Power BI Case Study

Title: Sales Performance Analytics for Dynamics 365 Organization

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1. Case Background

Your organization uses **Microsoft Dynamics 365** for managing customers, products, territories, and sales transactions. Leadership requires an executive dashboard to monitor performance, track targets, and identify business opportunities.

You have been assigned as a **Business Intelligence Analyst** to analyze exported sales data and generate insights using Power BI.

This is a timed analytical assessment designed to evaluate your ability to:

- Model relational datasets
- Create DAX measures
- Build meaningful visuals
- Generate decision-ready insights

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2. Time Limit

Total Duration: **60 Minutes**

Phase	Activity	Time
Phase 1	Data Modeling	10 min
Phase 2	Calculations (DAX)	15 min
Phase 3	Dashboard Build	20 min
Phase 4	Insight Summary	15 min

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3. Dataset (Standard Reference Model – AdventureWorks Sales)

Participants will work with a structured dataset modeled on Microsoft's **AdventureWorks** schema.

Table 1 — FactSales

Column	Description
OrderDate	Transaction date
CustomerKey	Customer ID
ProductKey	Product ID
SalesTerritory Key	Region ID
OrderQuantity	Units sold
UnitPrice	Price per unit

SalesAmount	Revenue

Table 2 — DimCustomer

Column	Description
CustomerKey	Unique customer ID
FullName	Customer name
Gender	Gender
YearlyIncome	Income segment
Occupation	Profession

Table 3 — DimProduct

Column	Description
ProductKey	Product ID
EnglishProductName	Product name
Category	Product category
Subcategory	Product type

Table 4 — DimTerritory

Column	Description
SalesTerritory	Region ID

Key	
Region	Region name
Country	Country
Group	Continent

Table 5 — FactSalesQuota (Targets)

Column	Description
EmployeeKey	Salesperson
CalendarYear	Year
SalesAmountQuota	Target

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4. Tasks to Perform

Task 1 — Data Modeling

Create relationships between tables using appropriate keys.

Expected Relationships:

From Table	To Table	Column
FactSales	DimCustomer	CustomerKey
FactSales	DimProduct	ProductKey
FactSales	DimTerritory	SalesTerritoryKey

Task 2 — DAX Measures

Create the following measures:

Measure Name	Formula
Total Revenue	SUM(FactSales[SalesAmount])
Total Orders	COUNT(FactSales[OrderDate])
Average Order Value	DIVIDE([Total Revenue],[Total Orders])
Target Achievement %	DIVIDE([Total Revenue], SUM(FactSalesQuota[SalesAmountQuota]),0)

Task 3 — Visualizations

Create a **single executive dashboard page** with:

Visual	Requirement
KPI Card	Total Revenue
Bar Chart	Revenue by Region
Column Chart	Revenue by Product Category
Table	Top 10 Customers
Line Chart	Monthly Revenue Trend
Slicers	Region, Category

Task 4 — Insight Generation

Participants must write at least **5 business insights** from their dashboard.

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5. Expected Insight Types

Analysis Area	Insight Example
Regional Performance	Highest revenue region
Product Analysis	Best performing category
Customer Analysis	Top revenue customers
Target Tracking	Underperforming regions
Trend Analysis	Seasonal sales patterns

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6. Deliverables

Participants must submit:

Deliverable	Format
Power BI file	.pbix
Dashboard Screenshot	Image
Insight Summary	Document (5–7 bullet points)

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7. Evaluation Rubric (60 Marks)

Criteria	Marks
Data Model Accuracy	10
DAX Logic	15
Visualization Selection	10
Dashboard Layout	10
Insight Quality	15
Total	60

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8. Business Interpretation Requirement

Participants must not describe visuals. They must interpret data.

Example:

Incorrect
"North region has highest sales."

Correct
"North region contributes the highest revenue, indicating strong market penetration. Sales strategy used here should be replicated in other regions."