

## Activity Title: Analyze a Data Transformation Plan

### Objective

You are tasked with analyzing a proposed data transformation plan for **RFM customer segmentation** at *TheLook eCommerce*. Your analysis will help determine whether the plan is ready to be implemented in a future lab.

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### Step-by-Step Guidelines

#### Step 1: Understand the Business Need

- **Goal:** Segment customers into four groups:
  - **High-value:** Spend a lot and buy frequently.
  - **Loyal:** Buy frequently, even if spending is lower.
  - **At-risk:** Haven't purchased recently.
  - **Persuadable:** Recently purchased, but don't fit other categories.
- **Purpose:** Help the marketing team tailor campaigns to increase loyalty, spending, and purchase frequency.

#### Guiding Questions:

- What are the marketing team's goals?
  - How will segmentation support those goals?
  - What actions will be taken based on the segmented data?
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#### Step 2: Review the Data

- **Source:** TheLook eCommerce dataset.
- **Fields Needed:** Customer ID, purchase dates, products, total spend.
- **Timeframe:** Focused on customer behavior in **2022**.

#### Guiding Questions:

- Are the data sources sufficient?
  - How will missing or inconsistent data be handled?
  - Is data cleaning planned before transformation?
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### ◆ Step 3: Evaluate the Transformation Techniques

- **Techniques Used:**
  - **Aggregation:** Summarize orders per customer.
  - **Derivation:** Create RFM metrics and quantiles.
  - **Joining:** Combine orders and items.
  - **CTEs:** Organize logic for clarity.
  - **Window Functions:** Calculate rankings and quantiles.
  - **Conditional Logic:** Assign customer segments.

#### ✅ Guiding Questions:

- Do the techniques align with business goals?
  - Are they sufficient to produce accurate RFM scores?
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### ◆ Step 4: Assess the Tools

- **Tools Proposed:**
  - **BigQuery:** For storage and querying.
  - **SQL:** For transformation logic.

#### ✅ Guiding Questions:

- Are these tools appropriate for the task?
  - What are their strengths and limitations?
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### ◆ Step 5: Review the Testing Plan

- **Testing Strategy:**
  - Double-check calculations.
  - Ensure accuracy of derived metrics.

#### ✅ Guiding Questions:

- Are the tests sufficient to ensure data quality?
  - Has the team planned how to handle issues found during testing?
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## **Final Step: Answer the Quiz**

After analyzing the plan using the steps above, proceed to the quiz in the course platform. Your answers will reflect your understanding of how well the plan meets business and technical requirements.