaultLectureRules provides baseline configurations.

- IndividualLectureRules allows lecture-specific customizations.

- LectureContent serves as the central model tying these rules together.