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Excel

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Analyze the given Sales Data and Visit Data to create various performance metrics and dashboards.

**Tasks:**

1. **Sales Executive Performance Matrix:**
   * Create a performance matrix for each Sales Executive (SE) considering the following metrics:
     + Total Sales (Net Value)
     + Total Returns (Return Net)
     + Total Visits
   * Use this matrix to evaluate the performance of each Sales Executive.
2. **Product and Category Performance by Geography:**
   * Analyze the performance of different products and categories across various geographies.
   * Identify which products and categories perform best in which regions.
3. **Top 5 Customers in Terms of Payment:**
   * Identify the top 5 customers who have the best payment records based on visits.
   * Suggest a scheme that could incentivize schools to make faster payments based on your findings.
4. **Sales Metrics Dashboard:**
   * Identify key sales metrics that are crucial for the business.
   * Create a dashboard using PowerBI, Excel, or any other BI tool to visualize these metrics.
   * The dashboard should include, but not be limited to:
     + Sales by Geography
     + Sales by Product Category
     + Sales Executive Performance
     + Top Customers
   * Mention any assumptions you make during the analysis.

**Assumptions:**

You are free to make any reasonable assumptions that you believe are necessary for the analysis. Please document any assumptions clearly in your submission.

**Submission:**

* Submit your analysis report in a well-documented format.
* Provide the performance matrix, analysis findings, and the dashboard in your preferred BI tool format.

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SQL

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You are working for a school district that wants to analyze student performance and other related data to improve educational outcomes. The school district has a database containing the following tables:

1. **Students**
   * student\_id (INT, Primary Key)
   * first\_name (VARCHAR)
   * last\_name (VARCHAR)
   * birthdate (DATE)
   * gender (VARCHAR)
   * grade\_level (INT)
2. **Teachers**
   * teacher\_id (INT, Primary Key)
   * first\_name (VARCHAR)
   * last\_name (VARCHAR)
   * subject (VARCHAR)
   * hire\_date (DATE)
3. **Classes**
   * class\_id (INT, Primary Key)
   * class\_name (VARCHAR)
   * teacher\_id (INT, Foreign Key)
   * schedule (VARCHAR)
4. **Enrolments**
   * enrolment\_id (INT, Primary Key)
   * student\_id (INT, Foreign Key)
   * class\_id (INT, Foreign Key)
   * enrollment\_date (DATE)
5. **Grades**
   * grade\_id (INT, Primary Key)
   * student\_id (INT, Foreign Key)
   * class\_id (INT, Foreign Key)
   * grade (DECIMAL)

**Tasks**

1. **Student Insights:**
   * Find the number of students enrolled in each grade level.
   * List the top 5 students with the highest average grades.
2. **Teacher Analysis:**
   * Calculate the average number of students per class for each teacher.
   * Identify the teacher with the highest number of classes taught.
3. **Class Performance:**
   * Find the average grade for each class.
   * List the classes where the average grade is below 70.
4. **Enrolment Trends:**
   * Find the total number of enrolments for each month in the year 2023.
   * List all students who are enrolled in more than 5 classes.

**Data**

Assume the data is populated as described in the scenario. Use the SQL queries to fetch the required information.