1. Introduction to Power BI

- What is Power BI?
- Components of Power BI (Desktop, Service, Mobile Apps)
- Benefits and use cases of Power BI
- Installation and setup of Power BI Desktop

---

2. Getting Started with Power BI Desktop

- Overview of Power BI interface
- Connecting to data sources (Excel, databases, online services, etc.)
- Data transformation using Power Query Editor
- Understanding the difference between Import and DirectQuery

---

3. Data Modeling

- Creating relationships between tables
- Understanding the data model (Star schema, Snowflake schema)
- Calculated columns vs. measures
- Introduction to DAX (Data Analysis Expressions)

---

4. Working with DAX

- Basic DAX functions: SUM, AVERAGE, COUNT, etc.
- Time intelligence functions: YTD, MTD, QTD
- Conditional functions (IF, SWITCH)
- Creating calculated tables and measures
- Optimization and troubleshooting DAX queries

---

5. Data Visualization

- Overview of visualization options (bar charts, line charts, tables, etc.)
- Designing effective dashboards and reports
- Customizing visuals (colors, formatting, filters, and slicers)
- Creating interactive reports with tooltips and bookmarks
- Using Power BI themes and templates

---

6. Advanced Visualizations

- Creating KPI dashboards
- Implementing R and Python visuals
- Drill-through and hierarchical visualizations
- Maps and geospatial analysis

---

7. Power BI Service

- Publishing reports to Power BI Service
- Creating and sharing dashboards online
- Scheduling data refreshes
- Collaborating with others using shared workspaces
- Understanding apps and app workspaces

---

8. Power BI Mobile

- Viewing and interacting with dashboards on mobile devices
- Customizing mobile reports
- Offline access to reports

---

9. Hands-on Projects

- Real-world case studies (sales analysis, financial reporting, etc.)
- End-to-end project from data import to report publishing
- Peer review and feedback

---

10. Certification Preparation (Optional)

- Tips for Microsoft Power BI certification exams (PL-300, etc.)