

[Md. Shah Alam](#)

Microsoft Certified Trainer | Consultant |

Microsoft Certified MS Excel & Power BI Specialist

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## A. Training Summary

| Training Type                       | Days Required     | Total Project | Assessment | Post Training Project |
|-------------------------------------|-------------------|---------------|------------|-----------------------|
| Data Analytics with Power BI and AI | 10 Days/ 15 Hours | 5             | 6          | 1                     |

|                    |  |
|--------------------|--|
| Training Take-home | <b>1. Hands-on experience in cleaning, modelling, analysing, and visualizing data using Power BI &amp; AI-assisted tools</b><br><b>2. Complete understanding of PL-300 exam structure, question patterns, and hands-on skills required to pass</b> |
|--------------------|--|

| Training Type                     | Summary  |
|-----------------------------------|--|
| Data Analytics with Power BI & AI | <ol style="list-style-type: none"><li>1. Understand the role of data analytics in business decision-making</li><li>2. Introduction to Power BI: Components, Architecture, Workflow</li><li>3. Connect Power BI to multiple data sources (Text/CSV, Excel, Folder, Web, Google Sheet, PDF, SQL, etc)</li><li>4. Use Power Query to clean, reshape, and transform data</li><li>5. AI-assisted generation of M Code in Power Query</li><li>6. Build efficient Data Models and relationships between datasets (Snowflake, Star Schema, Fact/Dim concepts)</li><li>7. Apply DAX formulas to create Measures for data analysis</li><li>8. DAX for Calculated Columns and Tables</li><li>9. AI-assisted DAX formula generation</li><li>10. Time Intelligence (YTD, QTD, YoY, Date Table Creation)</li><li>11. Row-Level Security (Static &amp; Dynamic)</li><li>12. Apply performance optimization techniques for Data Model and DAX</li><li>13. Design interactive dashboards for professional reporting</li><li>14. Integrate AI visuals like Smart Narrative, Key Influencers, and Q&amp;A for deeper insights</li><li>15. AI-assisted color themes and dashboard design enhancement</li><li>16. Publish, share, and collaborate reports in Power BI Service</li><li>17. End-to-end Project (Real-life scenario)</li><li>18. PL-300 exam overview, skills measured, preparation strategy &amp; practice guidance</li></ol> |

## **B. Training Content:**

| Pre-Assessment |          |   |  |
|----------------|----------|---|--|
| Section        | Duration | Lead  | Components   |
| Section-1      | 1 Hour   | Introduction to Data Analytics and Power BI             | <ul style="list-style-type: none"><li>• Understanding Data Analytics and its importance in Decision Making</li><li>• The role of Business Intelligence (BI) tools</li><li>• Overview of Power BI environment</li><li>• Key components: Power Query, Data Model, DAX, and Visualization</li><li>• Power BI Desktop and Power BI Service</li></ul>   |
| Section-2      | 5 Hour   | Data Cleaning, Reshaping, Transforming with Power Query | <ul style="list-style-type: none"><li>• Importing data from Text/CSV, Excel, Folder, Web, Google Sheet, PDF, SQL and Others</li><li>• Text Data Transformation by UI Text Tools</li><li>• Number Data Transformation by UI Number Tools</li><li>• Date Data Transformation by UI Date Tools</li><li>• Conditional and Custom Column</li><li>• Pivoting and Unpivoting Table</li><li>• Merger and Append Query</li><li>• Groupby Function</li><li>• Other UI Tools</li><li>• How to Manage M Codes</li><li>• How to Create M Codes</li><li>• <b>AI Integration: Using AI for transformation and M Code Generation suggestions</b></li><li>• <b>Discussion the types of Question from this Section for PL-300 Exam</b></li></ul> |
| Assessment-1   |          |   |  |
| Section-3      | 1 Hour   | Data Modelling and Relationships                        | <ul style="list-style-type: none"><li>• Understanding tables and relationships</li><li>• Creating relationships between Dim and Fact Table</li><li>• Cardinality: One-To-One, Many-To-One, Many-To-Many</li><li>• How to Convert Many-to-Many into Many-to-One</li><li>• Normalization and De-normalization of Dim and Fact Table</li><li>• Star Schema and Snowflake Schema</li><li>• Single and Both Direction Relationships</li><li>• <b>Discussion the types of Question from this Section for PL-300 Exam</b></li></ul>   |
| Assessment-2   |          |   |  |
| Section        | Duration | Lead  | Components   |
| Section-4      | 4 Hour   | Data Analytics with DAX                                 | <ul style="list-style-type: none"><li>• Implicit and Explicit Measure</li><li>• <b>Calculated Columns and Table Creation Functions-</b> Lookup up, Related, Related Table, Conditional Functions, Switch</li></ul>   |

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|   |        |   |  |
|---|--------|---|--|
|   |        |   | <p>Function, Table Functions, Row Level Security Function, Hierarchy Creation Functions</p> <ul style="list-style-type: none"><li>• <b>Creation and Management of Explicit Measure-</b> Statistics Functions, Calculate Function, Iteration Function, Filter Function, All and All Selected, Conditional Function, Time Intelligence Functions, Var for Structured Dax writing</li><li>• Dax Evaluation</li><li>• <b>AI Integration: Writing and explaining DAX formulas with AI assistance</b></li><li>• <b>Discussion the types of Question from this Section for PL-300 Exam</b></li></ul>  |
| <b>Assessment-3</b>                     |        |   |  |
| Section-5                               | 3 Hour | Data Visualization and Dashboard Design | <ul style="list-style-type: none"><li>• Best practices in visualization design</li><li>• Creating interactive charts, slicers, and cards</li><li>• Filter Concepts along with Slicers</li><li>• <b>Story behind each Charts</b></li><li>• Conditional Formatting- Gradient, Rules and Field Value (Measure Creation)</li><li>• Sparkline</li><li>• Importing and Using Image for Better Visualization</li><li>• Tooltips</li><li>• Drill-up, Drill-down and Drill-through</li><li>• Custom Theme. Importing Theme</li><li>• Usages of Buttons</li><li>• Custom Order</li><li>• Alt Text</li><li>• How to Use Bookmarks</li><li>• <b>AI Integration: Using AI visuals (Smart Narrative, Q&amp;A, Decomposition Tree, Key Influencers)</b></li><li>• <b>Discussion the types of Question from this Section for PL-300 Exam</b></li></ul> |
| Section-6                               | 1 Hour | From Insights to Decisions              | <ul style="list-style-type: none"><li>• Interpreting dashboards for actionable insights</li><li>• Case Study: Business decision-making</li><li>• <b>AI-assisted storytelling in Power BI</b></li><li>• Tips for building a portfolio-worthy dashboard</li></ul>  |
| <b>Assessment-4</b>                     |        |   |  |
| <b>Post-Assessment</b>                  |        |   |  |
| <b>Post Training Project Submission</b> |        |   |  |

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### **C. Project Summary**

| SL No | Project Data Types |
|-------|--------------------|
| 1     | Superstore Data    |
| 2     | Sales Data         |
| 3     | HR Data            |
| 4     | Loan Data          |
| 5     | Deposit Data       |