INTERNATIONAL UNIVERSITY OF APPLIED SCIENCES

Project: Conception and Development of Airbnb's database

Abstract:

This project focuses on developing a comprehensive database for the online booking platform Airbnb. The database management system (DBMS) designed in this project encompasses all necessary functionalities to meet the platform's requirements.

The development process included creating detailed conceptual information such as entities, an Entity-Relationship Model (ERM), and data dictionaries. The aim was to provide essential information and functionalities within the database.

After defining the conceptual framework, we proceeded to develop the database using SQL, a standardized programming language for creating and managing databases. This included creating tables, inserting data, and performing modifications to ensure efficient database management.

To verify that our implementation met the requirements, we wrote and executed test cases using a programming language. These tests involved querying data from the database and ensuring that each table contained at least 20 rows of data.

The resulting database consists of 23 tables, each normalized to the third normal form to minimize redundancy and enhance efficiency. Key tables include 'User' (storing user information), 'Listing' (storing all listings), and 'Property' (storing property data). Each table has at least 20 data entries, which can be expanded over time.

This database was built using MySQL, a DBMS known for its ease of use and robust data management capabilities. MySQL provides fine-grained access controls to prevent unauthorized access, ensuring the security and integrity of the database.