SQL Visualization Project

MONTHLY ORDER COUNT
For our first query, we delve into monthly order trends. We have a bar chart that shows how the order count fluctuates over time, specifically over each month. this may be used to identify patterns and fluctuations in sales orders. As a result of an increase in demand, we can see that there were spikes in sales orders in the months of March, May, and June. This data and visualization provides insight for planning and strategy-making to ensure customer needs are being fulfilled and for companies to be properly equipped for peak seasons. In retail settings, these months may have coincided with holiday seasons or promotions. Customers could be participating in such promotions, resulting in such spikes. In this example, considering these specific months that show an increase, customers can be preparing for outdoor activities in anticipation of the summer season. For instance, customers purchasing bikes. there are more cyclists present during the summer than in the winter seasons leading to the increase during the summer and a decrease during the winter season.

CATEGORY WISE SALES
For our second query, we explore the sales performance of each product category. We have a visualization that shows the quantity sold for each category over the course of 12 months. The visualization also shows the trends over time to identify customer preferences and category popularity over time. It is noticeable that sales in the Bikes category consistently exceeding other categories, such as Clothing and Accessories. This may be due to a number of things, such as a greater interest in outdoor activities, an active community lifestyle, or even marketing efforts that have specifically addressed bike sales. Another possibility why bike sales lead could be that there could be less competition with companies that sell bikes in comparison to companies that sell clothing. Perhaps there are far more companies that sell clothing than bikes. Using this visualization can be used to discover best-selling categories of products and improve inventory control. For instance, if your best selling category is bikes, you might want a greater inventory of bikes to meet the demand rather than products that do not sell as much or as fast.

YTD SALES
Finally, Sales Territory Analysis is our final visualization. The information reveals year-to-date sales figures for each country region code. This is useful because we are able to determine which countries generate the most (or least) YTD Sales. That being said, this visualization presents exactly that. - each country's sales performance. We can observe that the United States (US), leads the way and has the most YTD Sales. Despite making significant contributions, Canada (CA), Australia (AU), and Great Britain (GB) remain behind the US. The US's sales figures could be attributed to its large population, type of economy it has, or perhaps marketing strategies vary by country.

Theory 2: Connecting our last two visualizations, it could also be inferred why the US does better than other nations when one considers the excellent performance in the "Bikes" category. There may be a strong cycling culture in the US, a large number of biking locations, or

other characteristics that contribute to the popularity of bikes among consumers. in comparison to other countries listed.

REGIONAL SALES
Finally, we offer an visualization that combines location-based information with more detailed sales data. We gain significant insights into regional sales performance by connecting the quantity of products sold in each category to the appropriate country using joins and grouping. The United States (US) is clearly the dominant market, exceeding nations like Canada (CA), Australia (AU), and Germany (DE) in a significant way. With this insight, companies are better equipped to concentrate on high-potential markets and modify marketing plans appropriately. This can be connected to our first and second visualizations as well because:

Theory 1: New information is provided here about the theory behind the increase in orders in March, May, and June. Again, we might assume that seasonal demand causes some categories to have a surge in sales during these months. For instance, in locations with nicer weather and sunny days, the sales of accessories and bicycles may increase as people get ready for outdoor adventures.

Theory 3: Also, as previously mentioned understanding the types of orders can help companies better understand their customers' preferences and adjust their advertising strategies appropriately.

These visualizations paint a clear picture of regional demand and the potential for market development and in particular categories.
Although the US has outperformed other nations in SalesYTD, category-level statistics can pinpoint which product categories are responsible for this performance.