**Individual Capstone Questions**

1. **Policy Term Analysis:** Most of our Commercial Lines policies are 12 month policies.  However, some policies are 6 month policies, which is our standard policy term for auto policies.  For policies active in a particular month, what are some of the differences in volume (policy count, earned or written premium amount) between the 6 month and the 12 month policies?   Are there any states, business types, or risk type codes that have more of one policy term type than the other?  What other differences can you find between the 6 month and 12 month policies?  Based on your analysis of current policy term, are there recommendations that you would make?
2. **Channel Analysis:** Progressive sells insurance in both direct and agency channels.  What are some of the key differences between volume in direct and agency policies?  Do we sell more of one channel of policy by state, risk type, or business type?  Is one type growing faster than the other?
3. **PIF Growth Analysis:** Overall, the count of Commercial Lines policies went up in the time period of data provided (August 2022 through February 2023.)  Where do you notice that PIF counts grew (by state, risk type code, business type, channel, etc.) versus decreasing?   What policy attribute segments had the highest and lowest PIF growth in that time period?  Can you think of any macroeconomic factors that may have affected PIF growth?
4. **Years in Business Grouping Analysis:** This data includes a grouping for the years a company has been in business.  The companies that have been in business for a small amount of years are not grouped together, **but companies in business between 6 and 10 years, 11 and 50 years, 51 to 100 years, and 100 to 400 years are grouped together, even though those grouping have a different number of years in them**.   Based upon the behavior of the companies in these groups that you can see (volume, policy attributes, etc.), does this grouping for years in business make sense?   What are the benefits and drawbacks of the current grouping?  Would you propose a different grouping?  Why or why not?
5. **Market vs. Business Type Analysis:** Policies are grouped into a variety of different categories.  Compare and contrast the groupings for Market and Business Type.  Which attribute gives you more information about how to determine which segment is growing?  Is this different by state or channel or any other attribute?
6. **State Comparison Analysis:** Select two states to analyze and compare and contrast the available metrics about that state.  (This could be done for multiple states!). delve into a more detailed analysis using the provided tables: Policy, Date, Coverage, State, Yrs, RMM, and BMT.
7. **Risk Management and Product Segmentation Analysis**: Progressive operates in the insurance industry and collects extensive data on policies, including details related to coverage, risk management metrics (RMM), state of operation, policy tenure, and business types. They aim to gain deeper insights into their product portfolio's performance and risk profiles to inform strategic decision-making and enhance profitability. The objective is to conduct a comprehensive analysis of the company's insurance policies, segmenting them based on both product attributes and risk management metrics. This dual segmentation approach can help identify high-performing products, assess risk exposure, and prioritize risk mitigation efforts effectively.

**Gen 4 Capstone Questions:**

1. **Policy Term Analysis:** Many insurance policies have varying term lengths, such as 6-month and 12-month durations. Analyze the differences in volume, such as policy count and premium amounts, between these policy terms for a given month. Are there particular regions, business types, or risk categories that favor one term length over the other? What other distinctions can you identify between the two policy terms? Based on your findings, what recommendations would you suggest?
2. **Sales Channel Analysis:** Insurance can be sold through various channels, such as direct sales and agency networks. Examine the key differences in policy volume between these channels. Is there a preference for one channel over the other based on region, risk type, or business type? Which channel is experiencing faster growth?
3. **Policy Growth Analysis:** Over a specific time period, the number of active insurance policies may fluctuate. Identify where policy counts have increased or decreased, considering factors such as region, risk category, business type, and sales channel. Which segments experienced the highest and lowest growth? Consider any broader economic factors that might have influenced these trends.
4. **Business Longevity Grouping Analysis:** Companies are often categorized based on how long they have been in operation. Evaluate the effectiveness of current grouping strategies, such as grouping companies by specific year ranges. Does the current grouping make sense based on company behavior, like volume and policy attributes? What are the advantages and disadvantages of the existing grouping? Would you recommend a different approach?
5. **Market vs. Business Type Analysis:** Insurance policies can be categorized by market or business type. Compare these groupings to determine which provides more insight into segment growth. Does this vary by region, sales channel, or other attributes?
6. **Regional Comparison Analysis:** Choose two regions to analyze and compare various metrics. Conduct a detailed analysis using available data such as policy details, coverage, and other relevant attributes. How do these regions differ in terms of insurance metrics?
7. **Risk Management and Product Segmentation Analysis:** Insurance companies collect extensive data on policies, including coverage details, risk management metrics, and business types. Conduct a comprehensive analysis to segment policies based on product attributes and risk metrics. How can this segmentation help identify high-performing products, assess risk exposure, and prioritize risk mitigation strategies?