1. **What is the average price per square foot for single-family homes compared to condos in Texas?**

* By analyzing the 'listPrice' and 'sqft' columns, you can calculate the price per square foot for each property.
* Segment the dataset by property type ('type' column) to compare the average price per square foot for single-family homes versus condos.
* This insight can help potential buyers or investors understand the relative affordability and value of different property types in the Texas real estate market.

## Notes:

1. Cleaned the data in Tableau. Excluded land because there was no sqft.
2. **How does the number of bedrooms and bathrooms affect the asking price of properties in Texas?**

* Utilize the 'beds', 'baths', and 'listPrice' columns to explore the relationship between the number of bedrooms and bathrooms and the asking price of properties.
* Conduct a regression analysis to determine the impact of these features on property prices, controlling for other factors such as square footage and property type.
* This analysis can provide valuable insights for sellers in setting competitive listing prices and for buyers in evaluating the value proposition of properties based on their size and amenities.

## Notes:

1. Completed Bed & Bath worksheet, performed linear regression analysis. The analysis would indicate:

* **Direction and Strength of Relationship:** The slope of the regression line indicates the direction and strength of the relationship between the independent variables (bedrooms and bathrooms) and the dependent variable (asking price). A positive slope indicates a positive relationship, meaning that as the number of bedrooms or bathrooms increases, the asking price tends to increase. Conversely, a negative slope would indicate a negative relationship.
* **Prediction:** The regression line can be used to predict the asking price of a property based on its number of bedrooms and bathrooms. By plugging in specific values for the independent variables (e.g., number of bedrooms = 3, number of bathrooms = 2), you can estimate the corresponding asking price.
* **Interpretation of Coefficients:** The coefficients associated with the independent variables (bedrooms and bathrooms) in the regression equation provide information about the impact of each variable on the dependent variable (asking price). For example, if the coefficient for bedrooms is 50, it means that, on average, each additional bedroom is associated with a $50 increase in the asking price, holding all other variables constant.
* **Assessment of Model Fit:** The regression line helps assess how well the model fits the data. Metrics such as R-squared (coefficient of determination) provide information about the proportion of variance in the dependent variable that is explained by the independent variables. A higher R-squared value indicates a better fit of the model to the data.
* **Identification of Outliers:** Examining the residuals (the differences between the observed values and the values predicted by the regression line) can help identify outliers or data points that do not conform to the overall trend. Outliers may indicate unusual properties or errors in the data.

1. **Are there any significant differences in property prices based on the year of construction?**

* Group the dataset by the 'year\_built' column and calculate the average listing price for properties constructed in different years.
* Visualize the trend of property prices over time to identify any notable patterns or fluctuations.
* This analysis can offer insights into the appreciation or depreciation of property values over the years, informing decisions related to property investment and renovation projects.
* These actionable questions or insights provide opportunities for deeper exploration and analysis of the Texas real estate market trends, enabling stakeholders to make informed decisions related to buying, selling, or investing in properties.