

# **CityShare**

Sprint 1 Deliverables

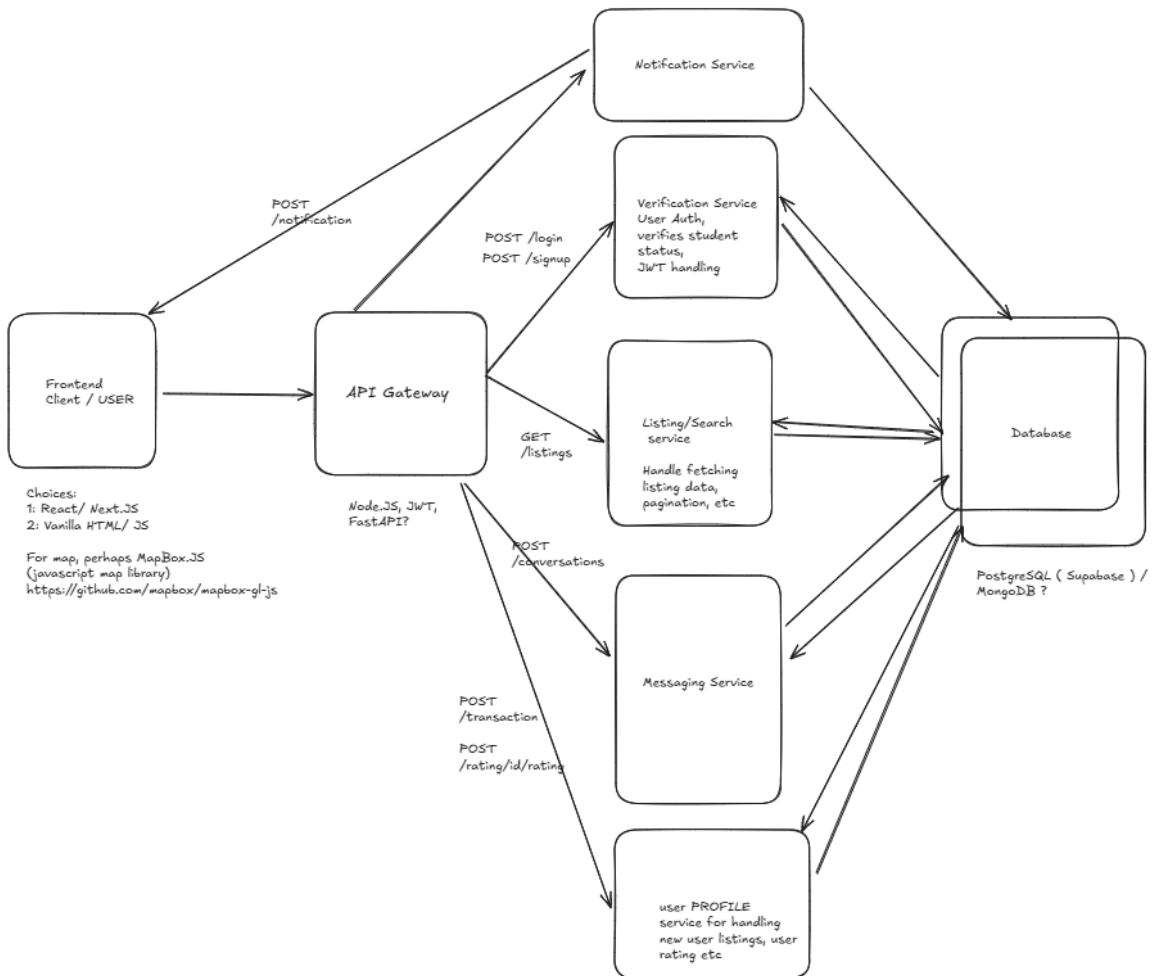
CS 160-03: Software Engineering

Team 2

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Sept 28, 2025

# Architectural document



## DATABASE SCHEMA

### 1. \*\*User\*\*

- id (PK)
- name
- email (unique)
- password\_hash
- verified (boolean)
- student\_id\_doc (optional, file path or URL)
- profile\_info (bio, avatar, etc.)
- avg\_rating\_condition (decimal)
- total\_ratings\_count (int)
- rating\_updated\_at (timestamp)

### 2. \*\*Listing\*\*

- id (PK)
- owner\_id (FK to User)
- title
- description
- category (enum: e.g., Tools, Books, etc.)
- mode (enum: Borrow, Free, Sell)
- location\_lat
- location\_lon
- created\_at
- price (nullable)
- status (active, closed, etc.)

### 3. \*\*Conversation\*\*

- id (PK)
- listing\_id (FK to Listing)
- user1\_id (FK to User)
- user2\_id (FK to User)
- created\_at

### 4. \*\*Message\*\*

- id (PK)
- conversation\_id (FK to Conversation)
- sender\_id (FK to User)
- content
- sent\_at

### 5. \*\*Transaction\*\*

- id (PK)
- listing\_id (FK to Listing)
- borrower\_id (FK to User)
- lender\_id (FK to User)
- start\_date
- end\_date
- status (pending, completed, cancelled)

### 6. \*\*Rating\*\*

- id (PK)
- transaction\_id (FK to Transaction)
- to\_user\_id (FK to User)
- from\_user\_id (FK to User)
- score\_on\_time (int)
- score\_condition (int)
- comment
- created\_at

### 7. \*\*Wishlist\*\*

- id (PK)
- user\_id (FK to User)
- keywords
- category
- radius\_km
- location\_lat
- location\_lon
- created\_at

### 8. \*\*VerificationJob\*\*

- id (PK)
- user\_id (FK to User)
- submitted\_at
- status (pending, approved, denied)
- reviewed\_at
- reviewer\_id (FK to User, nullable)

### \*\*Relationships\*\*

- User owns many Listings
- User can have many Wishlists
- Listing can have many Conversations
- Conversation contains many Messages
- Transaction links a Listing with a Borrower and Lender
- Transaction can have one or more Ratings

## Use Cases Description

### **UC-01 Sign Up**

Actor: New User

Goal: Create an account to use the app

Pre: Not logged in

Trigger: Click “Create account”

Flow: Fill form → validate → check duplicate → hash & save → start session

Alts: Email exists; weak password; server error

Post: Account created (hashed), user logged in

### **UC-02 Sign In**

Actor: Existing User

Goal: Access account

Pre: Not logged in, Existing Account

Trigger: Click “Log In”

Flow: Fill form → validate → check user/password → start session

Alts: Wrong Credentials; No existing Account; server error

Post: User logged in

### **UC-03 Search Listings**

Actor: Existing User, New User, Anyone

Goal: Find and View items

Pre: Service is online, user has access to the home page

Trigger: Click “Search”

Flow: Fill form → Apply Filters → System Validation of Query → System sends query to backend → System receives answer → homepage displays listings

Alts: No listings; No matches for search, server error

Post: Results are displayed; (if logged in), the User might contact the poster

### **UC-04 In-App Messaging**

Actor: Existing User

Goal: Contact another user about a listing

Pre: Service is online, user is logged in, listing is available

Trigger: Click “Contact” on the details page

Flow: System opens message window → User composes message → System creates conversation and saves message → Poster is notified

Alts: User not logged in, Post is unavailable, server error

Post: Conversation is created; Users can continue the conversation.

### **UC-05 User Verification**

Actor: Existing User, Verification Service, Admin Reviewer

Goal: Verify the user's identity and display a "Verified" badge.

Pre: User Account Exists, Profile Exists, and has not been verified yet, Verification Feature is available.

Trigger: User clicks "Verify Account" from profile

Flow: User clicks "Verify Account" button on profile → Verify Window is displayed → User selects a method (ID / SJSU ID) → User provides information → System validates input and creates a validation request → Admin reviews request (approved/denied) → User is notified of resolution and badge is displayed on profile and visible to community.

Alts: Unreadable, wrong information provided, verification failed, Service is unavailable, user cancels, User account deleted.

Post: User verification status is updated and badge is visible to community members; Record of verification is created in System; If failed, user is informed and profile continues as not verified (Retry Available)..

## **UC-06 User Rating**

Actor: Existing User.

Goal: Rate and review another user after a transaction or interaction.

Pre: User is logged in, has completed a transaction/interaction with another user, has not already rated this specific interaction.

Trigger: User clicks "Rate User" after a completed transaction or from conversation history

Flow: User selects rating (1-5 stars) → User writes optional review text → System validates input → System saves rating and updates recipient's overall rating → Rated user is notified → Rating appears on rated user's profile.

Alts: User not logged in; No completed transaction; Already rated this interaction; Invalid rating value; Server error; Inappropriate content detected

Post: Rating is saved and visible on user's profile; Overall rating score is updated; Transaction is marked as rated; Notification sent to rated user

## **UC-07 Wishlist**

Actor: Existing User.

Goal: Save desired items to a wishlist and receive notifications when similar items are posted

Pre: User is logged in, item listing exists and is available.

Trigger: User clicks "Add to Wishlist" on item details page or search results

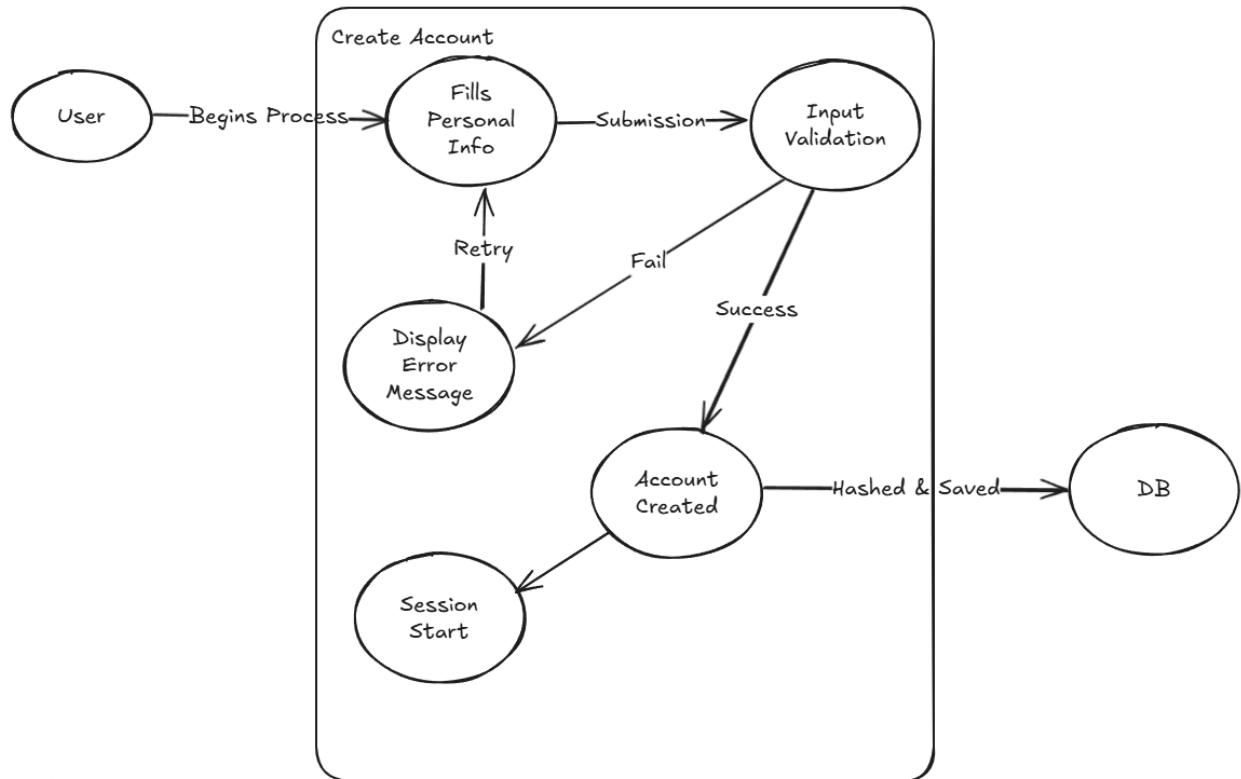
Flow: User clicks wishlist button → System adds item to user's wishlist → System sets up alert criteria based on item category/keywords → User receives notification when similar items are posted → User can view and manage wishlist from profile.

Alts: User not logged in; Item no longer available; Item already in wishlist; Wishlist full (if limit exists); Server error.

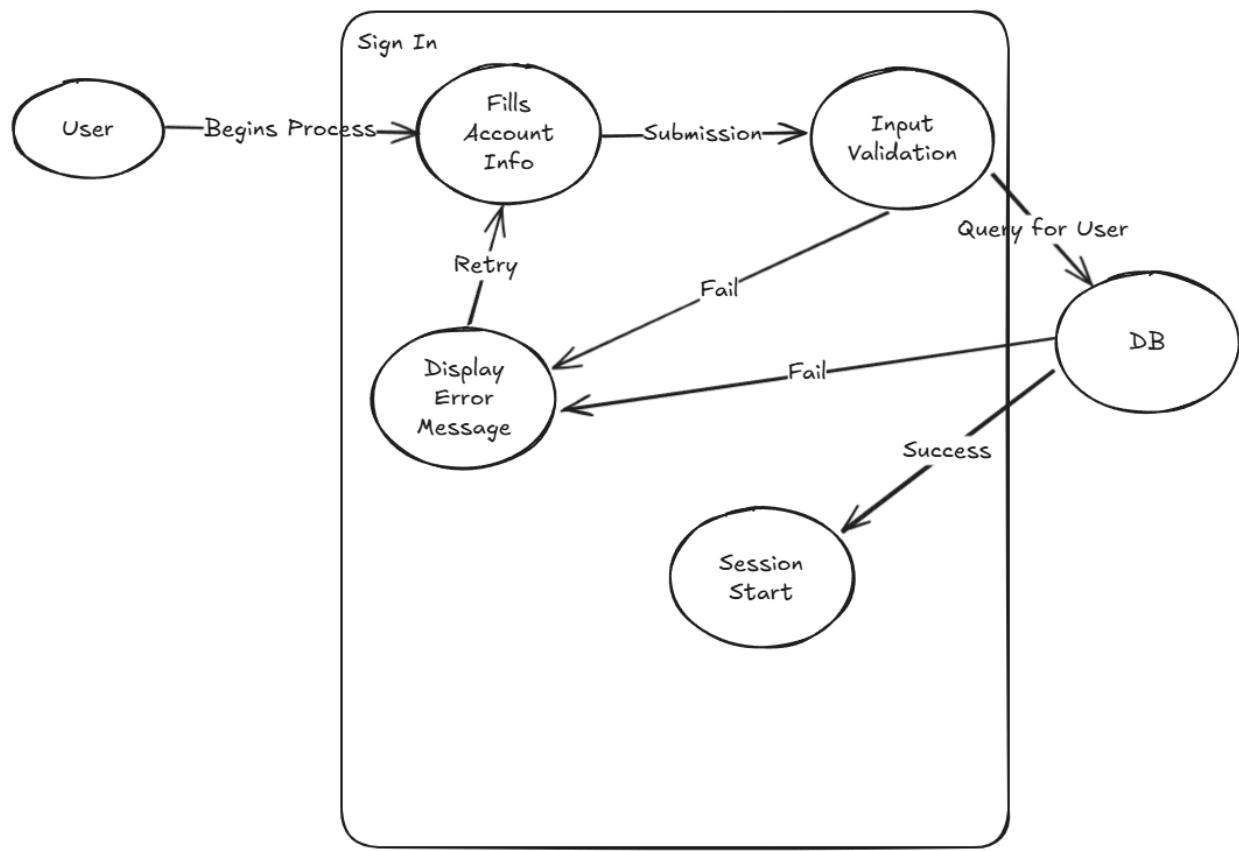
Post: Item added to user's wishlist; Alert criteria saved; User will receive notifications for similar items; Item accessible from wishlist page.

# Use Case Diagrams

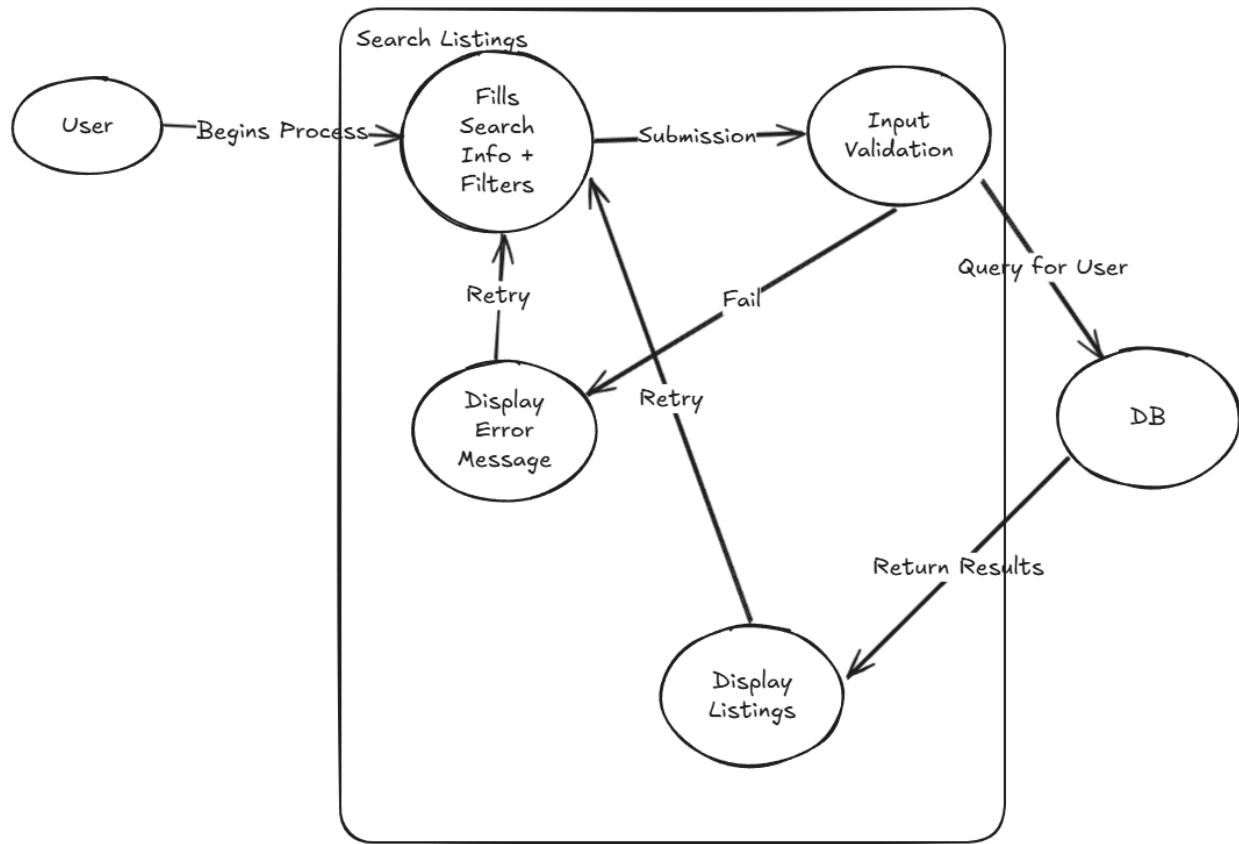
## UC-01 Sign Up



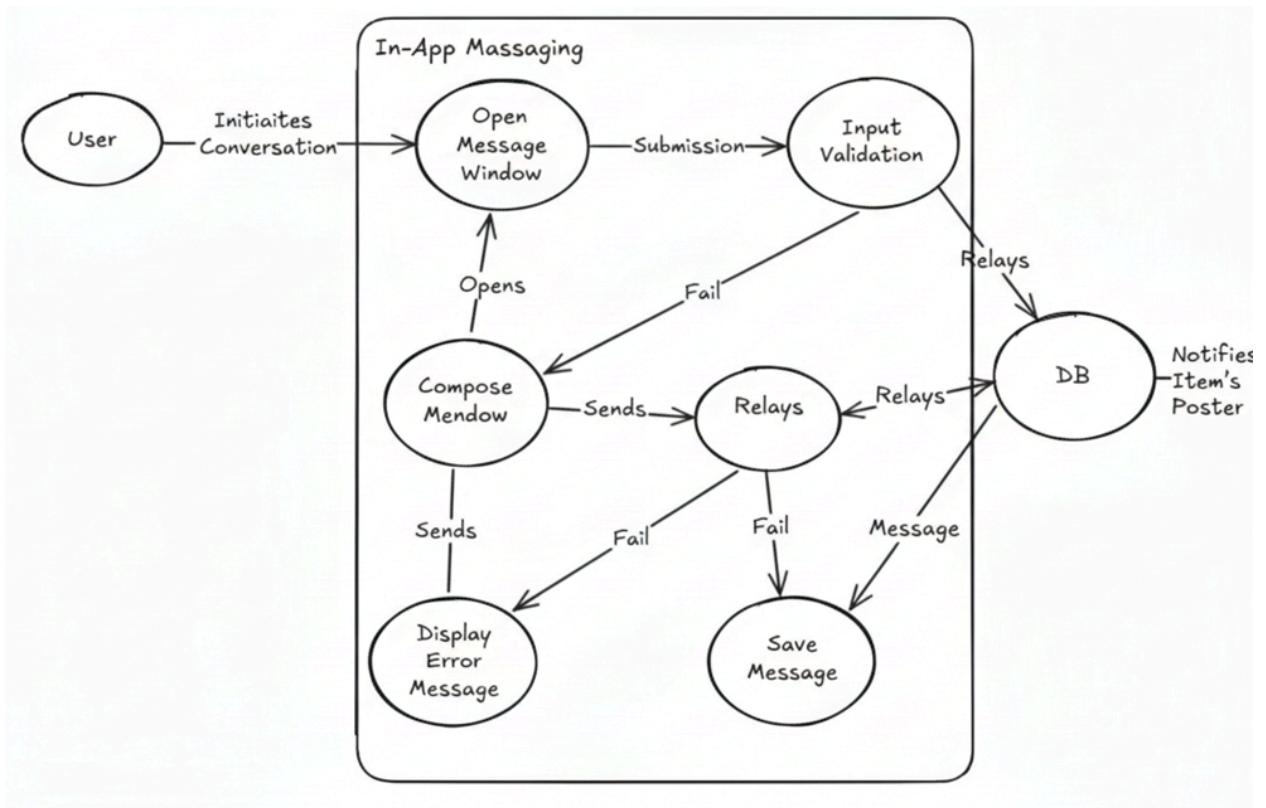
## UC-02 Sign In



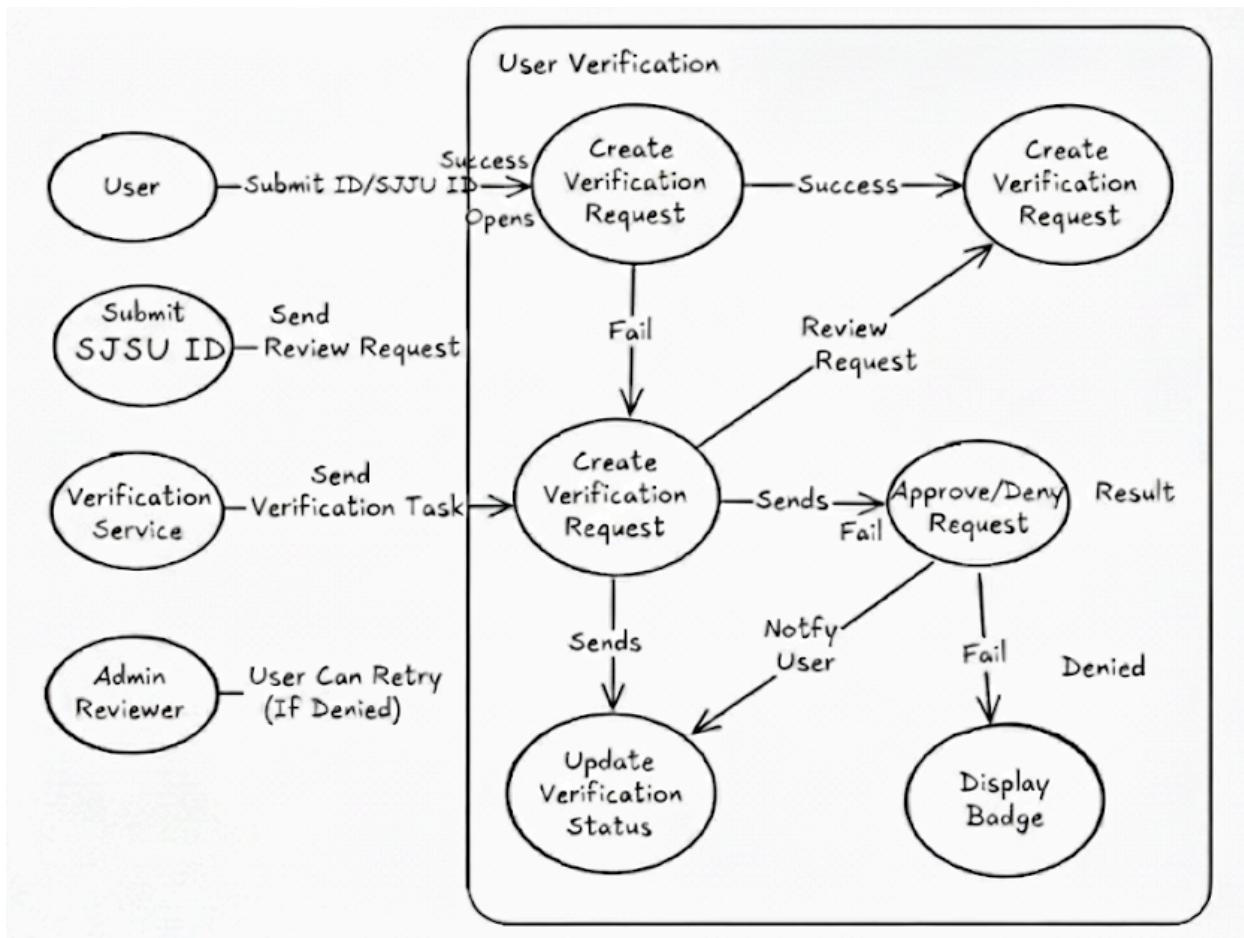
## UC-03 Search Listings



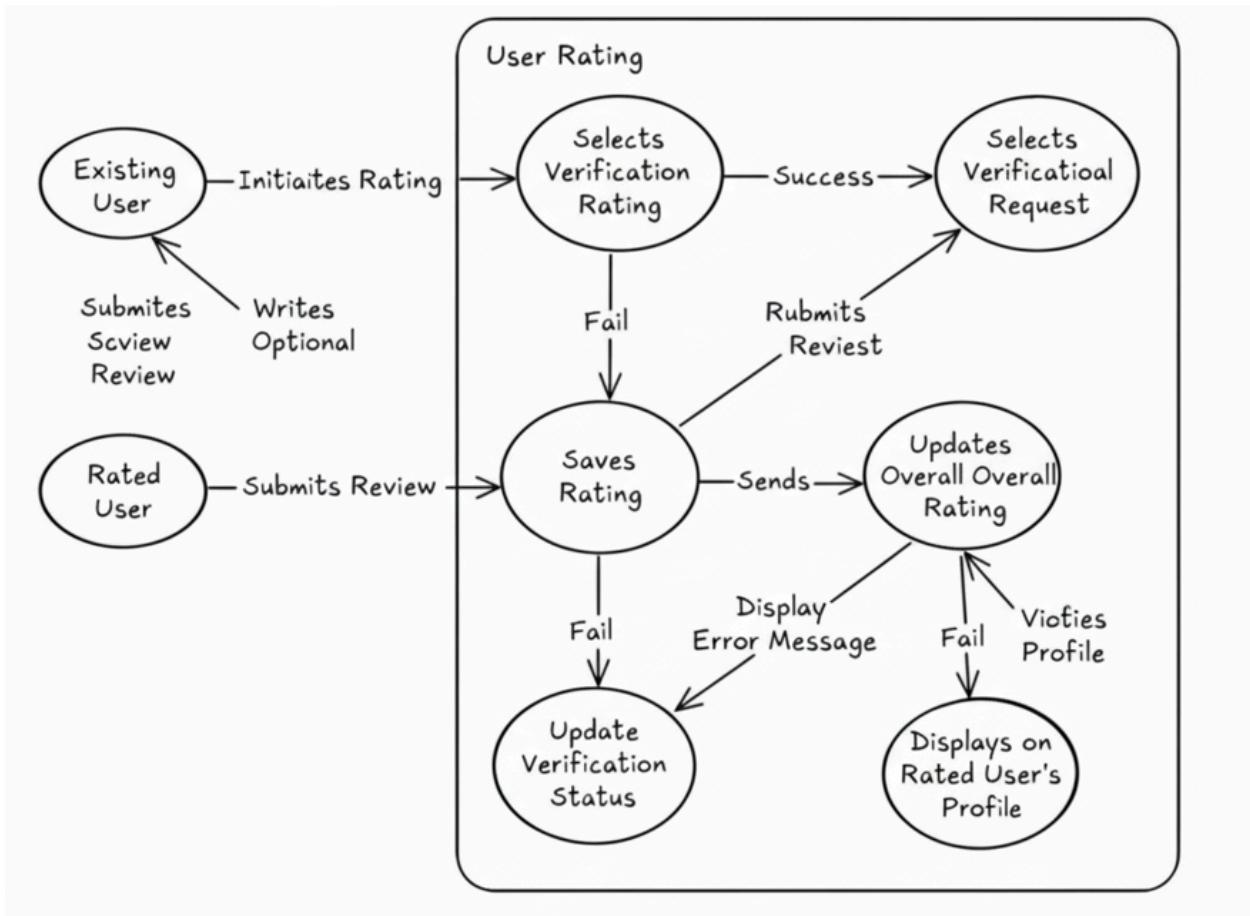
## UC-04 In-App Messaging



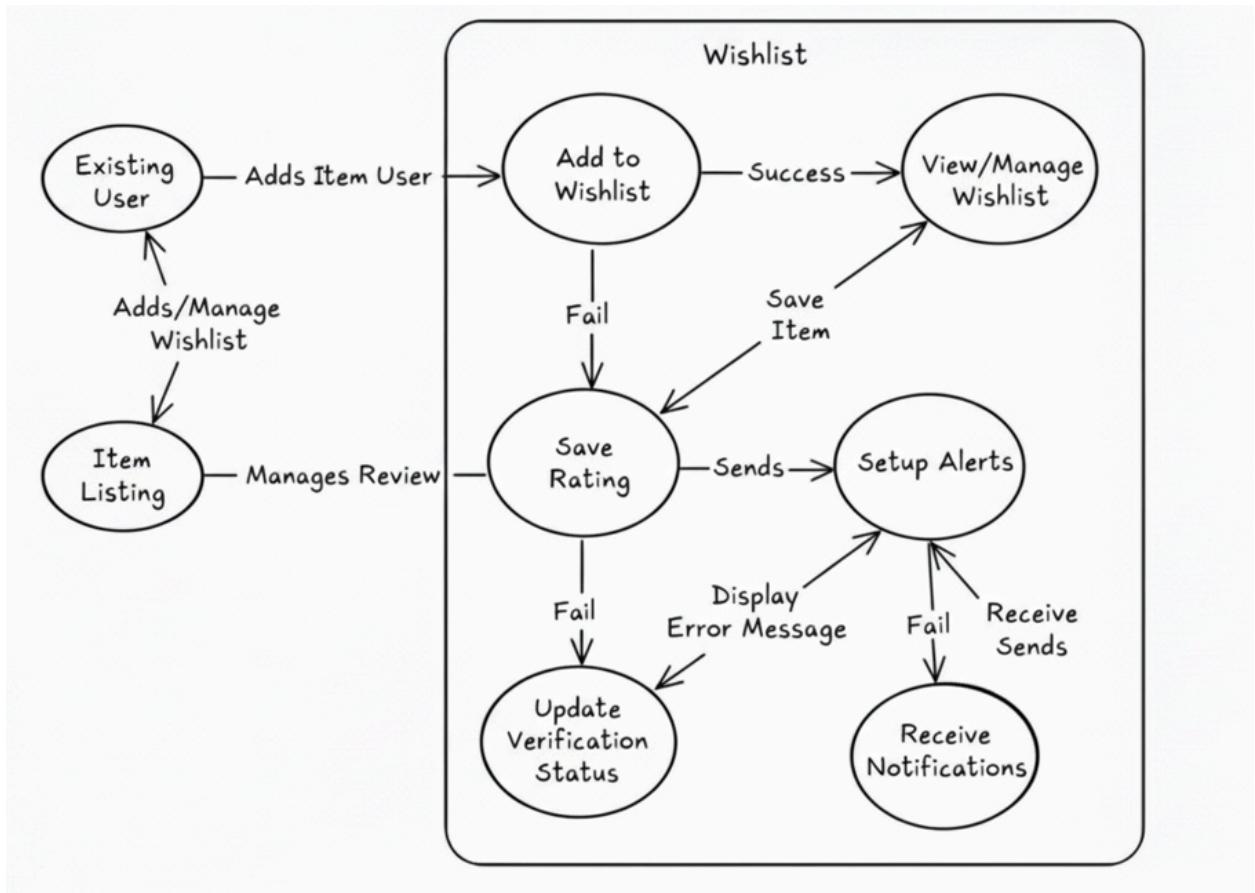
## UC-05 User Verification



## UC-06 User Rating

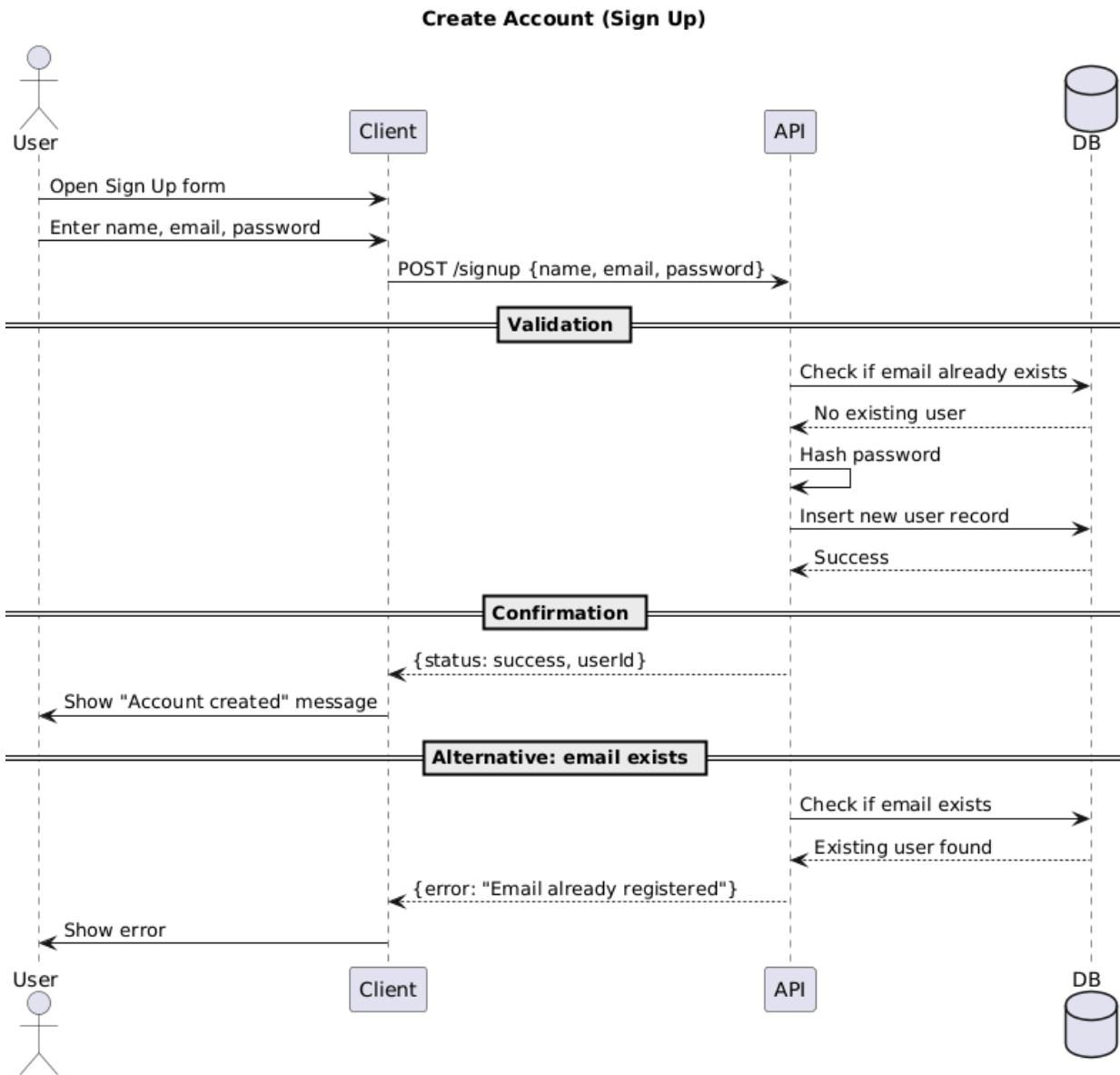


## UC-07 Wishlist



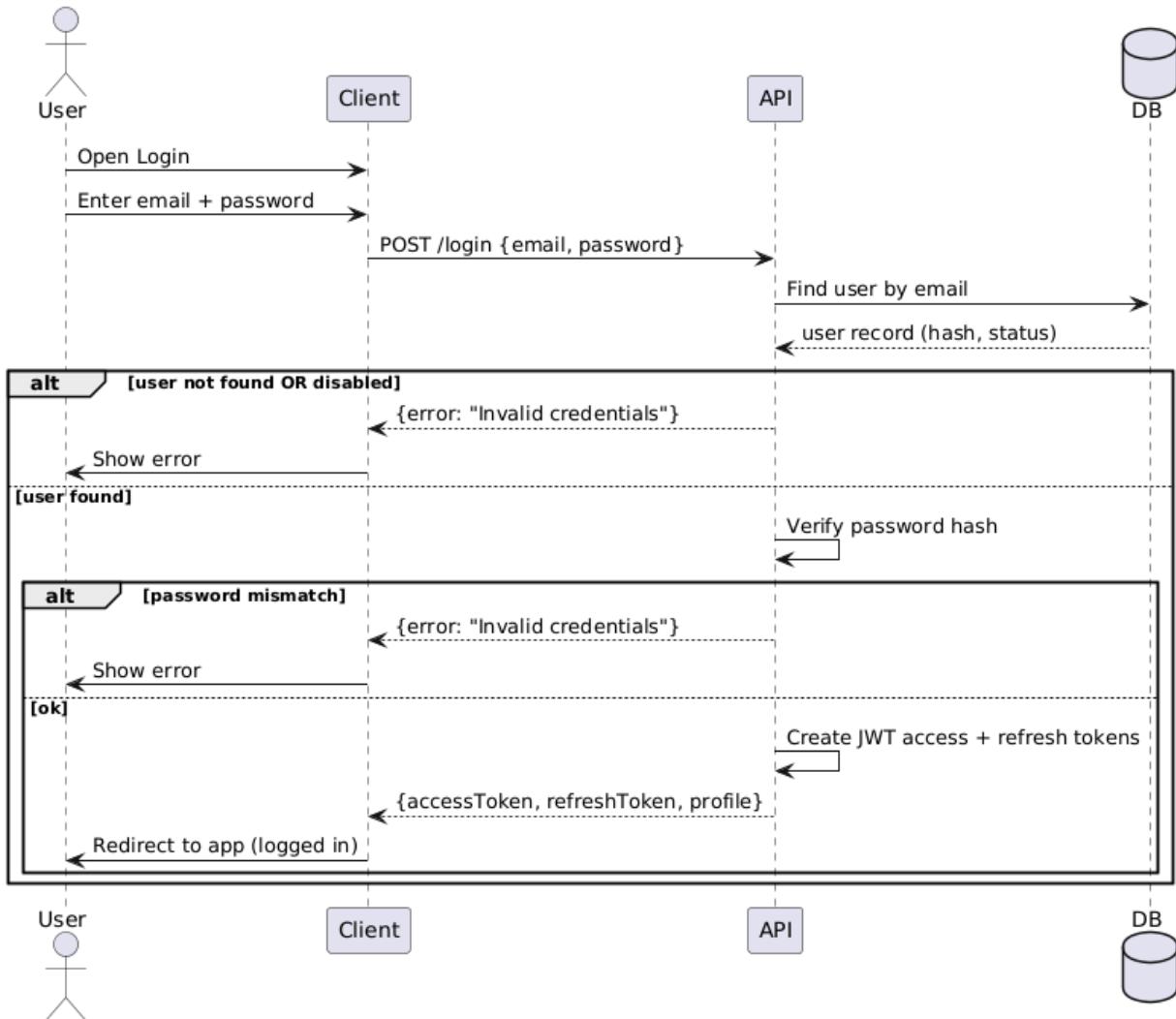
# Sequence Diagrams

## Create Account (SignUp)

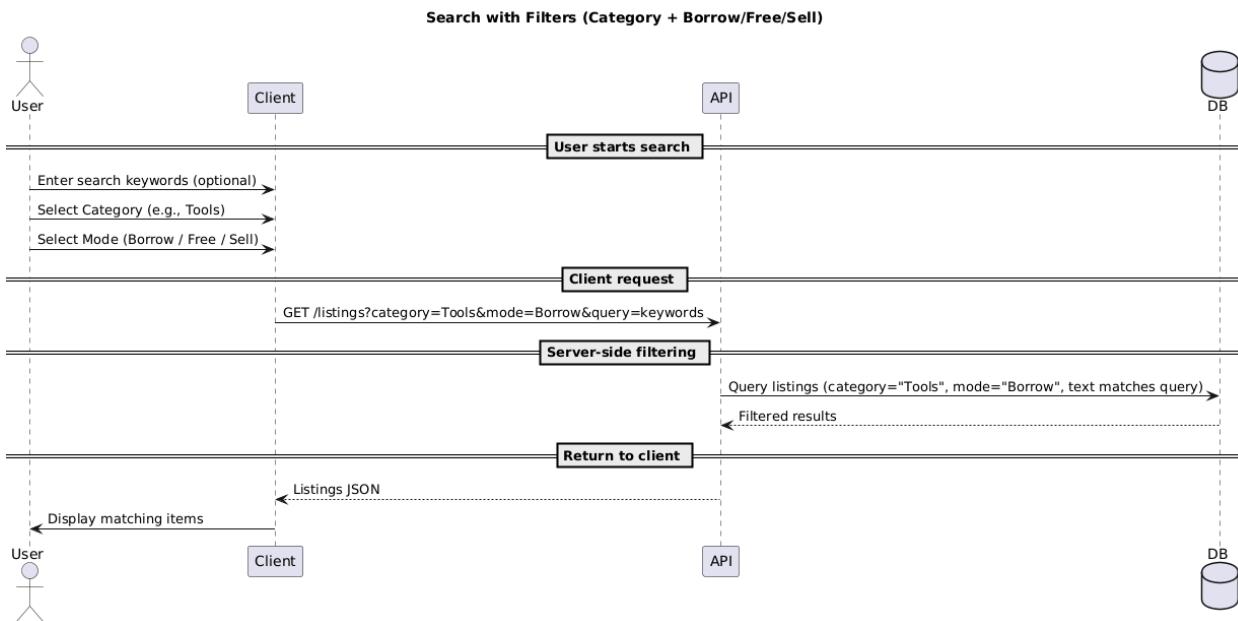


## User Log In

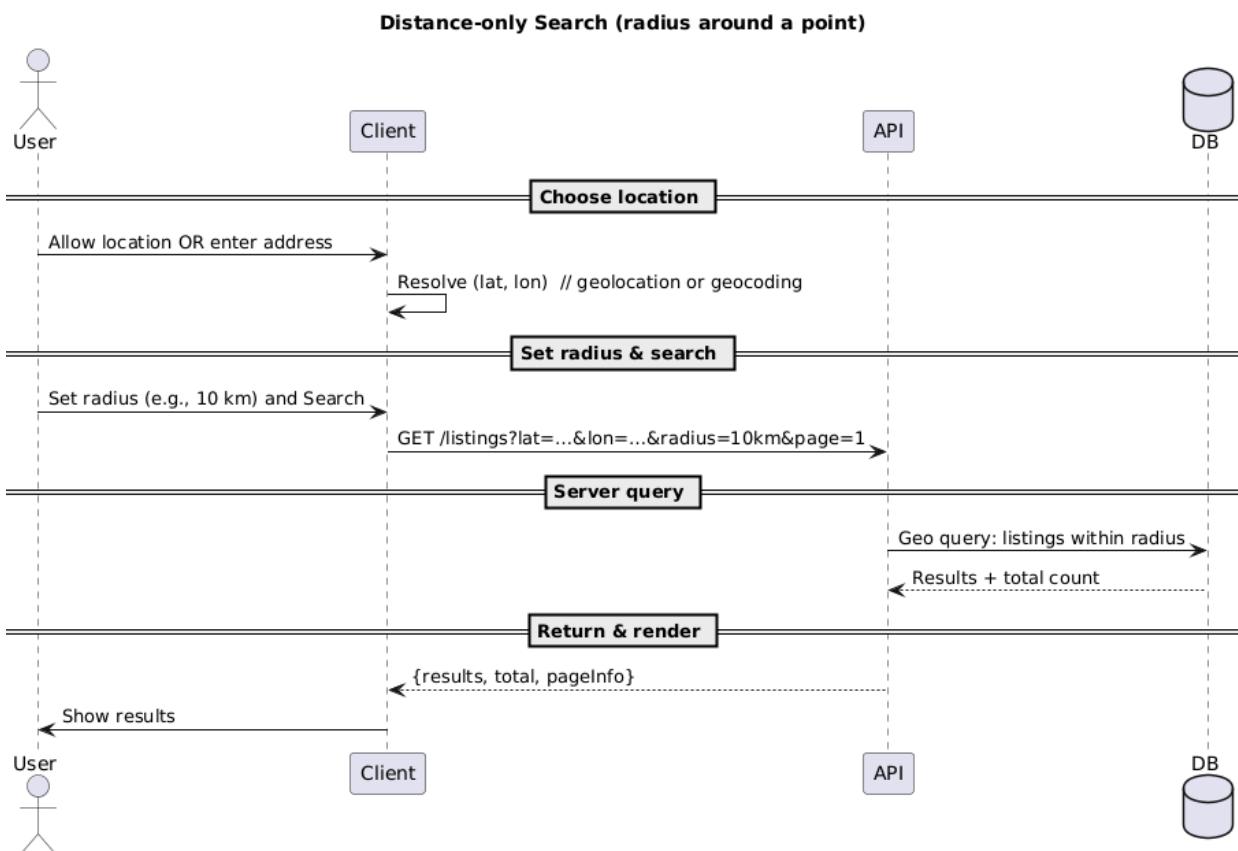
### Log In (email + password)



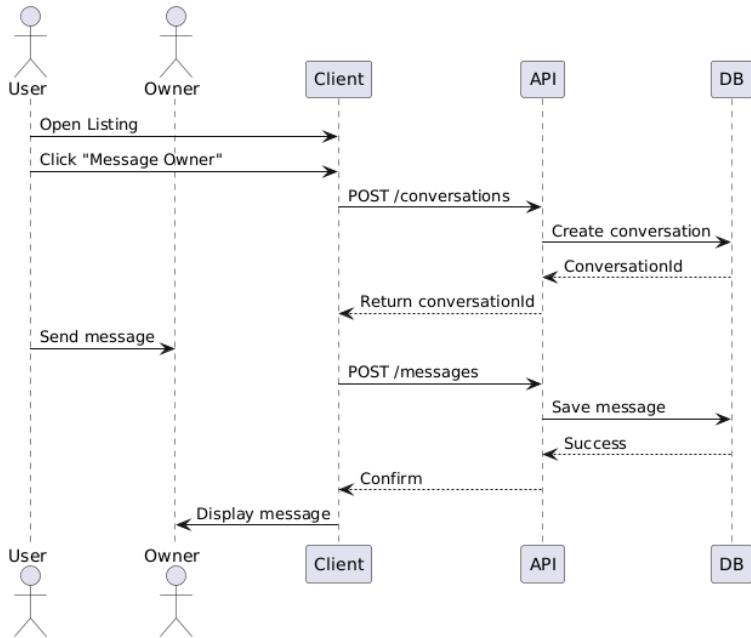
## Search (Using Filters)



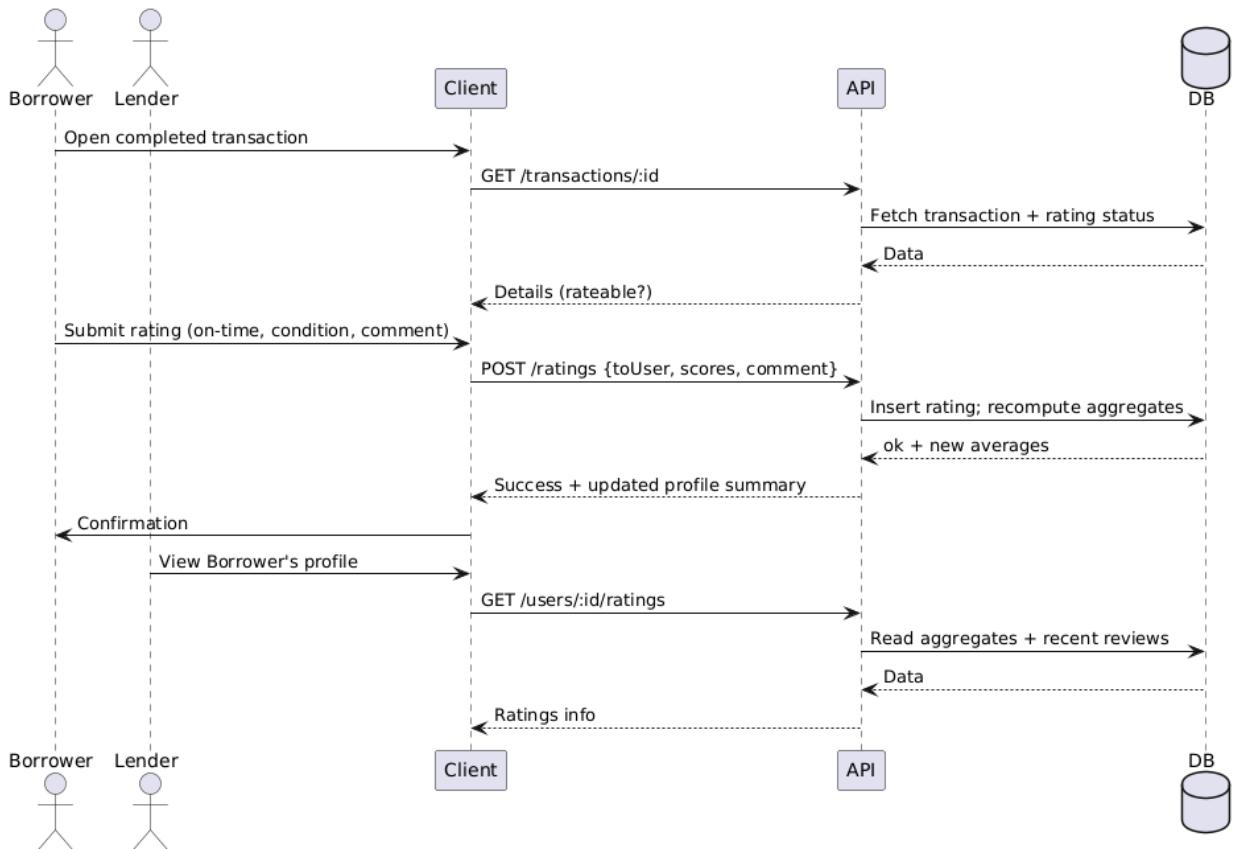
## Search (Using Distance)



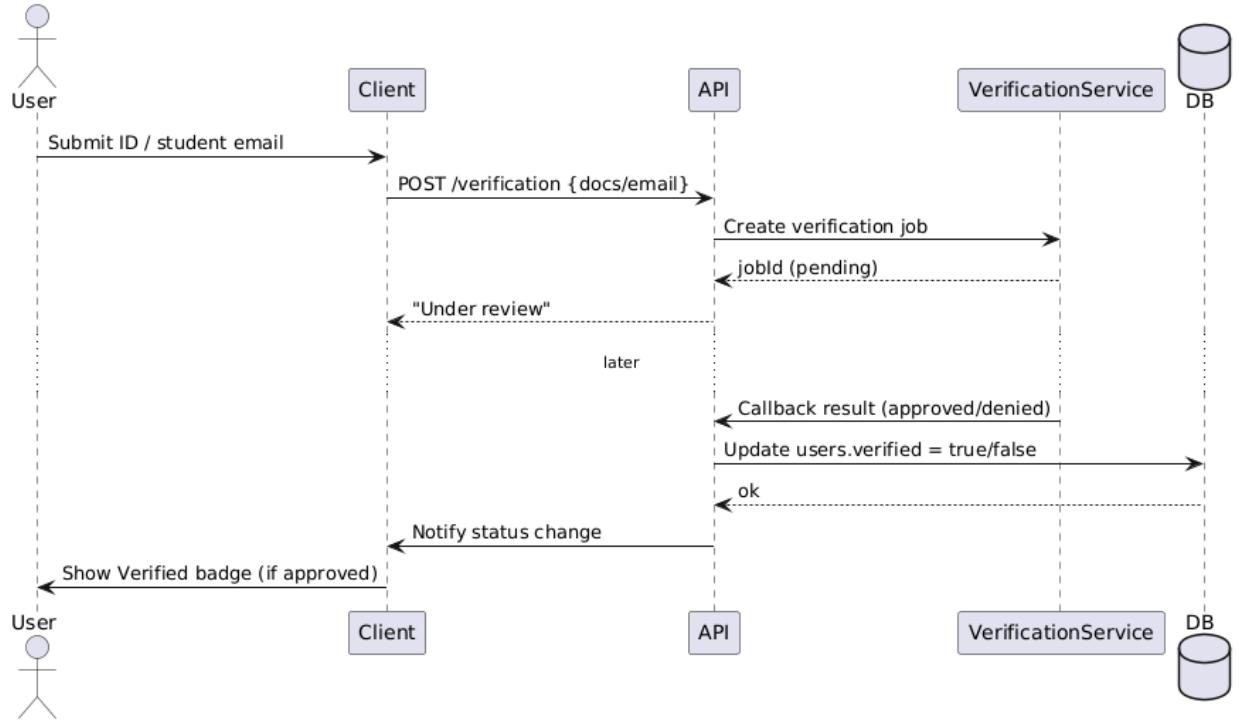
## In-App Messaging



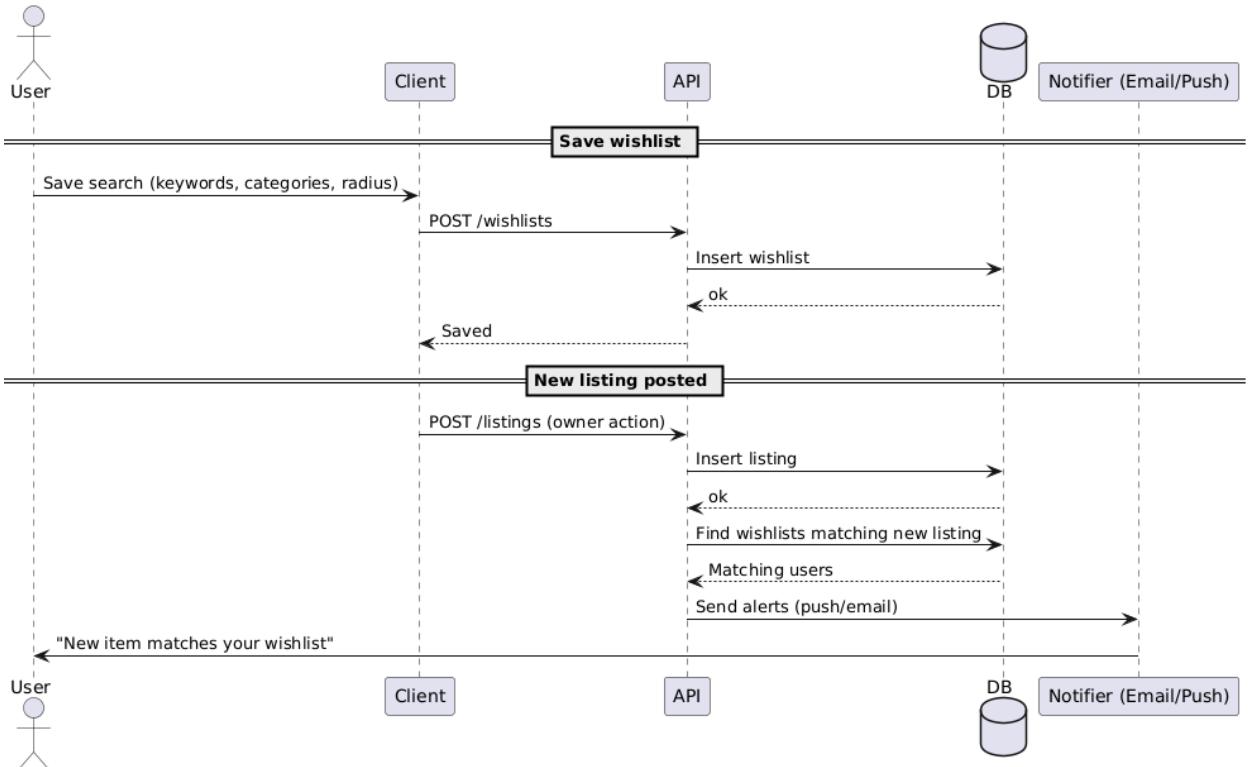
## Profiles and Rating



## Student Verification



## Wishlist Alerts



## User Log Out

### Log Out (invalidate session/tokens)

