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Power BI for Data Analytics & MIS

Module 1: Introduction to Business Intelligence & Power BI

- What is Business Intelligence (BI)
- Role of BI in Decision Making
- Overview of Power BI Ecosystem
- Power BI Desktop vs Power BI Service
- Power BI Licensing Overview
- Installing Power BI Desktop
- Understanding Power BI Interface

Module 2: Data Sources & Connectivity

- Connecting to Data Sources:
  - Excel
  - CSV / Text Files
  - SQL Server
  - Web Sources
- Import Mode vs DirectQuery
- Live Connection Concepts
- Data Refresh Basics
- Best Practices for Data Connectivity

Module 3: Power Query Editor - Data Transformation (Basic to Intermediate)

- Introduction to Power Query Editor
- Query Editor Interface
- Data Cleaning Techniques:
  - Remove Duplicates
  - Replace Values
  - Split & Merge Columns
- Change Data Types
- Sorting & Filtering Data
- Applied Steps
- Refreshing Queries
- First Row Header
- Duplicate Columns
- Split Columns
- Change Data Type
- Group BY
- Pivot and Unpivot
- Formatting data
- Add Custom Columns
- Merge Queries

Module 4: Data Modeling & Relationships (Intermediate Level)

- Data Modeling Concepts
- Fact Tables & Dimension Tables
- Creating Relationships
- Cardinality & Cross Filter Direction
- Star Schema & Snowflake Schema
- Managing Multiple Tables
- Handling Date Tables

Module 5: DAX Fundamentals (Core Concepts)

- What is DAX
- Calculated Columns vs Measures
- Basic DAX Functions:
  - SUM
  - AVERAGE
  - COUNT
  - MIN / MAX
- Using Variables in DAX
- Understanding Row Context & Filter Context

Module 6: Intermediate DAX & Time Intelligence

- Logical Functions:
  - IF
  - SWITCH
- Aggregation Functions:
  - CALCULATE
  - FILTER
- Time Intelligence Functions:
  - TOTALYTD
  - SAMEPERIODLASTYEAR
  - DATEADD
- KPI Calculations
- Dynamic Measures

Module 7: Data Visualization & Reporting

- Bar Chart and Line Chart
- Stacked bar chart/column chart
- Clustered bar chart/column chart
- 100% stacked bar chart/Column chart
- Line chart
- Aria chart
- Stacked aria chart
- Line and stacked column chart
- Line and clustered column chart
- Ribbon chart
- Waterfall chart
- Funnel chart
- Scatter chart
- Pie chart
- Donut chart
- Treemap Chart
- Geographical Data and Maps chart
- Gauge chart (Speedo meter)
- Cards / Multi Cards
- Adding slicers for filters
- Table and matrix
- Decomposition tree chart
- Q&A

- Formatting Visuals
- Conditional Formatting
- Slicers & Filters, Sorting
  - Report Level
  - Page Level
  - Visual Level

- Cross filters
- Data sorting
- Visualization sorting

- Drill Down & Drill Through
- Tooltips

Module 8: Advanced Visuals & Dashboard Design

- Custom Visuals
- Combo Charts
- Waterfall & Funnel Charts
- KPI & Card Visuals
- Dashboard Design Best Practices
- Color Themes & Branding
- Interactive Reports

Module 9: Advanced Power Query & Parameters

- Creating Parameters
- Dynamic Data Sources
- Merge Queries
- Append Queries
- Query Folding Concepts
- Performance Optimization in Power Query

Module 10: Advanced DAX & Performance Optimization (Advanced Level)

- Evaluation Contexts (ROW & FILTER Contexts)
- Relate Functions (RELATED & RELATED TABLE)
- Iterative Functions (SUMX, AVGX, COUNTX)
- Variables (VAR) Logical functions (IF, SWITCH)
- Table Functions (ALL, ALLEXCEPT,VALUES,FILTER,CALCUILATETABLE)
- FORMAT FUNCTION, FIND, SEARCH, SUBSTITUE, VALUE, CALCULATE,UNION,ROW,ADDCOLUMNS,SUMMARIZE
- Handling Blanks (ISBLANK,NOTISBLANK)
- Rank Functions (RANKX)
- Date Functions(DATEADD,DATEDIFF,TODAY Required Date Formats)
- Calendar Functions (CALENDAR, CALENDAT AUTO)
- Time Intelligence functions (TOTALMTD, TOTALQTD, TOTALYTD, PARALLELPERIOD, SAMEPERIODLASTYEAR, PARALLELPERIOD, RUNING TOTAL)

- Performance Tuning
- Optimizing DAX Measures
- Handling Large Datasets

Module 11: Power BI Service & Deployment

- Publishing Reports to Power BI Service
- Creating Dashboards
- Sharing Reports
- Workspace Management
- Row-Level Security (RLS)
- Scheduled Data Refresh

Module 12: Power BI for MIS & Real-World Use Cases

- Designing MIS Reports
- Financial & Sales Dashboards
- HR & Operations Dashboards
- End-to-End Power BI Project

- Best Practices for Corporate Reporting
- Interview & Project Preparation

Projects

- Project 1
- Project 2
- Project 3
- Project 4
- Project 5
- Project 6
- Project 7
- Project 8
- Project 9
- Project 10

Interview	Power BI Pillars / Components
5%	Extract Data / Get Data
5%	Transform
25%	Modelling
25%	Calculation (DAX)
15%	Visual
15%	Distribution / Power BI Service
10%	Automations

