

Large-Scale and Multi-Structured Databases

Project Design

Itinera

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Application Highlights

- **Visit Places:**
 - Showing most interesting Hotels, Restaurants and Monuments near a selected city
 - Allowing Admins to add new cities to discover
 - Discover statistics about the city, restaurants and hotels
 - Diving deeper into a place of their interest
- **Review trip:**
 - Joining communities for learning things about the city
 - Review hotels, restaurants and monuments by evaluation
 - Seeing the best places in every city to stay for your trip
- **Moderate communities:**
 - Allowing users to report other users
 - Allow Admin Handling inappropriate behaviors from users
 - Reporting single reviews
 - Report single posts
 - Allow reply to posts by users inside the communities

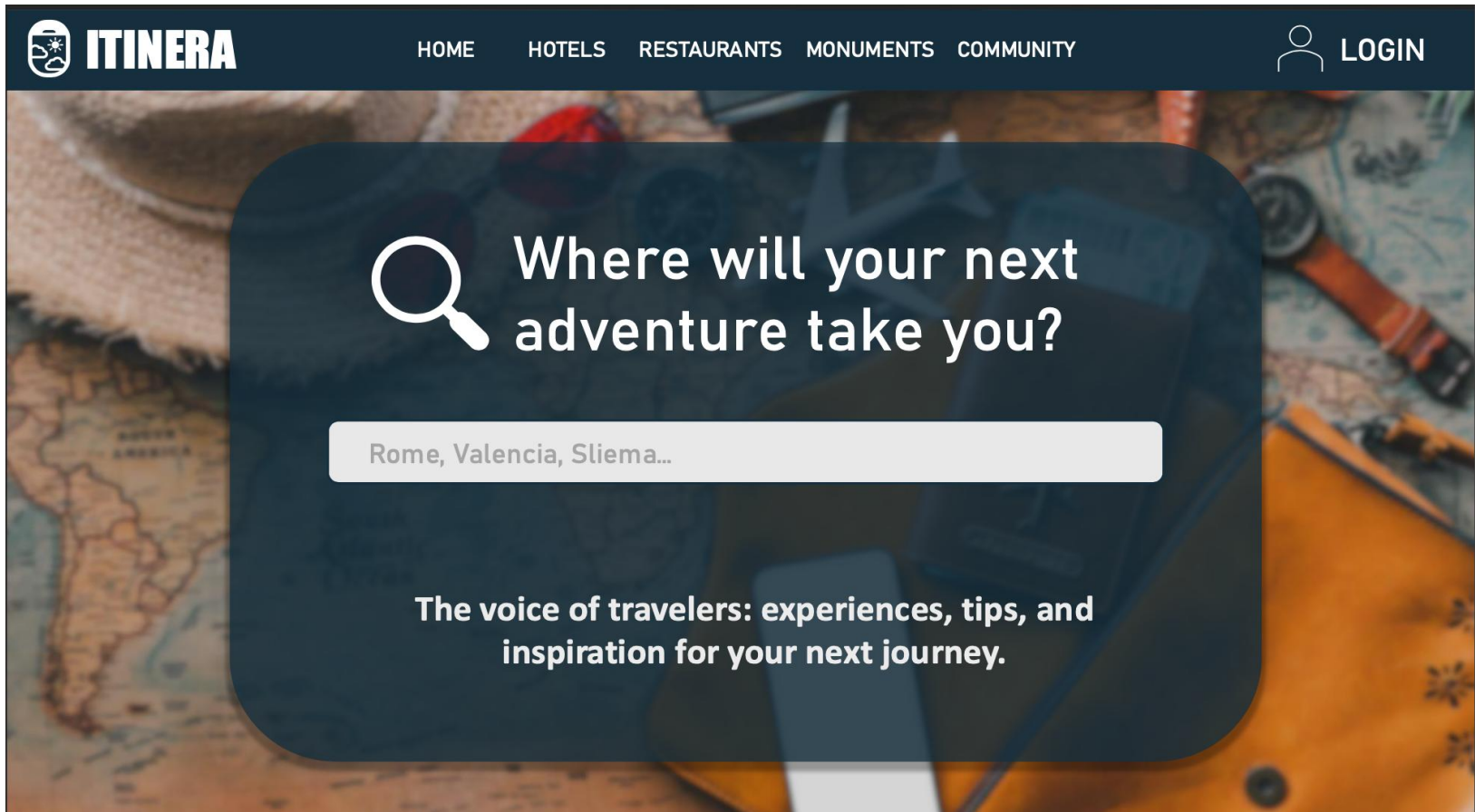
Actors and main mock-ups 1

Main Actors:

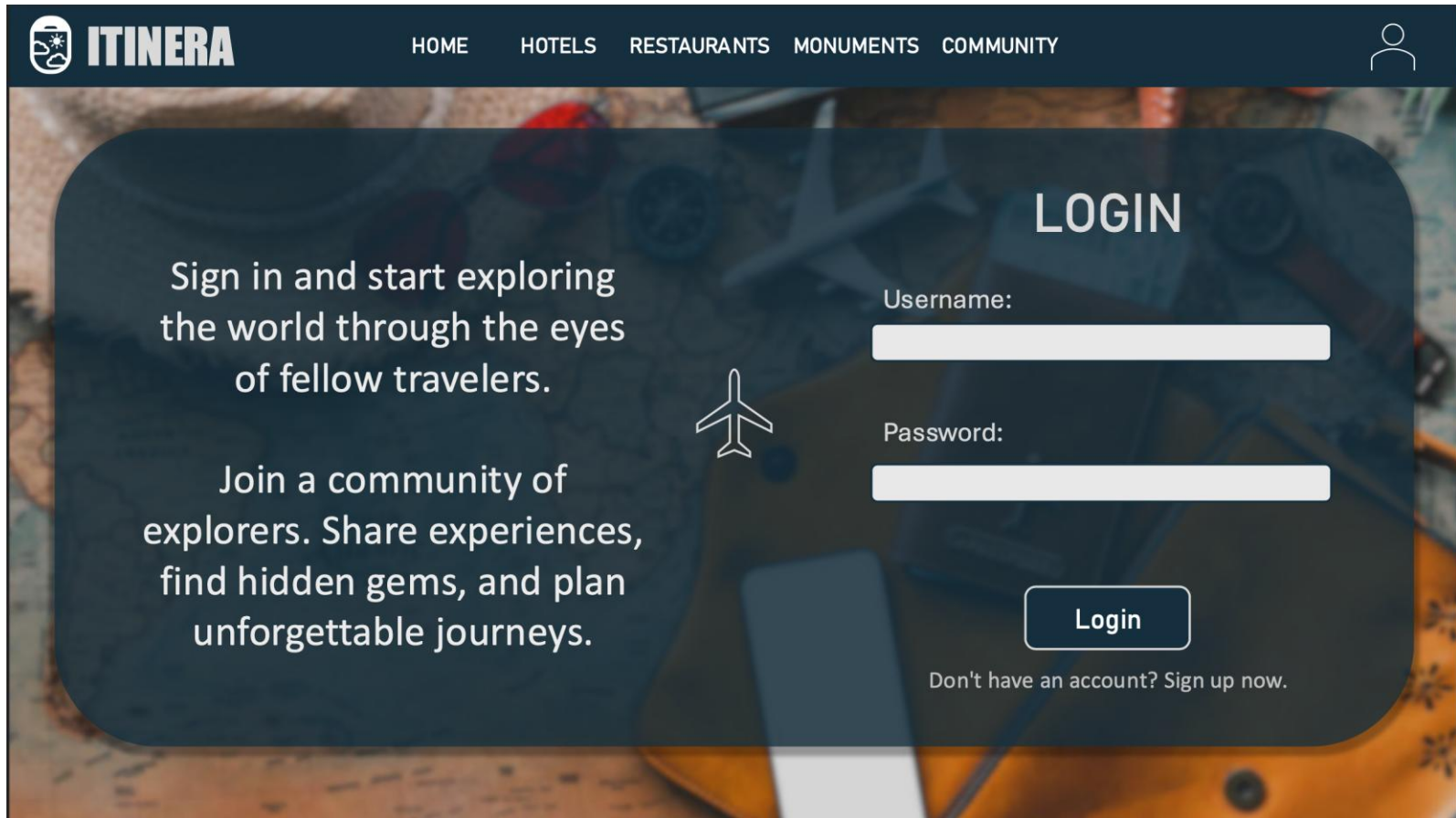
Unregistered User

Registered Users

Admins



Actors and main mock-ups 2



The image shows a mock-up of the ITINERA website's login page. The background is a dark blue overlay on a blurred image of travel items like a suitcase, a passport, and a plane. The ITINERA logo is in the top left, and navigation links (HOME, HOTELS, RESTAURANTS, MONUMENTS, COMMUNITY) are in the top right. A user icon is also in the top right. The main content area contains a login form with fields for Username and Password, a Login button, and a link to sign up. Text on the left encourages users to join a community of explorers.

ITINERA

HOME HOTELS RESTAURANTS MONUMENTS COMMUNITY

LOGIN

Sign in and start exploring the world through the eyes of fellow travelers.

Join a community of explorers. Share experiences, find hidden gems, and plan unforgettable journeys.

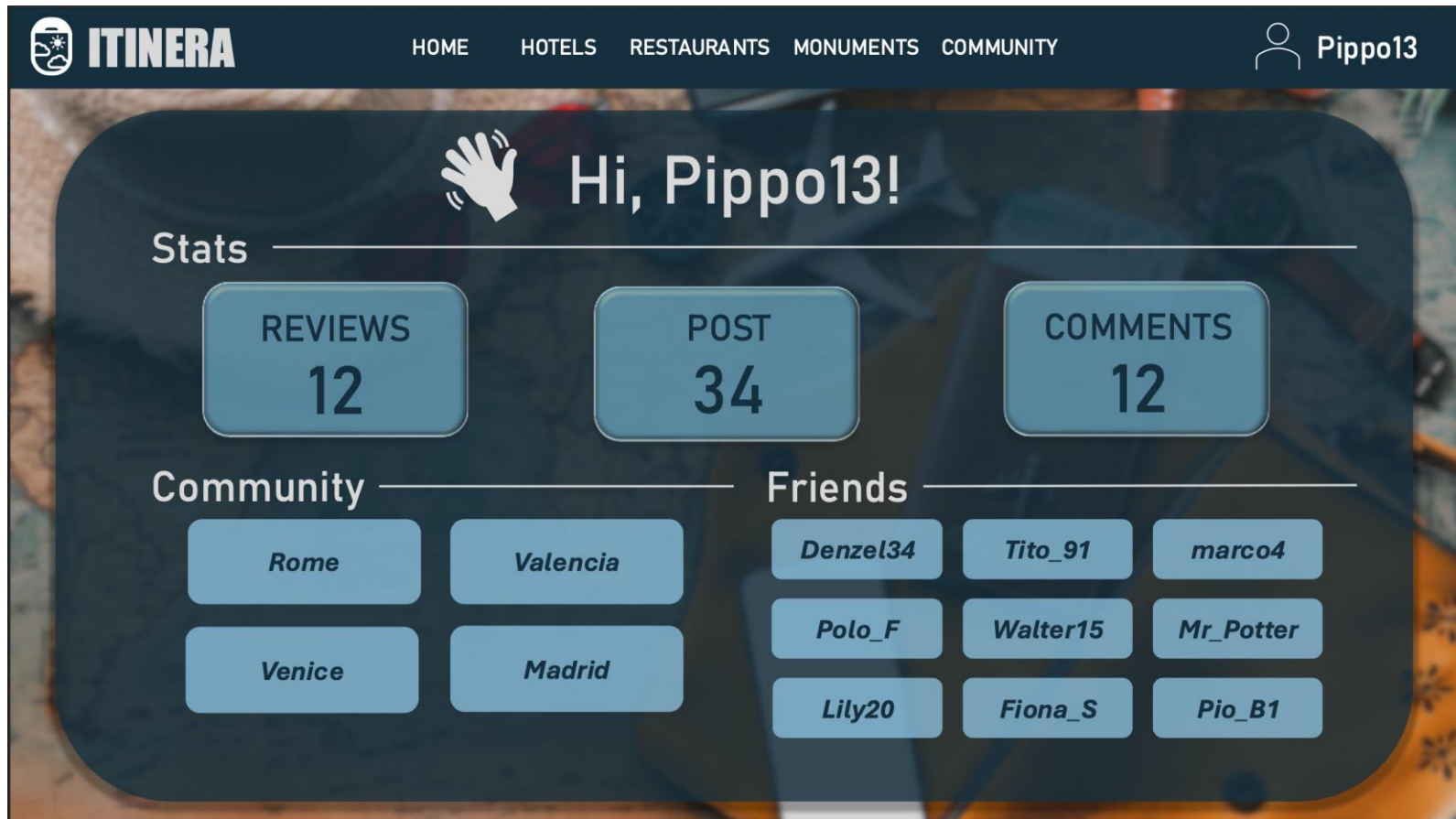
Username:

Password:

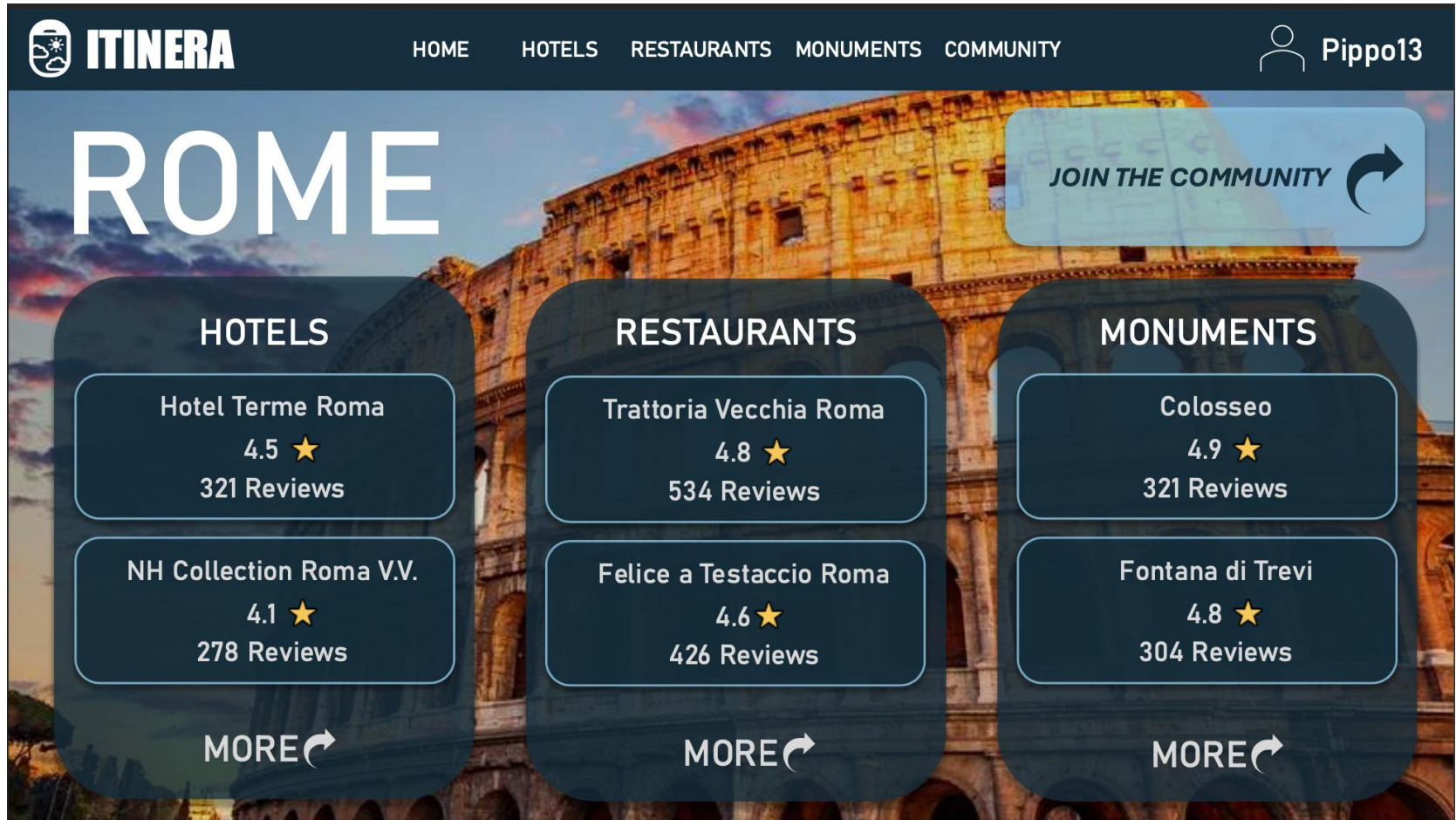
Login

Don't have an account? Sign up now.

Actors and main mock-ups 3



Actors and main mock-ups 4



Actors and main mock-ups 5

ITINERA HOME HOTELS RESTAURANTS MONUMENTS COMMUNITY Pippo13

ROME HOTELS

5 ★ ☐ 4 ★ ☐ 3 ★ ☐ 2 ★ ☐ 1 ★ ☐

Hotel Terme Roma

4.5 ★ 321 Reviews

Dumfries_Denzel21 03/08/2017
Rating: 5 ★
'Spectacular stay. Great location, friendly staff, and a wonderful atmosphere.'

See All ↻

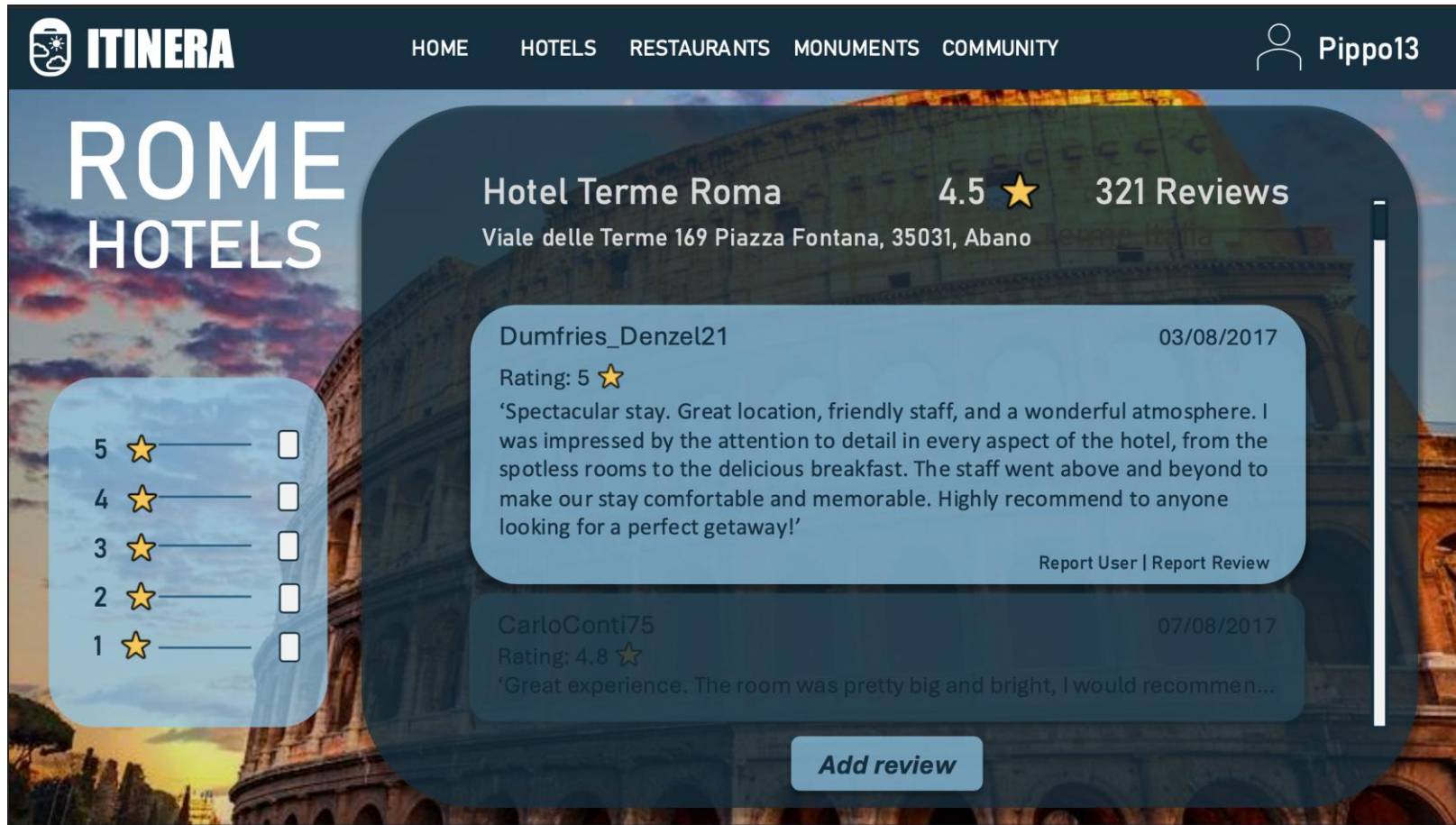
NH Collection Roma V.V.

4.1 ★ 278 Reviews

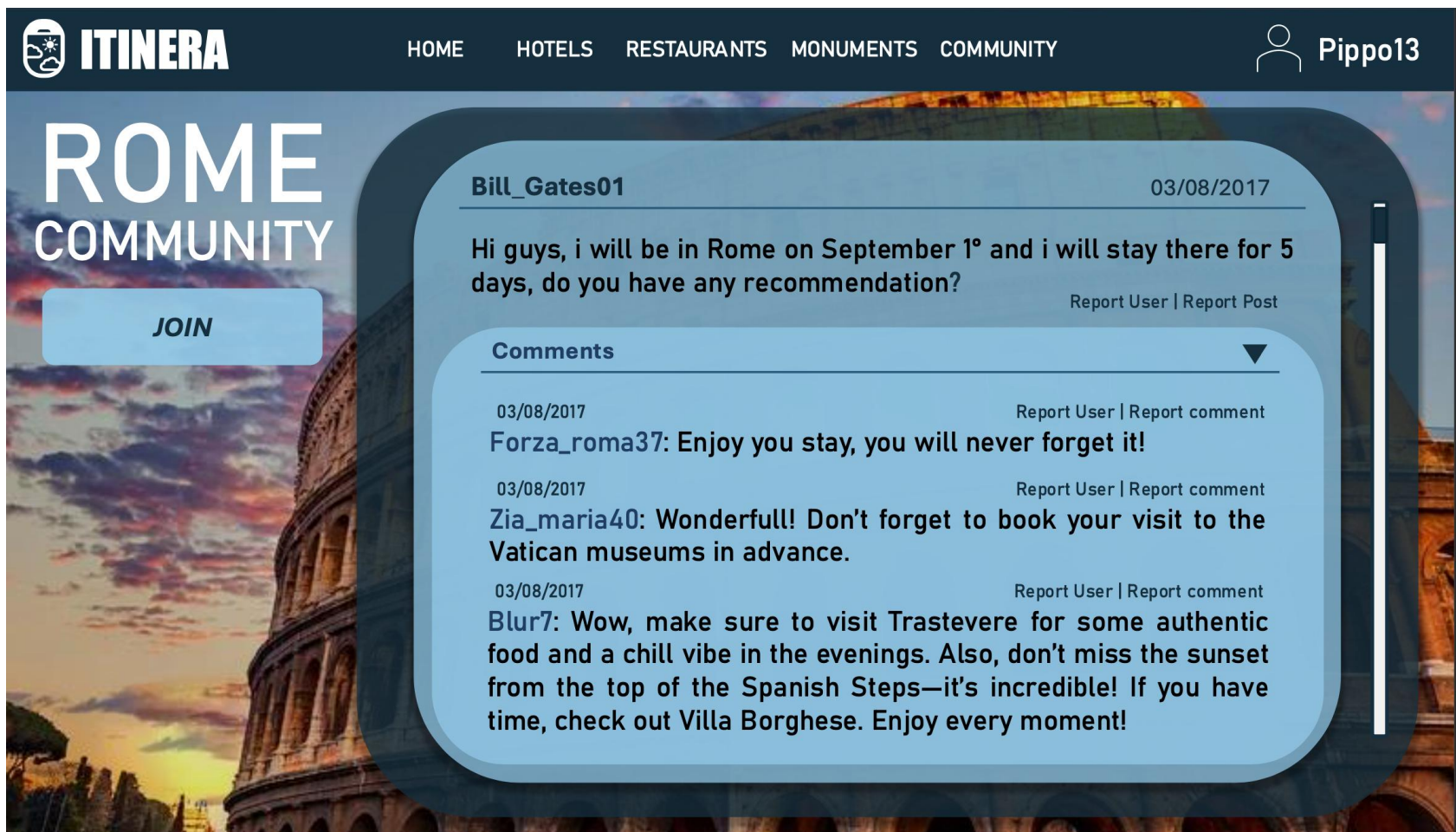
CarloConti75 07/08/2017
Rating: 4.8 ★
'Great experience. The room was pretty big and bright, I would recommen...'

See All ↻

Actors and main mock-ups 6



Actors and main mock-ups 7



Dataset Description

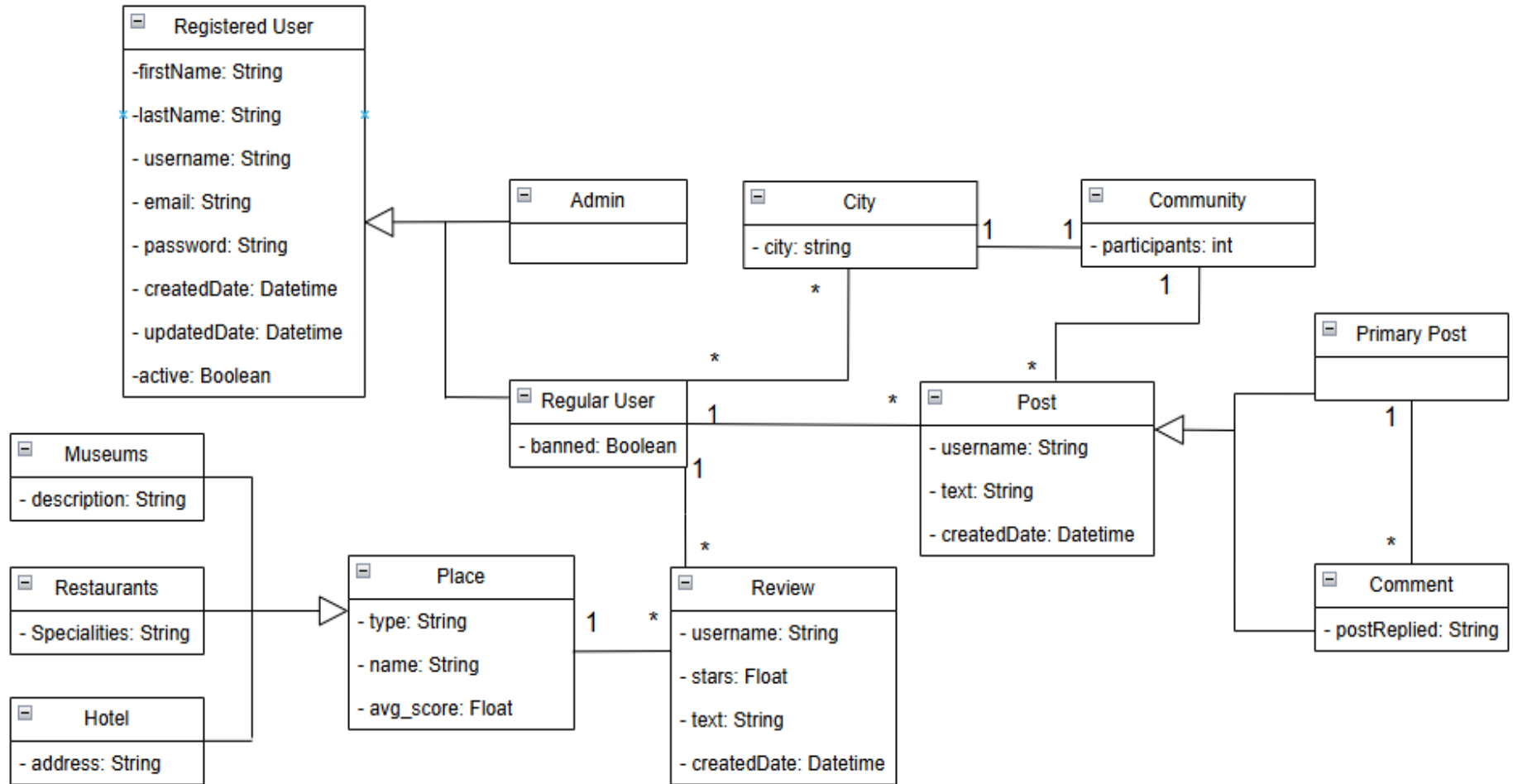
Source: reddit API, google places API,
https://www.kaggle.com/datasets/inigolopezrioboo/a-tripadvisor-dataset-for-nlp-tasks?select=London_reviews.csv ,
<https://www.kaggle.com/datasets/jiashenliu/515k-hotel-reviews-data-in-europe>

Description: all dataset with google places API collects reviews of restaurants and hotels, with reddit also we obtain comments for communities of cities

Volume: 238 MB hotel reviews + reddit data for communities + google places reviews of every restaurant, hotel and monument inside 5km radius of the city centre

Variety: variety is achieved by several datasets and APIs with different types of data schema

Preliminary UML Class Diagram



Relevant Queries and Entities handled by Document DB

Entities:

- Users
- Admins
- Posts
- Reviews
- Communities
- Comment
- Places
- City

Queries:

- Shows best reviews for interesting places based on a city
- Shows the most reviewed city by the user
- Shows the number of posts written for each community
- Retrieving user activities and provide them in their page
- Obtain average review value for the selected place
- The places with the highest number of 5 star reviews

Requirements and Entities handled by Graph DB

- Suggests cities to visit.
- Suggests people to follow.
- Suggests posts you might be interested in
- What is the most popular community?
- Most active user in a community.

