REAL ESTATE CHALLENGE

Problem Statement: *Sunrise Infra Properties Pvt. Ltd.*, a leading real estate firm, seeks to gain deeper insights into the domestic and commercial property market across multiple cities in India over the past 10 years. The CEO is particularly interested in understanding market trends, pricing patterns, dealer performance, and investment opportunities to make strategic business decisions. Participants are tasked with leveraging Power BI to analyze the dataset and derive actionable insights that will help the company optimize sales, identify profitable markets, and improve customer engagement.

Dataset provided: Participants will be provided with a comprehensive collection of datasets covering various aspects of the real estate market. These datasets capture key details on property sales, pricing trends, location-based insights, and dealer performance. The datasets include:

- **Real_Estate_fact**: This is the core table containing real estate transaction data. It stores detailed information about each property, including specifications like locality, area, flat type, number of rooms, furnishing status, and facing direction. It also includes transaction details such as the sale price, price per square foot, and dealer commission. The table links to other tables for property type, city, and state, allowing for detailed analysis of market trends, property values, and sales performance over time.
- **Propertytype_dim**: This table holds different property types available in the real estate dataset. It classifies properties into categories such as Residential Apartment, Independent House/Villa, and Commercial Space. Each property type has a unique identifier, which is linked to the main dataset. This table is useful for grouping properties based on type and analyzing trends in different property categories.
- **City_dim:** This table contains information about cities where real estate properties are listed. It acts as a supporting table to help categorize and filter property records based on location. Each city has a unique identifier, which is referenced in the main real estate data table. This table ensures consistency in city names and helps in location-based analysis.
- **State_dim:** This table provides state-level geographic information for real estate properties. It standardizes state names and ensures consistency across records. Each state has a unique identifier that is referenced in the main dataset. This table is essential for region-based analysis and filtering property data by state.

Submission Guidelines: To successfully submit your entry, please follow these steps:

- **Follow Us on LinkedIn:** Ensure you are following **KSR Datavizon** on LinkedIn to stay updated with the latest announcements and resources.
- **Share Your Work:** Publish a post on your LinkedIn profile featuring your video presentation or an image of your report. Be sure to tag **@Santosh J**, **@Mahesh Desireddy**, and **@Kiran Kumar KSR** in your post to acknowledge their support and guidance.
- **Community Engagement:** Additionally, post your report in the **KSR Datavizon's Data Challenges/Hackathons Community Group**. This step ensures your work is visible to a broader community of peers and mentors.
- **Email Submission:** Send your **.pbix** file to **hackathons@datavizon.com**. This will enable us to provide you with personalized feedback on your submission.

Key Questions to Guide Your Analysis:

- What is the total number of properties sold across different cities and states?
- What is the average selling price of properties based on city, state, and property type?
- How does the price per square foot vary across different locations?
- What is the most common property type sold in each city and state?
- How does the total area of a property impact its selling price?
- Which cities have the highest number of property listings?
- What is the trend of property sales over time (monthly, quarterly, yearly)?
- Which localities have the highest demand for properties?
- What is the percentage of fully furnished, semi-furnished, and unfurnished properties sold?
- Which facing direction (east, west, north, south) has the highest average selling price?
- What is the average time taken to sell a property in each city and state?
- What is the total revenue generated from property sales in different states?
- How does the dealer commission vary across different property types and cities?

- What percentage of sales involve dealer-assisted transactions vs. owner-listed properties?
- What is the distribution of property sales across different price ranges?
- How does the number of bedrooms (1BHK, 2BHK, 3BHK, etc.) impact the selling price?
- Which states have the fastest-moving real estate market (shortest selling time)?
- What is the demand for different property types (residential, commercial, etc.) in each city?
- How do property prices fluctuate based on seasonality and market trends?
- Which city/state has seen the highest appreciation in property prices over the last 5 years?
- What is the correlation between locality and the price per square foot?
- What are the key factors influencing real estate pricing trends in different locations?
- Are there specific months/years where property sales saw a significant spike or drop?
- What is the long-term trend in real estate market appreciation in different cities/states?
- How do external factors (e.g., economic downturns, interest rate changes) impact property sales trends?
- What is the trend of property listings vs. actual sales over different time periods?

Participants should use **Power BI** to create visually compelling reports that tell a comprehensive story about the real estate business in India over the past decade. The goal is to provide actionable insights and recommendations based on the analyzed data.

All the best!