

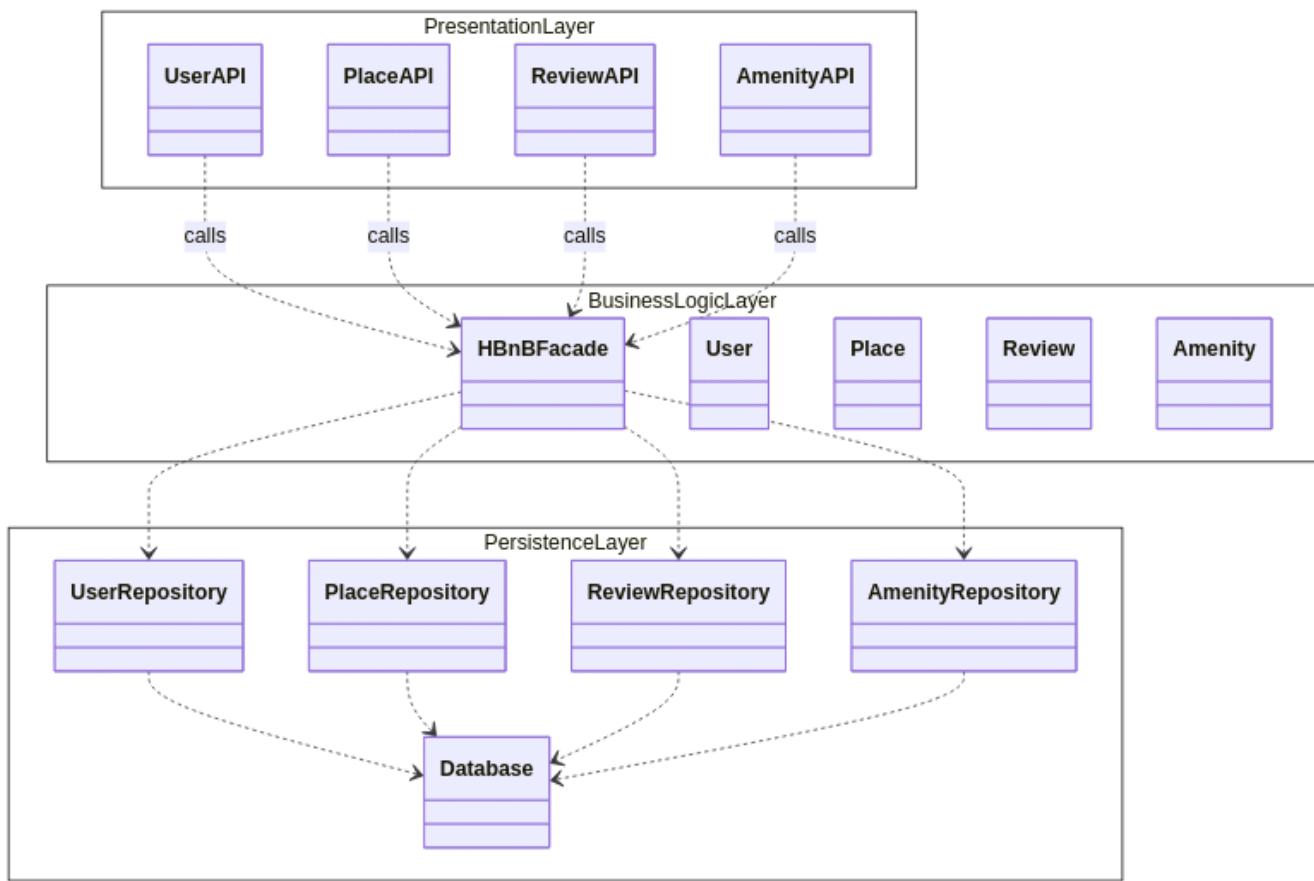
# HBnB Part 1 Technical Documentation

## Introduction

This document consolidates the UML artifacts for HBnB Part 1 into an implementation-ready reference. It describes the intended architecture, the business entities and their relationships, and the expected API interactions.

## High-Level Architecture

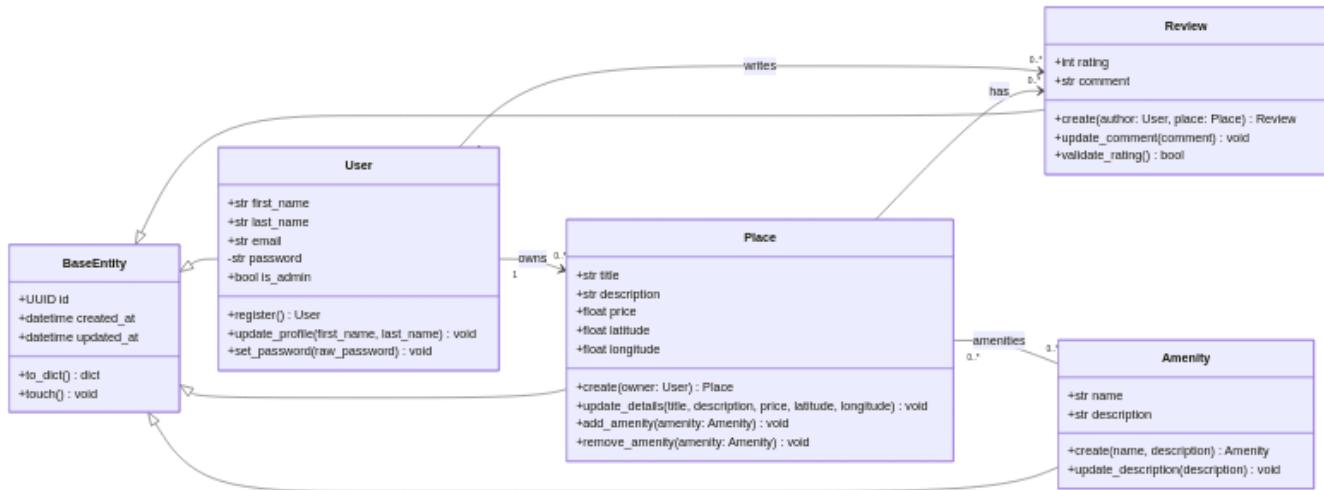
The package diagram describes the Presentation, Business, and Persistence layers and the facade that centralizes use-case orchestration.



Package diagram

# Business Logic Layer

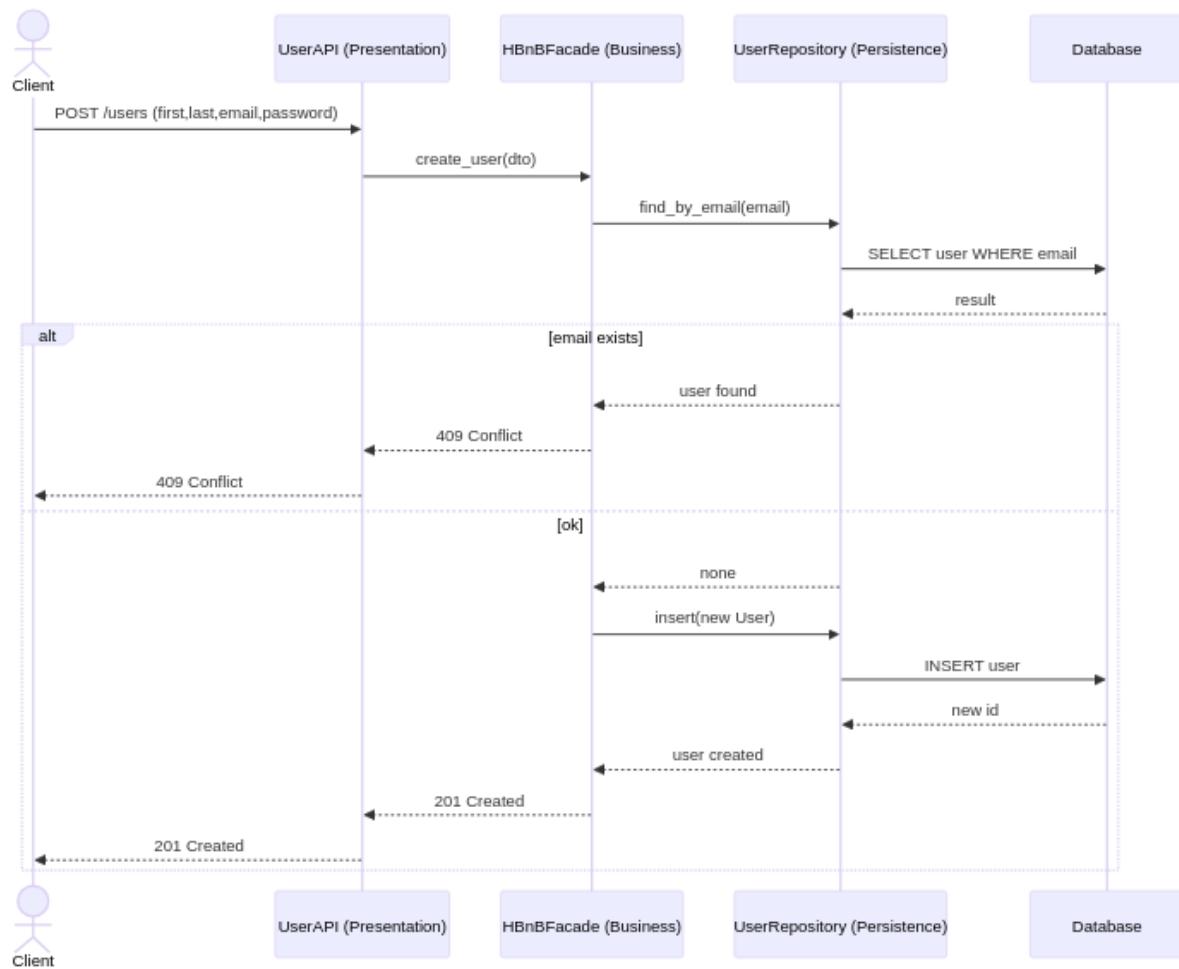
The class diagram shows the shared BaseEntity and the core entities used to model users, places, reviews, and amenities.



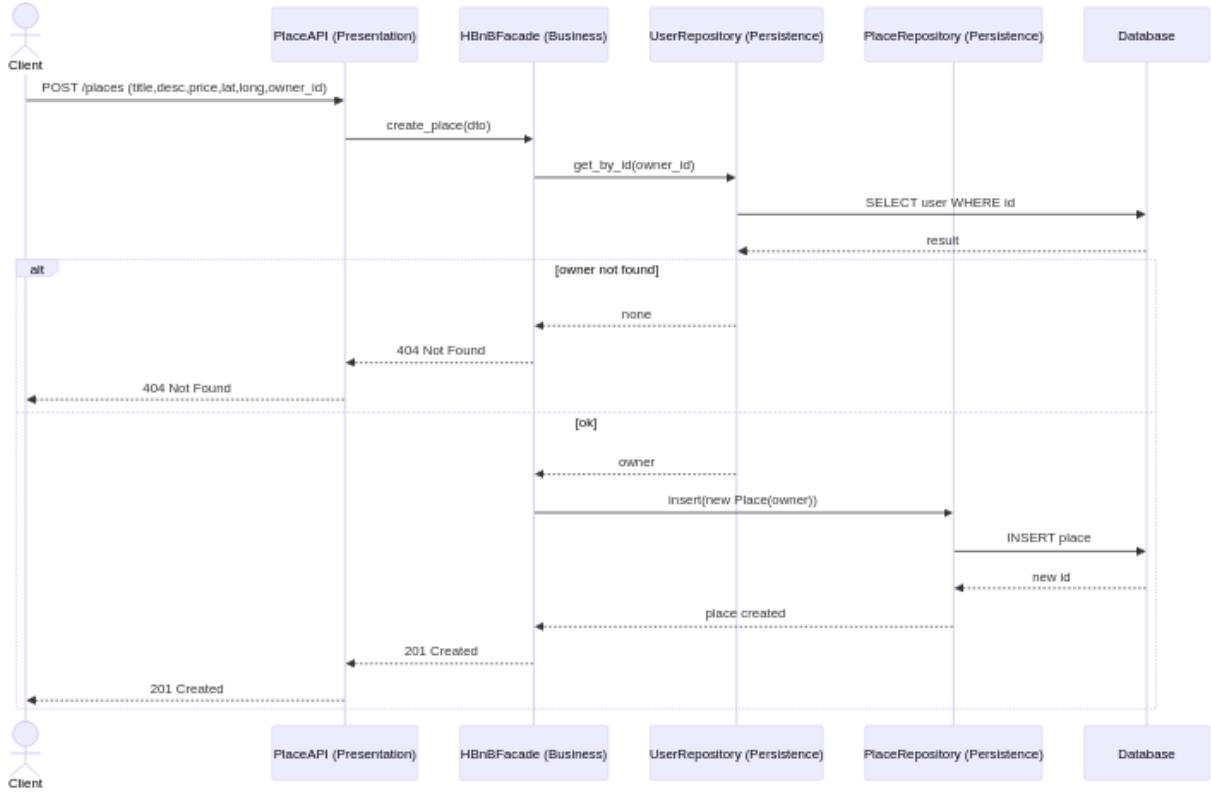
Class diagram

# API Interaction Flow

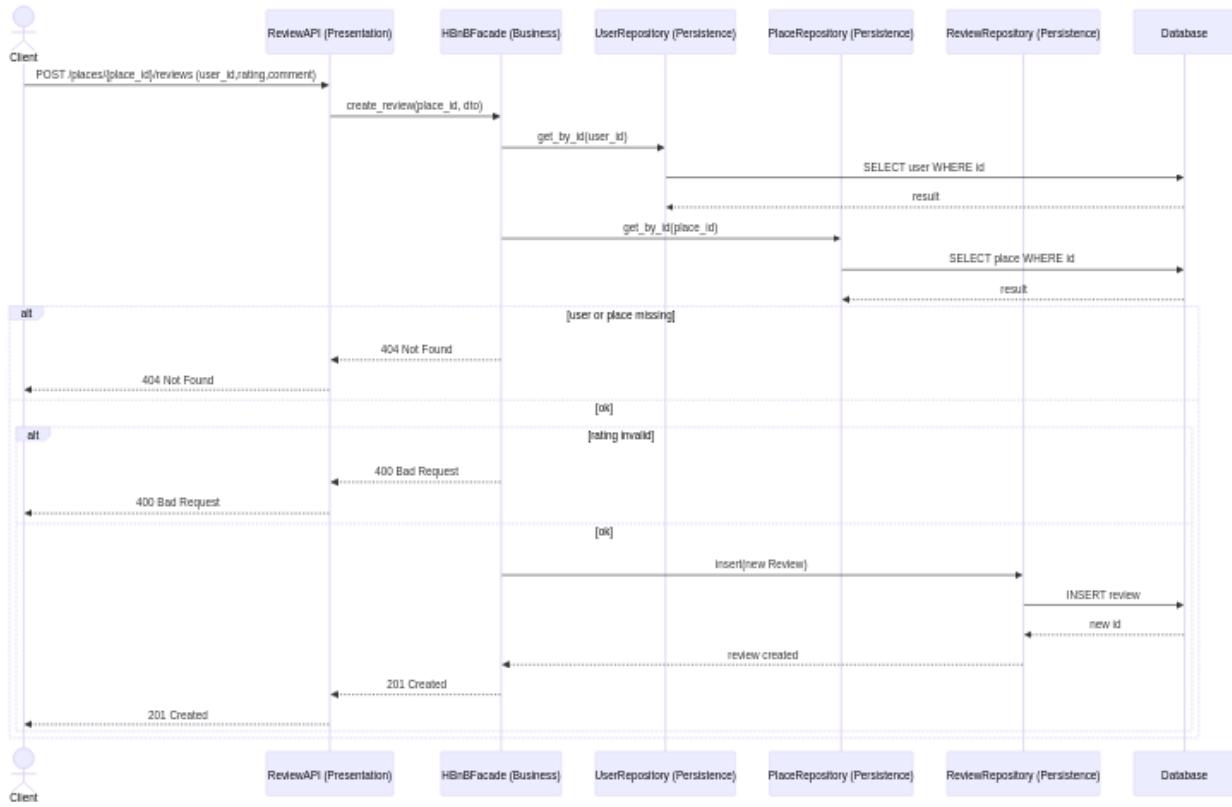
Each sequence diagram captures the facade-centered flow for key endpoints and the repository interactions that persist data.



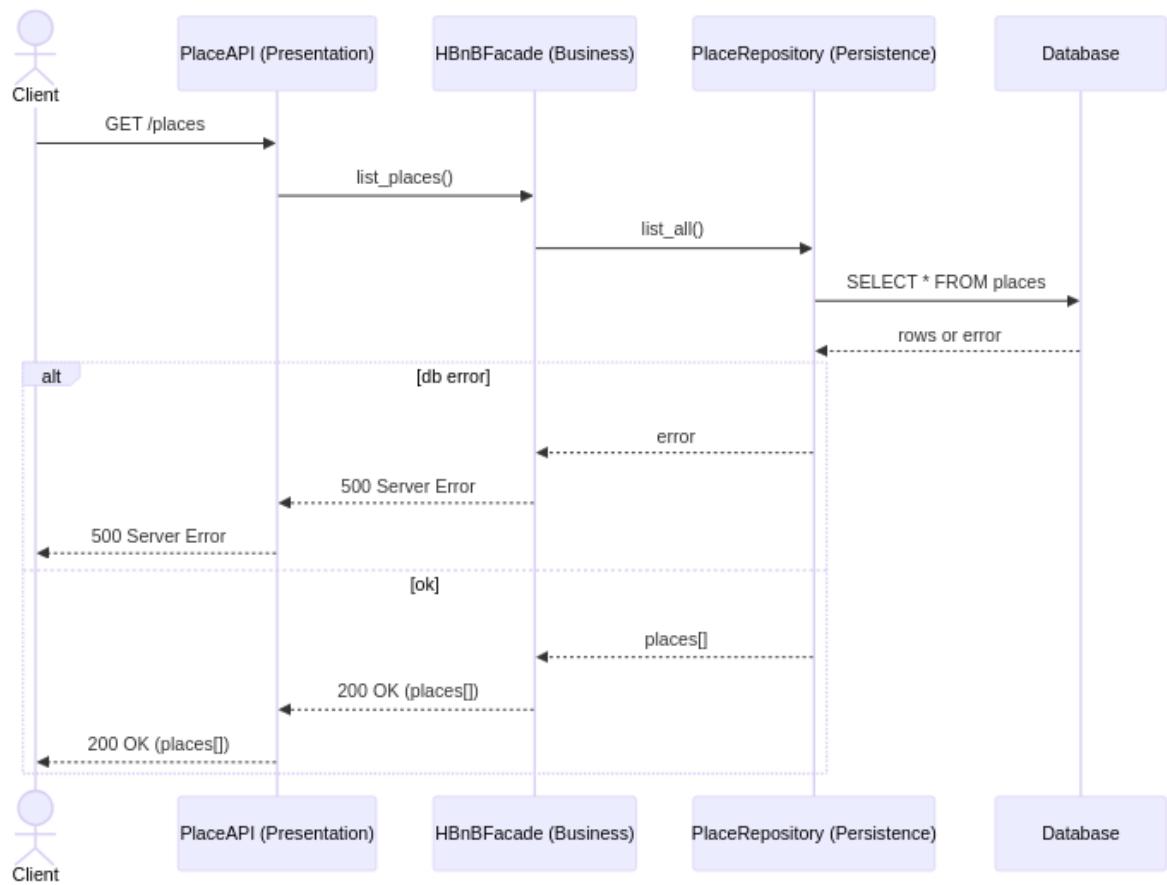
Sequence: User registers



Sequence: Place created



Sequence: Review submitted



Sequence: List places

## **Regeneration**

PNG diagrams are regenerated from Mermaid source files in part1/diagrams using the regenerate.sh script, which calls npx mmdc. This PDF embeds the PNG exports from part1/exports.