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Use Case 1

Operation Contracts

Operations:

`createOfferings(location, timeslot, lessonType)`

`ModifyOffering(OfferingID, newDetail)`

`viewOfferings()`

`TakeOffering(OfferingID)`

Contract: `createOfferings`

Operation: `createOfferings(location: Location, timeSlot: TimeSlot, lessonType: LessonType)`

Cross reference(s): Use Case: Process Offerings

Preconditions:

1. The Administrator is authenticated by the system.
2. The Location, TimeSlot, and LessonType are valid objects in the system.

Postconditions:

1. A new instance of Offering has been created. [Instance creation]
2. The newly created Offering has been associated with the Location. [Association formation]
3. The newly created Offering has been associated with the TimeSlot. [Association formation]
4. The newly created Offering has been associated with the LessonType. [Association formation]
5. The new offering has been added to the Offerings List in the system for potential instructors to view. [Attribute Modification]

Contract: `modifyOffering`

Operation: `modifyOffering(OfferingID: String, newDetail: String)`

Cross reference(s): Use Case: Process Offerings

Preconditions:

1. The Administrator is authenticated by the system.
2. The Offering identified by OfferingID exists in the system.

Postconditions:

1. The existing instance of Offering identified by OfferingID has been updated with the newDetail. [Attribute Modification]
2. The modified Offering remains associated with the same Location, TimeSlot, and LessonType unless explicitly changed by the Administrator. [no change]

Contract: viewOfferings

Operation: viewOfferings()

Cross reference(s): Use Case: Process Offerings

Preconditions:

1. The user (Administrator, Instructor, or client) is authenticated by the system.

Postconditions:

1. The system filters and displays a list of Offerings based on the user's access level.
[Attribute modification]
2. Each Offering in the list is associated with the relevant Instructor (if any), Location, TimeSlot, and LessonType. [Association formation]

Contract: takeOffering

Operation: takeOffering(OfferingID: String)

Cross reference(s): Use Case: Process Offerings

Preconditions:

1. The Instructor is authenticated by the system.
2. The Offering identified by OfferingID exists in the system.
3. The Offering has not been taken by another Instructor.

Postconditions:

1. The status of the Offering is updated to indicate it has been taken by the Instructor.
[Attribute modification]
2. The Instructor is now associated with the Offering. [Association formation]
3. The Offering is made publicly visible, displaying the associated instructor's details.
[Association formation]