## Data Analysis Using AdventureWorks2019 (DataBase)

# Step 1: Extracting Data Using SQL

**Description**:  
The first step involved extracting all Products info details from the **DataBase** AdventureWorks2019 database. At this stage, I retrieved all available columns for further processing

Step 2: Data Processing in Excel  
 After exporting the data to Excel, I performed the following steps to clean and prepare it for analysis:

### Format and clean data:

* + - Changed some values from columns to make it more clear specifically in product line column
    - Changed columns names to make it more clear

### Creating a Dashboard in Excel

#### Goals: The dashboard was designed to visually represent Products and make insights easily understandable. It used Excel features like Pivot Tables and Charts.

##### Product Line And Quantity:

* + - * + **Pie Chart showing the relationship between quantity and product line**

#### Category And Quantity

* + - * + **Clustered bar showing the relationship between quantity and Category**

#### Color And Quantity

* + - * + **Bar Chart showing the relationship between the quantity and the color**

#### Top 6 Sub Category By Quantity

* + - * + **Radar chart showing the relationship between sub category and Quantity to see top 6 sub categories**

#### Category And Quantity

* + - * + **Line chart showing the relationship between category and quantity over time using sales date**

# Insights:

1. From the **Product Line And Quantity** chart we can see that the mountain is the most abundant among the Products line with 24607 pieces
2. From the **Category And Sub Category & Quantity** chart we can see that the saddle in component category is the most abundant with 10853
3. From the **Color And Quantity** chart we can see that the uncategorized color is the most abundant then the Black color with 30 %
4. From the **Top 6 Sub Category** chart we can see that the wheels is the most abundant
5. **From the Category And Quantity** chart we can see that the trend is in component category with 47214