**Contract CO2:**    getLocation

**Operation:**    getLocation(location_id: Long)
**Cross References:**    Use Case: Process Offerings
    System Sequence Diagram: UC1_S1_SSD_Success
**Preconditions:**    There is an instance of Location that has the ID *location_id*
**Postconditions:**    None


**Contract CO2:**    getActivity

**Operation:**    getActivity(activity_id: Long)
**Cross References:**    Use Case: Process Offerings
    System Sequence Diagram: UC1_S1_SSD_Success
**Preconditions:**    There is an instance of Location that has the ID *activity_id*
**Postconditions:**    None


**Contract CO2:**    makeLesson

**Operation:**    makeLesson(location: Location, activity: Activity, startDate: LocalDate, endDate: LocalDate, startTime: LocalTime, endTime: LocalTime, day: DayOfWeek, totalSpots: Integer)
**Cross References:**    Use Case: Process Offerings
    System Sequence Diagram: UC1_S1_SSD_Success
**Preconditions:**    User must be logged in as an Administrator
**Postconditions:**    A Lesson instance *lesson* was created (instance creation)
    *location* was associated with the Location (association formed)
    *location* was associated with the Activity (association formed)

**Contract CO2:**    displayCorrespondingLessons

**Operation:**    displayCorrespondingLessons(instructor_id:Long)
**Cross References:**    Use Case: Process Offerings
    System Sequence Diagram: UC1_S2_SSD_Success
**Preconditions:**    User must be logged in as an Instructor
    *instructor_id* must belong to the connected user
**Postconditions:**    An Lesson array *lessons* was created which can be empty (instance creation)

**Contract** CO2:      takeLesson

| | |
|---|---|
| **Operation:** | takeLesson(lesson_id: Long, instructor_id: Long) |
| **Cross References:** | Use Case: Process Offerings |
| | System Sequence Diagram: UC1_S2_SSD_Success |
| **Preconditions:** | User must be logged in as an Instructor |
| | There is an instance of Lesson with the ID *lesson_id* |
| | *instructor_id* must belong to the connected user |
| **Postconditions:** | An Offering instance *offering* was created (instance creation) |
| | *offering* was associated with a Lesson, based on *lesson_id* match |
| | *offering* was associated with an Instructor, based on *instructor_id* match |
| | *offering.bookedSpots* was set to 0 |

**Contract** CO2:      displayCorrespondingOfferings

| | |
|---|---|
| **Operation:** | displayCorrespondingOfferings(client_id:Long) |
| **Cross References:** | Use Case: Process Bookings |
| | System Sequence Diagram: UC2_SSD_Success |
| **Preconditions:** | User must be logged in as a Client |
| | *client_id* must belong to the connected user |
| **Postconditions:** | An Offering array *offerings* was created which can be empty (instance creation) |

**Contract** CO2:      takeOffering

| | |
|---|---|
| **Operation:** | takeOffering(offering_id: Long, client_id: Long) |
| **Cross References:** | Use Case: Process Bookings |
| | System Sequence Diagram: UC2_SSD_Success |
| **Preconditions:** | User must be logged in as a Client |
| | There is an instance of Offering with the ID *offering_id* |
| | The Offering instance's *bookedSpots* is less than its associated Lesson instance's *totalSpots* |
| | *client_id* must belong to the connected user |
| **Postconditions:** | A Booking instance *booking* was created (instance creation) |
| | *booking* was associated with an Offering, based on *offering_id* match |
| | *booking* was associated with a Client, based on *client_id* match |
| | The associated Offering instance's *bookedSpots* was incremented by 1 |