

CS5200 · PM6

Project Milestone 6: Conclusion

1. Did you fulfill your value proposition? Explain.

As a reminder, our value proposition was as such:

Gr8BnB is a data insight service that provides enhanced social features, advanced multiple filtering options with personalized recommendations, and host ranking by rating for travelers and professional BnB seekers who are unhappy with the metrics, recommendations, and social interactions currently provided by Airbnb.

We delivered multiple features of our value proposition, such as filtering options, detailed reviews and ratings for each listing (by multiple factors such as cleanliness, amenities, so on), and finally host ranking by rating rather than by number of listings.

2. List what you initially planned to deliver, and compare to what you actually delivered.

We initially planned to deliver one of the advanced features: (1) host ranking by rating rather than by number of listings, (2) enhanced social features such as chatting and sharing that are more than just rating and reviewing, and (3) filter search with recommendations which help BnB seekers find the listings that are personalized based on search history, review logs, and stay bookings. We delivered the first advanced feature along with a filtering feature. We also delivered basic functionalities such as Host and Guest CRUD functionality so that they can make their way through our service.

3. Your final UML. Include a description of what changed in your UML.

(Please see page 2 for the final UML.) The changes made to the UML were done during PM2. These changes included specifying or changing the data type for some attributes in the UML, after attempts to import data were unsuccessful due to a mismatch in size or format between the data types we predicted we would need and the actual data used. An example of a change we made was changing the data type of "ID" in the Review table from INT to BIGINT, upon discovering that an integer was not large enough to store some Review IDs.

4. What went well?

The most noteworthy aspects of this project is the process of collaboration and leadership. Each member of the team took the lead on one of the milestones of this project. The leader of a milestone was responsible for the initiation, planning, and integration. The leader would break down the whole milestone into phases, and identify the scope and deliverables for that milestone. Accordingly, they would assign tasks to each team member, and establish a workflow to track the implementation progress. This mode of collaboration and leadership proves to be effective and makes the whole team work seamlessly throughout the semester. We also shared general ideas and found a midpoint and agreement between them for each milestone. We held weekly meetings and shared google docs, where we were able to propose and discuss project names and values, features, data sources, UMLs and general progress in the project. We ran polls to vote for multiple ideas when needed and to define the schedule of our meetings. We had excellent leadership, workflow, and collaboration.

5. What were the biggest challenges?

A big challenge was finding reliable data sources and working with some of the records in the ones we chose. Some of the data sources we wanted to consider for milestone 1 didn't meet the required number of rows or their access wasn't entirely free. In milestone 2 when creating tables and loading to MySQL several data records such as the "Amenity", "Host About" and "Review Comment" had emojis, multiple words and special characters which made it hard to divide. In Milestone 5, some of the external data sources didn't match directly with the data of our database so extra processing and filtering was needed to use them. Additionally, integrating each team member's work into one deliverable was challenging. One example is when implementing the data model, some models depend on others (the review model depends on the listing model). Integrating those two implementations done by two different team members was a challenge.

6. What would you do differently?

On a management level, we could have better split the workload by having specialized people do specialized things. It was obvious that some members were more familiar with frontend tech stacks and some with backend ones. On a technical level, there were a few things that could have been done better. For one thing, the design for 'Neighborhood' entity could have been better by having an 'area' primary key consisting of multiple (latitude, longitude) tuples so that later on neighborhoods could be mapped on geographical positions instead of names. For another, it would be better if our final web application had corresponding tests and CI/CD pipelines for automatic deployment.

7. What do you plan to do next?

The most urgent task is to refactor the design for 'Neighborhood' table, possibly align it with the Map APIs from AWS or Google. Later on, we can differentiate into 3 teams, one for frontend, one for backend and one for DevOps. Major development tasks for the future would be ML model training and deployment for a recommendations system.

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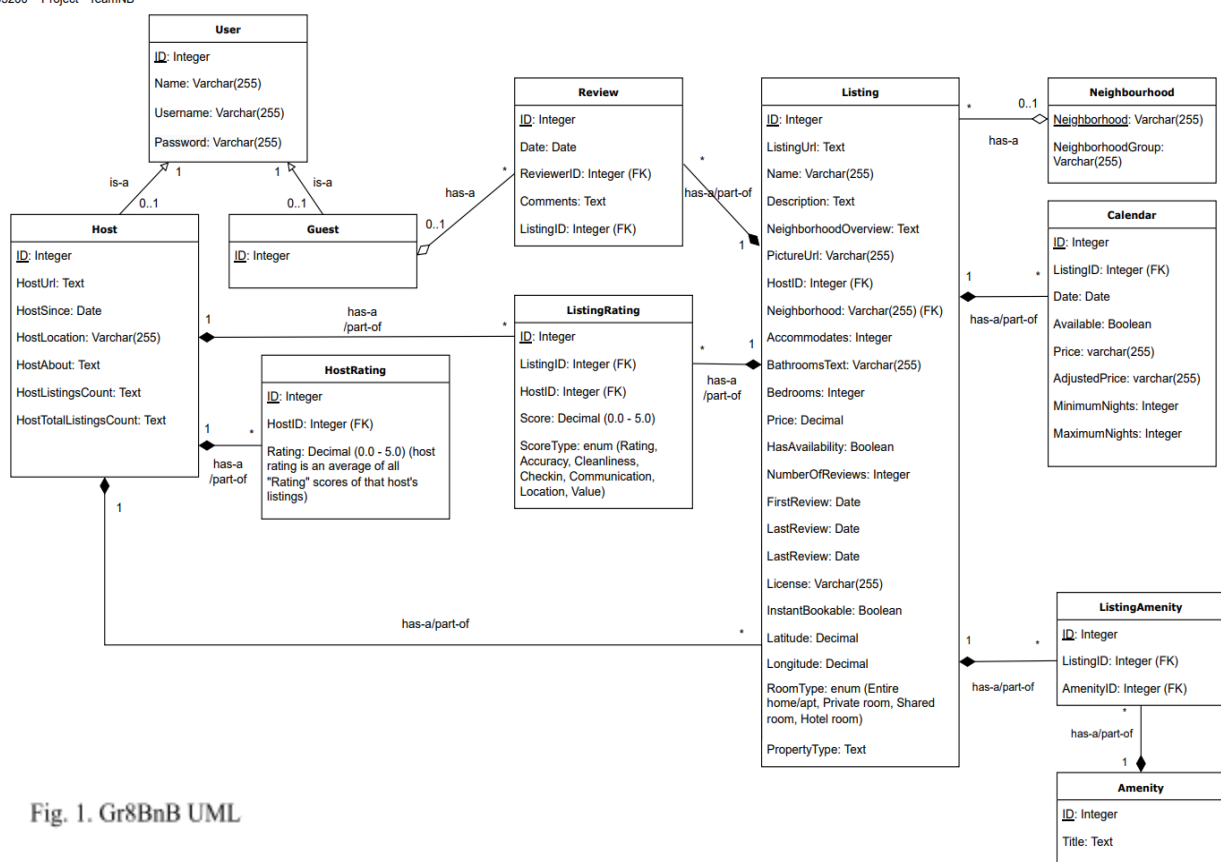


Fig. 1. Gr8BnB UML