Use Case 2: Process Bookings

System Operations Overview

Operation: `login(credentials)`

- **Preconditions**:
  - The user (Client) must have a registered account in the system.
- **Postconditions**:
  - The client's session is initiated if the credentials are correct.
  - The system provides authentication success or failure feedback.

Operation: `viewOfferings()`

- **Preconditions**:
  - The client must be logged in.
- **Postconditions**:
  - The system retrieves and displays a list of available offerings to the client.

Operation: `selectOffering(offeringID)`

- **Preconditions**:
  - The client must have successfully viewed the offerings list.
- **Postconditions**:
  - The selected offering is marked as the chosen item by the client and ready for further processing.

Operation: `isAvailable(offeringID)`

- **Preconditions**:
  - The offeringID must refer to a valid offering in the system.
- **Postconditions**:
  - The system confirms if the offering is available or not.
  - If not available, an error message is shown to the client.

Operation: `checkForConflicts(clientID, schedule)`

- **Preconditions**:
  - The offering must be available.
  - The client must be logged in.
- **Postconditions**:
  - The system checks if there are any scheduling conflicts with the client's current bookings.

○ Returns "no conflicts" if booking is possible, or "conflicts" if the selected time slot is occupied.

Operation: `verifyGuardian()`

- **Preconditions**:
  - The client's age is below 18.
- **Postconditions**:
  - Guardian verification is requested and confirmed by the system before proceeding with the booking.

Operation: `markAsBooked(offeringID)`

- **Preconditions**:
  - The offering must be available and conflict-free.
- **Postconditions**:
  - The offering is marked as booked and no longer available to others during the selected schedule.

Operation: `createBooking(clientID, offeringID)`

- **Preconditions**:
  - The client must have selected a conflict-free, available offering.
  - Guardian must be verified if the client is under 18.
- **Postconditions**:
  - A new booking entry is created, associating the client with the offering.
  - Booking details become accessible only to the client, instructor, and administrator.

Operation: `cancelBooking(bookingID)`

- **Preconditions**:
  - The booking must exist and belong to the client or their legal guardian.
  - The booking is not within a restricted cancellation period (e.g., 24 hours before the session).
- **Postconditions**:
  - The booking is canceled and removed from the system.
  - The offering's availability is restored.