

# Pinnacle Realty Group: Strategic Data Insights Project

**Company:** Pinnacle Realty Group

## **Overview:**

Pinnacle Realty Group is a commercial real estate company that owns and manages a wide range of properties including offices, retail spaces, industrial sites, and residential buildings. The company's primary focus is to maximize profitability while maintaining high standards for tenant satisfaction and property upkeep. Pinnacle Realty Group has properties across major cities, and the organization relies heavily on data analytics to optimize operational efficiency, ensure strategic leasing, and manage long-term property investments.

## **Objective:**

The company's management has tasked the data analytics team with a comprehensive project to analyze various aspects of the business, including property performance, leasing trends, tenant retention, and maintenance expenses. As a data analyst, your role is to extract meaningful insights that will help the company make data-driven decisions on areas like rent adjustments, tenant engagement, maintenance scheduling, and resource allocation.

## **Project Assignment:**

The following set of questions has been provided to guide you through this project. Each question aims to uncover specific business insights, with a focus on using advanced SQL window functions and analytical techniques. Answering these questions will equip Pinnacle Realty Group's leadership with actionable insights for strategic planning and operational improvement.

1. The leasing department wants to track rent growth for each property over time. Calculate the cumulative rent amount for each property, ordered by lease start date.
2. Management is interested in knowing the properties generating the most revenue. Rank properties by their total rent revenue generated, grouped by property type.
3. Pinnacle Realty Group's CEO wants a report on the top-performing properties based on transactions. Find the top 5 most profitable properties in terms of total transactions and rank them.
4. Leasing managers need insight into rent trends to adjust lease pricing. For each property, determine the rolling average rent amount over the last 3 leases.
5. Maintenance costs are rising, and management wants to identify high-cost properties. Calculate the percentage of total maintenance costs per property and rank properties by this percentage.

6. To manage tenant satisfaction, leasing agents need to understand rent adjustments. Identify properties with rent increases over consecutive leases using window functions.
7. Investment advisors need to evaluate the latest transactions for properties. For each property, determine the three most recent transactions and calculate the average transaction amount.
8. Maintenance staff needs to know which properties require more frequent servicing. Determine the properties with the highest average maintenance cost over the last year.
9. The leasing team wants to understand tenant loyalty by analyzing lease durations. Calculate the tenure of each tenant and find the average tenure for each property type.
10. Investment managers need to see cash flow trends from transactions. Calculate the moving sum of transactions over the last 12 months for each property.
11. To optimize resources, managers want to know the most frequently leased properties. Rank properties based on the number of leases and identify the top 10 most leased properties.
12. Property managers are being evaluated on maintenance efficiency. For each property manager, calculate the average maintenance cost across their assigned properties.
13. The finance team wants to assess lease stability by duration. Identify the properties with the longest active leases by calculating the difference between lease start and end dates.
14. The board wants an annual summary of leasing activity for strategic planning. Determine the cumulative number of leases for each property by year, ordered by lease start date.
15. Investment advisors are interested in high-value properties within each category. Calculate the 90th percentile of transaction amounts for each property type.
16. Maintenance planners need to identify properties with recurring issues. Identify properties with consecutive maintenance activities of the same type (e.g., consecutive plumbing issues).
17. To analyze revenue distribution, finance needs property type revenue percentages. Find the total rent revenue for each property, then calculate the percentage of total revenue for each property type.
18. Leasing agents need to track rent changes over time to understand market trends. Calculate the difference in rent between consecutive leases for each property, and flag increases or decreases.
19. Management wants to know which property managers bring in the most revenue. Rank property managers by the total revenue generated from properties they manage.

20. Leasing agents want to analyze recent rent prices to set competitive rates. For each property, calculate the average rent for the top 3 most recent leases.