This project simulates an online room booking platform, similar to Airbnb and Booking. It supports two roles: managers, who can upload and manage rooms, and users, who can search for and book rooms.

Any manager can do any of the following options:

1. Add rooms
2. Add available dates to a room
3. Display reservations for their property
4. View all accommodation reservations for a specific period.

Any user can do any of the following options:

1. Add filters to search for a room
2. Book a room
3. Rate a room

To handle large volumes of data, the system runs in a distributed environment. It uses the MapReduce framework, which allows the parallel processing of data across multiple machines.

The manager uploads room data and photos via a JSON file. The system uses a hashing method to distribute the data across multiple worker nodes, which store the information (Map phase). When a user applies search filters, the filters are sent to the workers, who search for matching rooms. These results are returned to the Reducer, which aggregates the results and sends them back to the user through the Master (Reduce phase).

The Master and workers communicate via TCP sockets, ensuring efficient data exchange. With multi-threading, the system can handle multiple user and manager requests simultaneously.