API Interaction Flows

User Registration Sequence Diagram:

User → API Service: The user sends registration details (e.g., name, email, password) to the application's API endpoint.
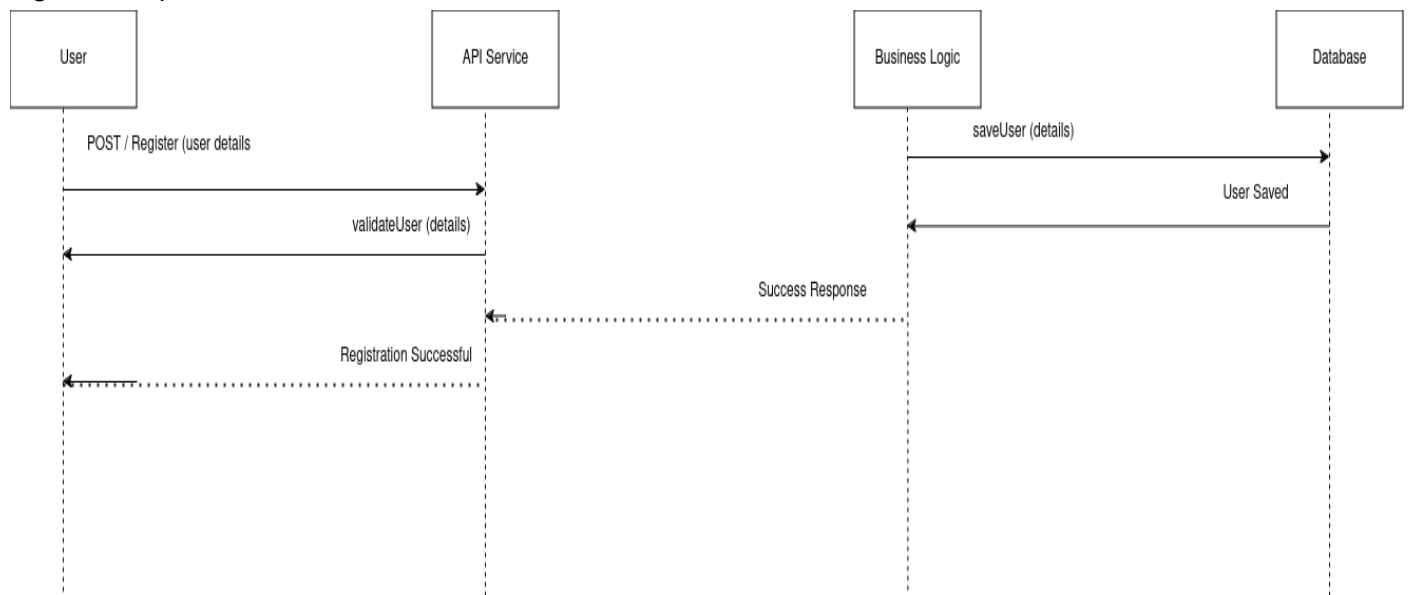
API Service → Business Logic: The API service validates the incoming data, ensuring the email is unique and the password meets security requirements.

Business Logic → Database: If validation passes, the Business Logic layer calls the Persistence layer to save the new user record.

Database → Business Logic: The Database confirms that the user is successfully stored.

Business Logic → API Service: The Business Logic layer returns a success response, possibly including the new user's ID or a success message.

API Service → User: The API returns a success message to the client, completing the registration process.

Place Creation Sequence Diagram:

User → API Service: The user submits the details of a new place (title, description, price, location) via an API endpoint.
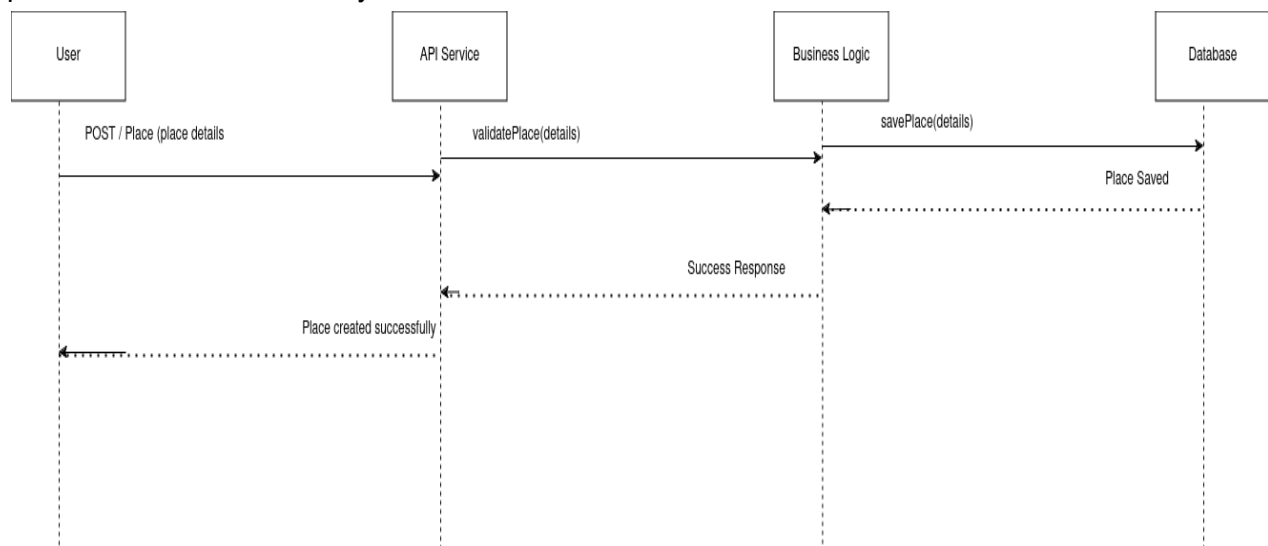
API Service → Business Logic: The API forwards the place creation request to the Business Logic layer, where the request is validated (e.g., checking if the user is authenticated and has permission to create places).

Business Logic → Database: Once validated, the Business Logic layer sends the place data to the Persistence layer to store the new record in the database.

Database → Business Logic: The database confirms the successful creation of the new place entry.

Business Logic → API Service: The Business Logic layer returns a success response along with the newly created place's ID or other relevant data.

API Service → User: The API sends back a success response to the user, indicating that the place has been successfully created.

Review Submission Sequence Diagram:

User → API Service: The user posts their review details (place ID, rating, comment) through an API endpoint.
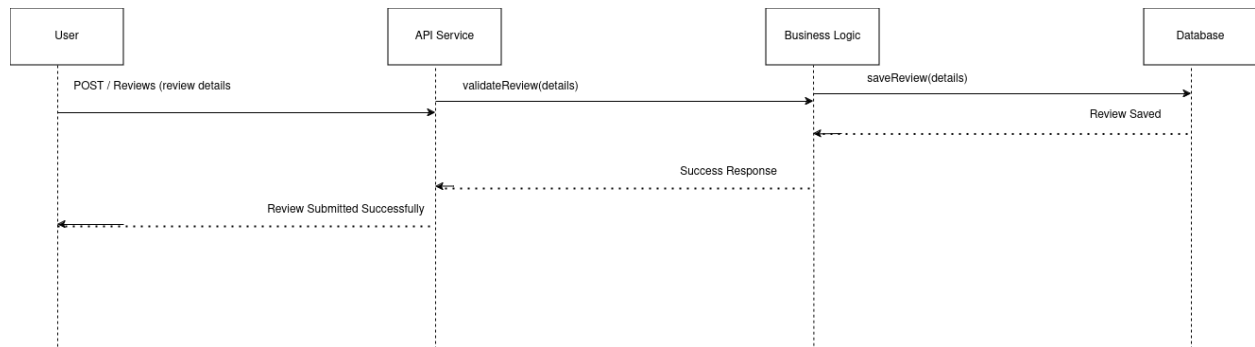
API Service → Business Logic: The API service forwards this information to the Business Logic layer, which checks if the place and user exist, and if the user is authorized to post a review.

Business Logic → Database: After validation, the Business Logic layer saves the review record in the database, associating it with the correct place and user.

Database → Business Logic: The database confirms that the review has been successfully stored.

Business Logic → API Service: The Business Logic layer returns a success message or the saved review data to the API.

API Service → User: The API responds to the user, indicating that the review submission was successful.

Fetching a List of Places Sequence Diagram:

User → API Service: The user sends a GET request to fetch a list of places, possibly including search criteria or filters (e.g., location, price range).

API Service → Business Logic: The API passes the request to the Business Logic layer, which interprets the criteria and prepares a query for the database.

Business Logic → Database: The Business Logic layer requests from the Persistence layer all places that match the given filters.

Database → Business Logic: The database returns a collection of place records that satisfy the criteria.

Business Logic → API Service: The Business Logic layer processes the returned data, formatting it as a structured response (e.g., JSON).

API Service → User: The API sends the list of places back to the user, completing the request with the requested data.

User	API Service	Business Logic	Database
GET /places?criteria	getPlaces(criteria)	fetchPlaces(criteria)	
			List of places
	Places list response		
Places list			