Low Level Design

AIRBNB DATA ANALYSIS

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Document version Control

Date issued	Version	Description	Author
02/06/2023	1.0	First version of complete LLD	Rajhans Prasad

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Abstract

AirBnb is an online marketplace that connects people who want to rent out their property with people who are looking for accommodations in specific locales.

Airbnb offers people an easy, relatively stress-free way to earn some income from their property.

These data can be used for various types of analysis depending on the scope of the specific work.

The data-set contains information about the hosts, geographical Availability.

1 Introduction

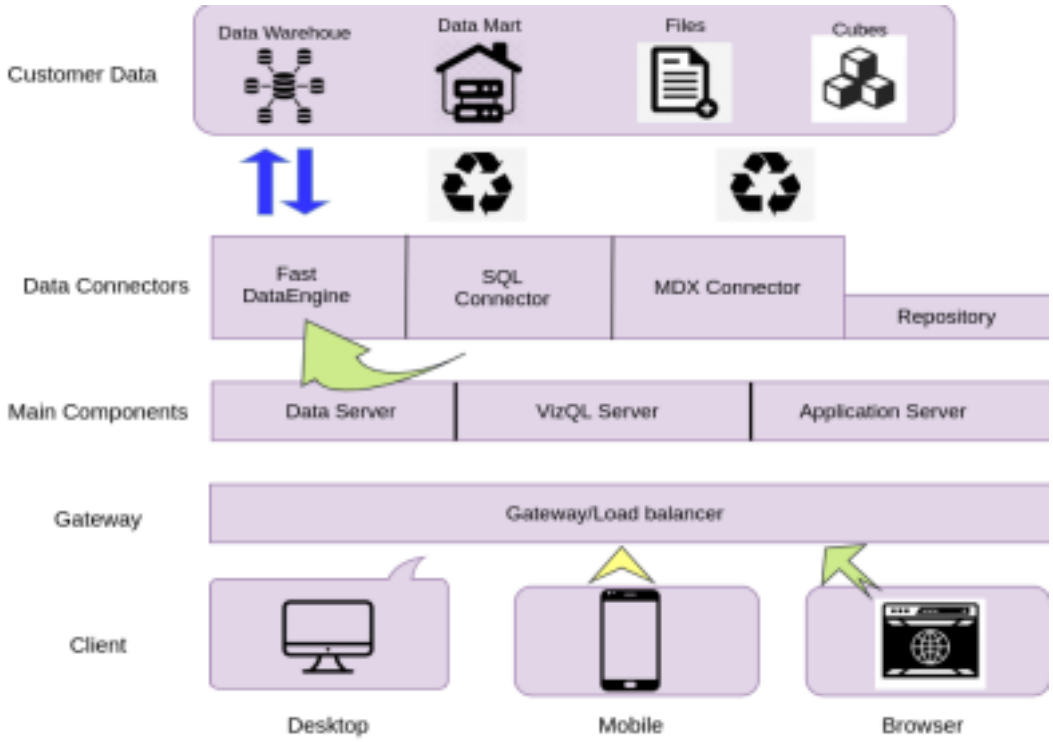
1.1 Why this Low- Level Design Document ?

The goal of LLD or a low-level design document (LLDD) is to give the internal logical design of the actual program code for Airbnb Data Analysis. LLD describes the class diagrams with the methods and relations between classes and program specs. It describes the modules so that the programmer can directly code the program from the document. Low-level design is a detailed description of every module of software. It describes every module in detail by incorporating the logic behind every component in the system. It delves deep into every specification of every system, providing a micro-level design.

1.2 Scope

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

2. Architecture



2.1 Architecture Description

The architecture of the Airbnb Data Analysis project encompasses several key components that work together to collect, analyze, and present travelling possibilities and present more unique, personalized way of experiencing the world. While the specific technical details may vary, here is a high-level overview of the project's architecture:

Data Collection: The project relies on a variety of sources to collect data on Airbnb data. Airbnb collects and processes various types of data to provide its services and improve the user experience. The data is gathered through standardized data collection processes and protocols.

Data Processing and Integration: Once collected, the raw data goes through a

processing phase where it is standardized, cleaned, and validated. This step ensures consistency and quality in the dataset. The processed data is then integrated into a centralized database, which serves as the foundation for analysis and reporting.

Analysis and Visualization: Advanced analytical techniques are applied to the integrated dataset to derive insights and identify global travel trends and User Experience. This may involve statistical analysis and other quantitative methods. The results of the analysis are then visualized using interactive charts, graphs to facilitate data exploration and comprehension.

Reporting : The project generates reports, publications, and an online platform to disseminate the findings and insights derived from the data. Reports provide in-depth analysis, while publications offer specialized studies and research papers. The online platform serves as a dynamic repository of data, visualizations, and real-time updates, accessible to a wide range of users

3. Project Introduction

The sharing economy model has transformed many businesses, and the hospitality industry is no exception. The way consumers identify and reserve unique accommodations throughout the world has changed because to Airbnb, the industry leader in home-sharing. In order to maintain flawless interactions and unmatched customer happiness, the Airbnb experience must be improved given that millions of hosts and guests use this site.

3.1 Problem Statement

Since 2008, guests and hosts have used AirBNB to expand on travelling possibilities and present more unique, personalized way of experiencing the world.

3.2 Dataset Info

This dataset describes the listing activity and metrics in San Diego, California for 2019.

This data had all the information regarding the listings :-

- Host name
- Location
- Neighbourhood
- Price
- Monthly price
- Review score
- Number of reviews.

4.Power BI Dashboard Introduction.

Power BI is a business analytics service by Microsoft that provides interactive visualizations and business intelligence capabilities with an interface that is simple enough for end users to create their own reports and dashboards.

Power BI dashboards can be created using a variety of data sources, such as Excel spreadsheets, SQL databases, and cloud-based applications like Salesforce and Google Analytics. Power BI also provides connectors to many other data sources, making it easy to bring in data from multiple sources. Once data is connected, Power BI allows users to create visually appealing and interactive dashboards.

Users can drag and drop visualizations onto the canvas, customize the appearance of the dashboard, and add filters and slicers to allow for interactive exploration of the data.

Power BI dashboards also have a variety of sharing options. Users can share dashboards with others within their organization, publish dashboards to the web, or embed them into websites and other applications.

Power BI also has many advanced features, such as the ability to perform complex data modeling and calculations using DAX formulas, and the ability to create and share reports with others.Overall, Power BI dashboards are a powerful tool for organizations to gain insights into their data, improve decision-making, and drive business success.

5.AirBnb Data Visualization Dashboard.