Project Report

Real Estate Listings and Analytics

Abstract

This project focuses on tracking real estate property listings and analyzing market trends. By creating a database for properties, agents, buyers, and transactions, it provides insights such as average property prices by city, high-demand areas, and price trends over time using SQL queries and window functions. The exported reports help in making data-driven decisions in the real estate market.

Introduction

The real estate market involves multiple properties being listed, bought, and sold every day. Monitoring this data manually is inefficient and error-prone. This project creates a structured database system to store property listings, agents, buyers, and transactions. It applies SQL queries to analyze average prices, identify high-demand areas, and track price trends. The results provide valuable insights for buyers, agents, and market analysts.

Tools Used

- **Database:** MySQL (Workbench)
- **Client:** MySQL Workbench
- **Export Format:** CSV for report generation

Steps Involved

1. **Database Creation:**
    - Created a database named RealEstateAnalytics in MySQL Workbench.
2. **Tables Creation (Schema):**
    - Agents: Stores agent details.
    - Buyers: Stores buyer details.
    - Properties: Stores property listings with price, city, and agent information.
    - Transactions: Records property sales with buyer information.

3. **Insert Mock Data:**
    - Added sample agents, buyers, properties, and transactions to simulate the real estate market.
4. **Analytical Queries:**
    - **Average Price by City:** Calculates average property prices in each city.
    - **High-Demand Areas (View):** Identifies cities where multiple properties have been sold.
    - **Price Trend (Window Function):** Tracks moving average price trends over time.
5. **Export Results to CSV:**
    - Exported query results as CSV files for reporting and further analysis.

Conclusion

The project successfully demonstrates how to track and analyze real estate data using a structured database. SQL queries and views help identify high-demand areas and observe price trends, while exported CSV reports provide actionable insights. This system aids buyers, agents, and analysts in making informed decisions in the real estate market.