

## Manager-Customer Distributed Booking System

This distributed Airbnb booking system is developed entirely in Java, integrating both backend and frontend functionalities. Designed for scalability and efficiency, it uses the MapReduce framework to analyze, process, and store data effectively. The system is structured to provide seamless functionality for hosting and booking Airbnbs, offering distinct interfaces and roles for managers and customers.

The backend is responsible for all core data operations, including user management, property listings, reservations, and availability tracking. The frontend, implemented as an Android application, provides users with an intuitive platform to interact with the system, ensuring a smooth and reliable experience.

Managers, acting as hosts, can utilize the system to add properties for hosting, update their availability, view reservations, and analyze booking trends by area for specific time periods. These features are accessible via a console application, offering a simple yet powerful tool for managing listings and optimizing operations.

Customers interact with the system through the Android application, which allows them to search for properties using filters such as location, date range, price, rating, and guest capacity. They can view detailed property information, including photos, map locations, room counts, and amenities, before making a booking. Additionally, customers can rate their stays, view their past bookings, and manage their account details directly through the app.

This distributed system combines a robust backend with an intuitive frontend to create a reliable and efficient platform for managing short-term rental properties in a distributed environment. The project was developed as part of the **Distributed Systems** course at Athens University of Economics and Business (AUEB).