

1. "Offerings are unique. In other words, multiple offerings on the same day and time slot must be offered at a different location."

context Lesson

inv: Lesson.allInstances()->forAll(lesson1, lesson2 | lesson 1 <> lesson 2 implies lesson1.isOverlapping(lesson2) implies lesson1.location <> lesson2.location)

2. "Any client who is underage must necessarily be accompanied by an adult who acts as their guardian."

context Client

inv: self.age < 18 implies self.parent->notEmpty()

3. "The city associated with an offering must be one the city's that the instructor has indicated in their availabilities."

context Offering

inv: self.instructor.availabilities->includes(self.lesson.location.city)

4. "A client does not have multiple bookings on the same day and time slot."

context Client

inv: self.booking->forAll(b1, b2 | b1 <> b2 implies not b1.offering.lesson.isOverlapping(b2.offering.lesson))