

## **Identification of System Operations and Operation Contracts**

### **1. createOffering()**

Description: Allows an administrator to create a new offering (e.g., yoga class, swimming lessons).

Precondition:

The administrator is logged in.

The location and time slot are available.

Postcondition:

A new offering is created and stored in the system.

The offering becomes available for instructors to select.

### **2. selectOffering()**

Description: Allows an instructor to select an available offering for teaching.

Precondition:

The instructor is registered and logged in.

The offering is available (not booked or selected by another instructor).

Postcondition:

The offering is marked as selected by the instructor.

The offering is no longer available for other instructors to select.

### **3. checkAvailability()**

Description: Checks if a location and time slot are available for a new offering.

Precondition:

A request is made to check the availability of a location and time slot.

Postcondition:

The system returns whether the location and time slot are available or not.

### **4. bookOffering()**

Description: Allows a client to book an available offering.

Precondition:

The client is registered and logged in.

The offering is available (not already booked by another client).

Postcondition:

The offering is booked by the client.

The offering is marked as unavailable for further booking.

#### 5. cancelBooking()

Description: Allows a client to cancel a booking they made.

Precondition:

The client has an existing booking for the offering.

Postcondition:

The booking is canceled.

The offering becomes available again for other clients to book.

#### 6. registerInstructor()

Description: Allows an instructor to register on the platform, providing their credentials and availability.

Precondition:

The instructor provides valid registration details (name, specialization, and availability).

Postcondition:

The instructor is successfully registered in the system and can select offerings to teach.