1-Month Power BI Data Analyst Course Syllabus

Module 1: Introduction to Data Analytics & Power BI

- What is Data Analytics? Role of Power BI

- Power BI vs Excel vs Tableau

- Power BI Desktop vs Service

- Components: Power BI Desktop, Service, Mobile

- Types of Data (Structured, Semi, Unstructured)

- Data Analyst Roles and Real-time Use Cases

Module 2: Power BI Desktop Get Started

- Install Power BI Desktop

- Interface Overview (Ribbon, Views)

- Report View, Data View, Model View

- Connect to Data Sources (Excel, CSV, Web, etc.)

- Real-time scenario: Load Sales Report from Excel

Module 3: Data Preparation Power Query Editor

- Query Editor Overview

- Applied Steps, Query Settings

- Column Operations: Rename, Remove, Move, Split Columns (by delimiter, position), Merge Columns, Duplicate Columns

- Row Operations: Remove Rows (Top, Bottom, Duplicates), Filter Rows, Sort Rows, Reverse, Count

- Advanced: Group By, Transpose, Fill Down/Up, Pivot & Unpivot Columns, Detect Data Type, Change Data Types

- Real-time Practice: Clean messy sales/customer data

Module 4: Data Modeling

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- What is a Data Model?

- Relationships One to One, One to Many

- Star Schema vs Snowflake Schema

- Manage Relationships

- Active vs Inactive Relationships

- Role of Primary Key/Foreign Key

- Real-time Practice: Relate Product, Sales, Region tables

Module 5: DAX (Data Analysis Expressions)

- Calculated Columns vs Measures vs Tables

- Aggregate Functions: SUM, COUNT, MIN, MAX, AVERAGE

- Logical Functions: IF, SWITCH, AND, OR

- Text Functions: CONCATENATE, UPPER, LEFT, LEN

- Date Functions: TODAY, YEAR, MONTH, DATEDIFF

- Time Intelligence: YTD, QTD, MTD, PREVIOUSMONTH, SAMEPERIODLASTYEAR, DATEADD, DATESINPERIOD

- Filter Functions: CALCULATE, FILTER, ALL, ALLEXCEPT

- Variables in DAX

- Real-time Practice: Calculate Running Total, YoY Growth, etc.

Module 6: Data Visualization

- Basic Charts: Bar, Column, Line, Pie, Donut

- Advanced Charts: Waterfall, Funnel, KPI, Gauge, Map

- Table, Matrix, Card

- Slicers (Visual & Date)

- Customize Visuals: Titles, Labels, Conditional Formatting

- Tooltips & Bookmarks

- Drill Down / Drill Through

- Real-time Dashboard: Sales vs Region, Top Customers

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Module 7: Power BI Service (Cloud)

- What is Power BI Service?

- Publish to Power BI Service

- Workspaces, Datasets, Reports

- Schedule Refresh

- Share Reports with others

- Roles: Admin, Viewer, Member

- Row Level Security (RLS)

Module 8: Real-Time Project & Dashboarding

- Real-World Use Case: End-to-End Dashboard (Sales or HR or Inventory)

- Load Clean Model DAX Visualize Publish

- Follow business requirements

- Present dashboard with insights

Module 9: Interview Preparation

- Power BI Interview Questions (Basic to Advanced)

- DAX Scenarios

- Case Studies: Debugging performance issues

- Explain project from resume

- Mini Mock Interviews (if possible)

Deliverables to Provide Students

- Daily Class Notes with Screenshots

- Sample Datasets (Sales, HR, Finance)

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- Power BI Practice Files (PBIX)

- Interview Q&A PDF

- Real-time Project Assignment