

Sequence diagram technical documentation

Here are the four sequence diagrams for the HBnB application.

1. User Registration Workflow

The first diagram illustrates the process of creating a new user. The user initiates a pop-up window and fills out a registration form. The submitted data is sent to the API controller, which delegates the logic to the facade. The facade then creates a new instance of the User entity and stores the data in the database via the ClientRepository.

If the operation is successful, a boolean value is returned, and the API controller returns an HTTP status code (201 Created), which is then relayed to the frontend to display a success message. In case of failure, an appropriate error code is returned (e.g., 400, 429, or 500).

2. Place Creation Workflow

The second diagram describes the process for creating a new place. The flow is similar to user registration: the frontend interacts with the API controller, which calls the facade, and the data is stored in the database. The key difference is that this operation uses the PlaceRepository instead of the ClientRepository.

3. Review Submission Workflow

The third diagram shows how a user can submit a review for a place. First, the system verifies that the user is logged in and has previously completed a stay at the selected location. If these conditions are met, the user can submit a review by entering a comment and a rating.

The frontend sends this data to the API controller, which routes it to the facade. The facade creates a new Review object and saves it via the ReviewRepository.

If the operation is successful, the backend returns a confirmation and the frontend displays a success message. Otherwise, it returns an error code such as 400 (Bad Request) or 500 (Internal Server Error), depending on the issue.

4. Fetching a list of places

The fourth diagram outlines how users can search for available places using specific criteria (e.g., location, dates, number of guests). The frontend sends a search request to the API controller, which forwards it to the facade. The facade then queries the PlaceRepository to retrieve matching results from the database.

The list of available places is then returned to the API controller and sent back to the frontend, where it's displayed to the user. If no places match the criteria, the system can return an empty result or an informational message.



