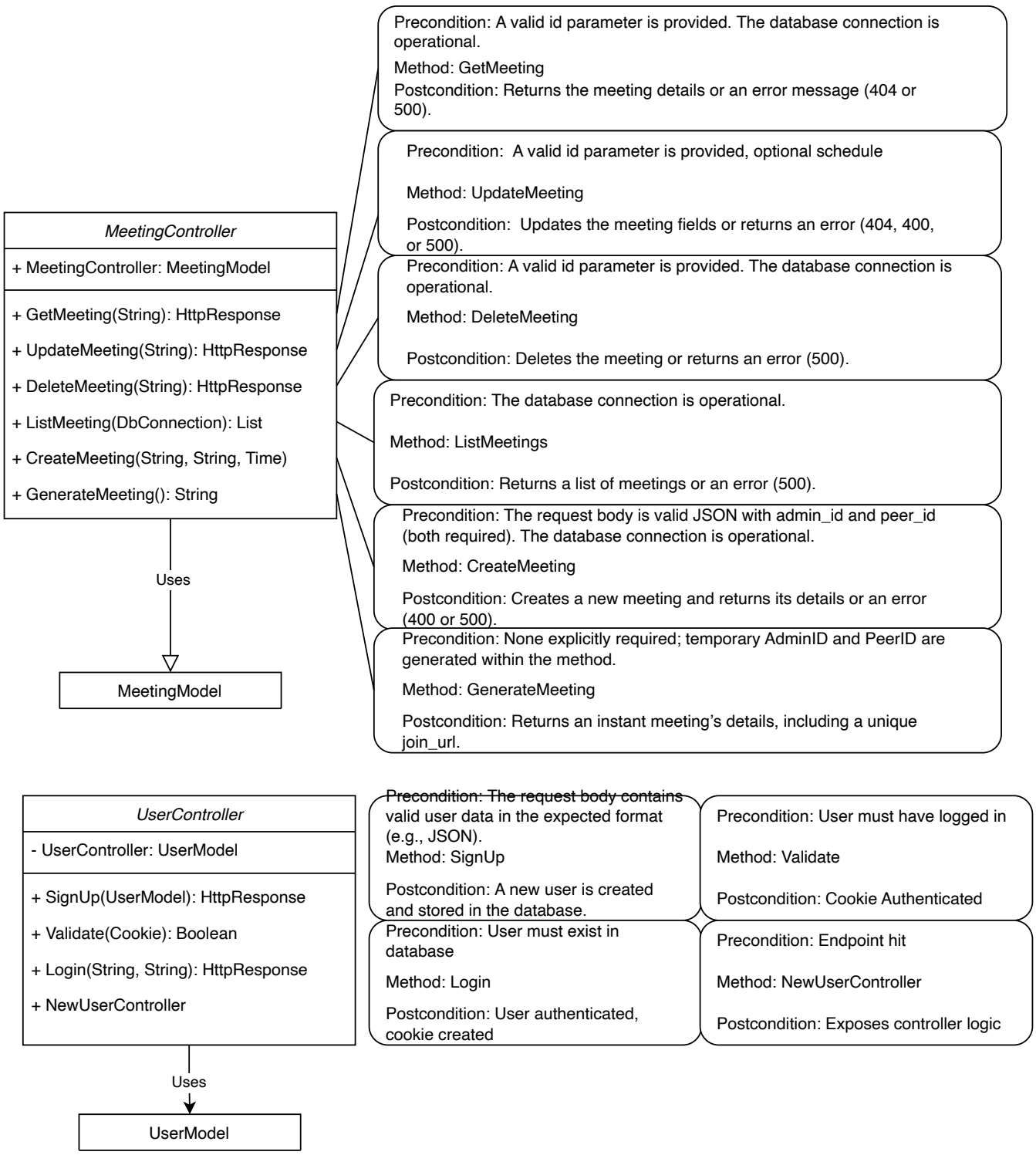
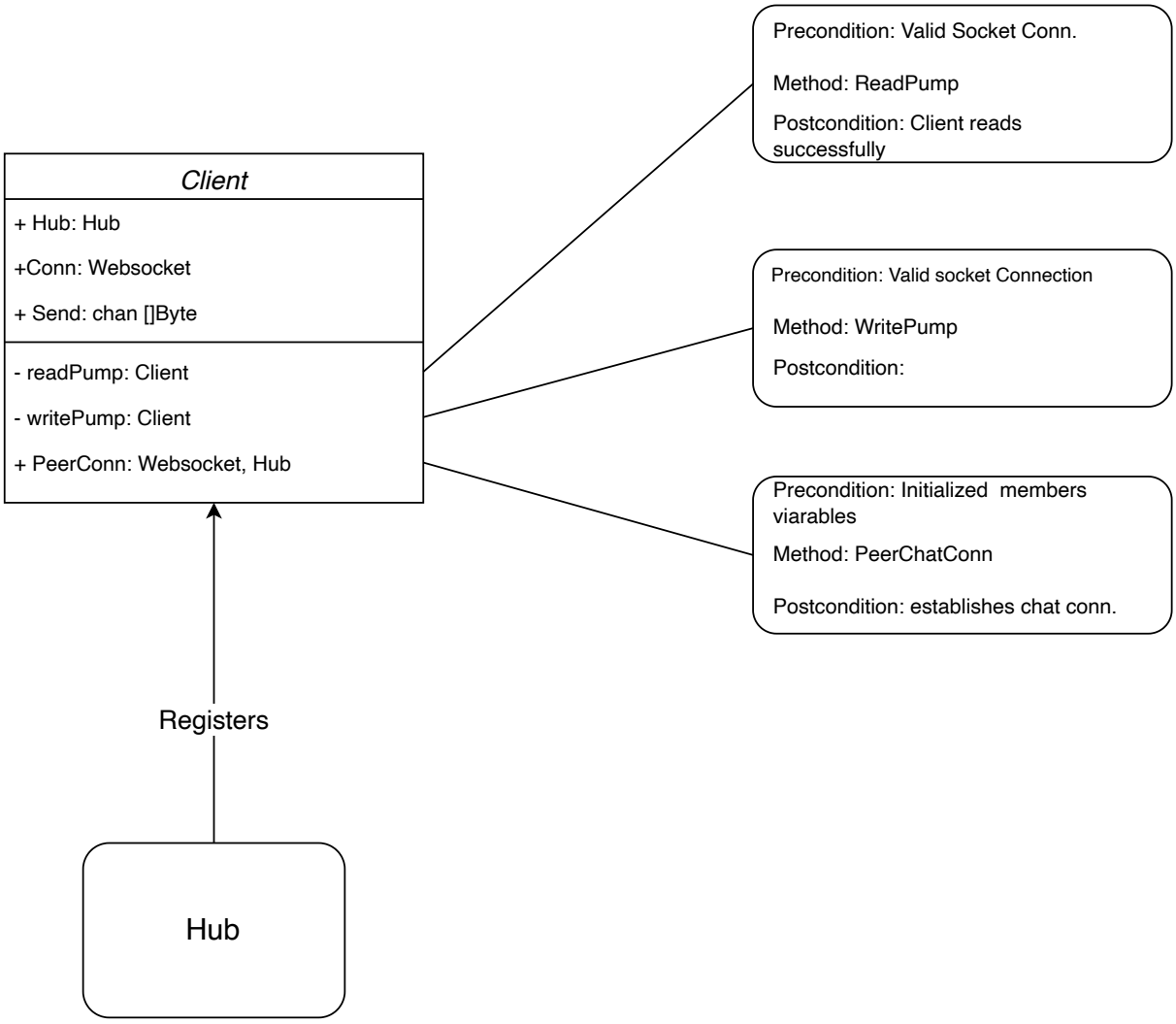
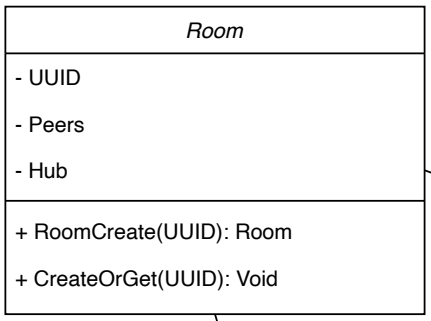
Controller Package Class Diagram



Chat Package Class Diagram



WEBRTC PACKAGE CLASS DIAGRAM



RoomCreate()

Preconditions:

Valid Peer Information: A peer object must be provided.

Hub Association: A `hub` must be specified as the central entity for room management.

Postconditions:

Room Created: A new room instance is created within the specified hub.

Peer Added to Room: The `peer` is automatically added to the new room as the first participant.

CreateOrGetRoom()

Preconditions:

Valid Peer Information: A `peer` object with valid credentials or session data is required.

Hub Specified: A `hub` the object must be present for room management.

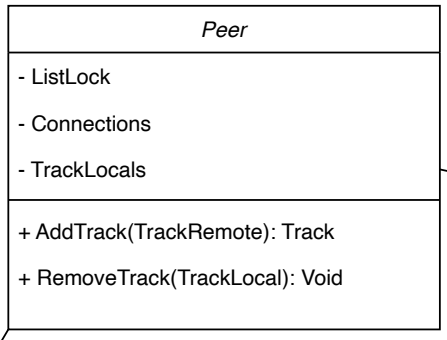
Postconditions:

Room Created or Retrieved:

If the room does not exist, it is created, following the same rules as `RoomCreate()`.

If the room already exists, a reference to the existing room is returned.

WEBRTC PACKAGE CLASS DIAGRAM cont.



AddTrack()

Preconditions:

Valid Peer Connection: The peer connection object must be active and valid to allow track addition.

Track Properties: The media track being added (e.g., audio or video) must have proper configurations, such as a codec, source, and unique identifier.

Postconditions:

Track Added to Peer Connection: The track is successfully associated with the peer connection.

Signaling Updated: Necessary signaling messages are sent to other peers to inform them of the new track.

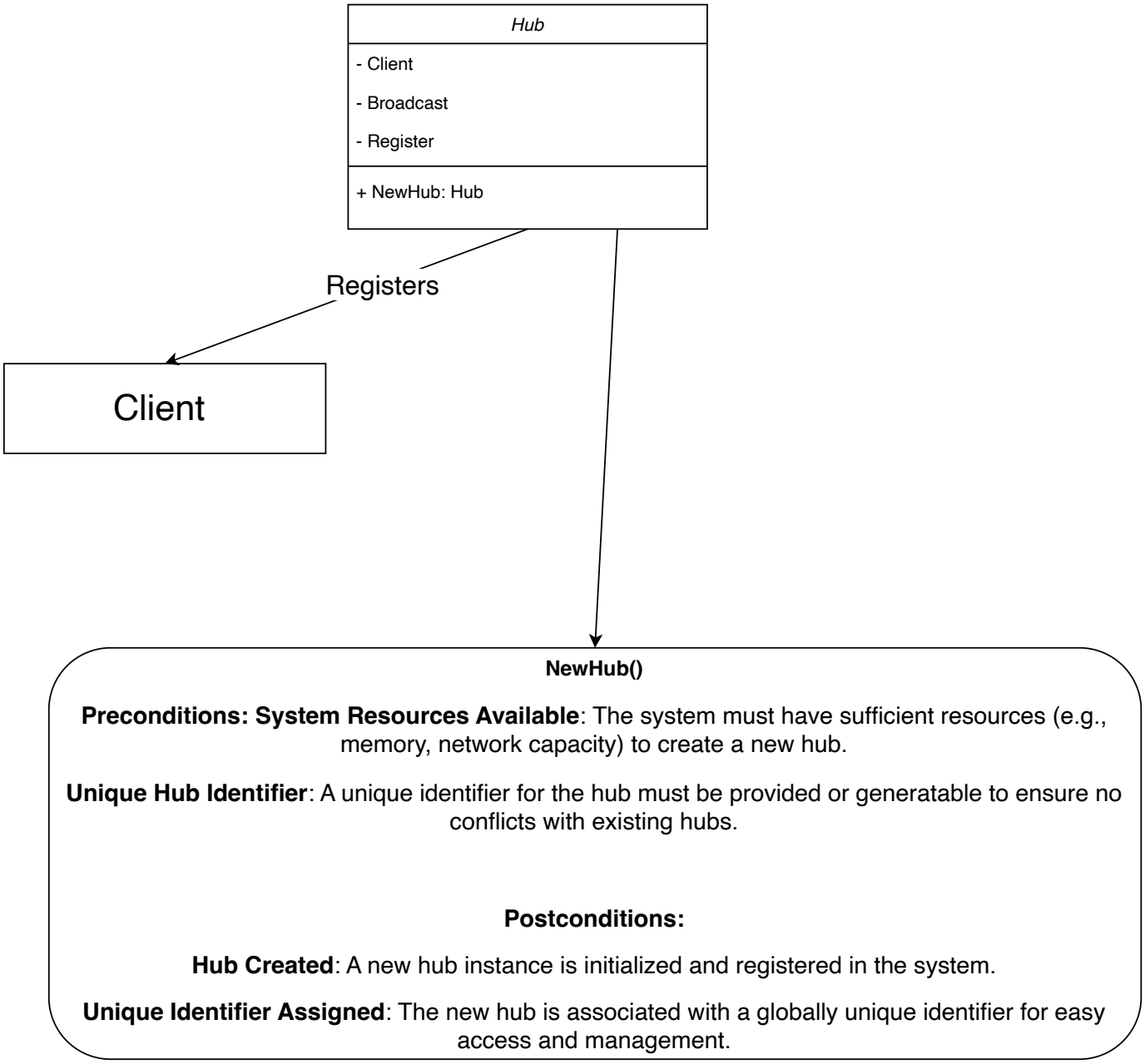
RemoveTrack()

Preconditions:Valid Peer Connection: The peer connection object must be active and valid to allow track removal.

Postconditions:

Track Removed from Peer Connection: The specified track is successfully disassociated from the peer connection.

WEBRTC PACKAGE CLASS DIAGRAM cont.



NewHub()

Preconditions: System Resources Available: The system must have sufficient resources (e.g., memory, network capacity) to create a new hub.

Unique Hub Identifier: A unique identifier for the hub must be provided or generatable to ensure no conflicts with existing hubs.

Postconditions:

Hub Created: A new hub instance is initialized and registered in the system.

Unique Identifier Assigned: The new hub is associated with a globally unique identifier for easy access and management.