Graduation Project Requirements

Data Analysis Workshop – Data Pill Academy

Complete Data Analytics Project using BI Tools on a Sales Data Warehouse

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Project Objective:

To build a **complete analytics solution** starting from raw data extraction up to interactive dashboard visualization.
The project must cover the full data analytics lifecycle:

- Data Extraction, Transformation, Loading (ETL)

- Data Modeling

- Data Analysis

- Dashboard creation (Power BI)

- Full process documentation

Tools to Use:

- **SQL Server** (using ContosoRetailDW or WideWorldImportersDW)

- **SSIS** for building ETL pipelines

- **Power BI** for dashboards

- **Python** (optional – for extra transformation or validation)

- **Excel/Word** for documentation

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Project Components:

1. Design ETL Workflows (using SSIS):

- Create at least 5 data pipelines

- Each pipeline should focus on a different aspect:

    o Sales Performance

    o Product Analysis

    o Channel Analysis

    o Geographic Insights

    o Time-Based Order Trends

2. Execute ETL:

- Load data from appropriate Data Warehouse tables

- Apply transformation (Aggregations, Joins, Filters, Derived Columns, etc.)

- Save outputs to staging or final tables for analysis

3. Build Power BI Dashboard:

- Minimum 4 analytical pages

- Visualize key KPIs, interactive filters, trends

- Examples: Total Sales, YoY comparison, Top Products, Channel Performance

4. Documentation:

- Submit a Word or PDF file including:

    o All project steps

    o Screenshots from SSIS and Power BI

    o Explanation of logic and transformations

    o Notes on challenges and solutions

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5. Analytical Report:

- Final summary of insights and conclusions

- Use visuals and data to support findings

Final Deliverables:

1. Fully working and interactive Power BI dashboard

2. Analytical Report with insights and visualizations

3. Technical Documentation of all steps

4. Project files (Power BI file, SSIS packages, SQL scripts, etc.)

Deadline:

Thursday – August 15th, 2025

Submission Instructions:

- Submit all files in a well-organized folder with your full name

- Upload via academy platform or send to the official email

Notes:

- Projects must be fully functional – no broken visuals or links

- Evaluation criteria:

  o ETL process quality

  o Analytical strength

  o Dashboard design

  o Documentation clarity

- Top projects will be showcased by the academy

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