Up and Running with Power BI

Course Description:

This seven-session, instructor-led course equips students with the knowledge and skills needed to analyze data effectively using Microsoft Power BI. Each session will be approximately 1 to 1.5 hours, followed by assignments to reinforce learning. The course covers a wide range of topics, from basic data visualization to advanced data transformation and automation techniques using Power BI.

Audience Profile:

The primary audience for this course includes Business Intelligence (BI) professionals who need to leverage Power BI for data analysis. Secondary audiences include technically proficient business users looking to enhance their data visualization and analysis skills.

- **Duration:** 7 sessions (1-1.5 hours per session)

Skills Gained:

By the end of this course, participants will be able to:

- Describe self-service BI.

- Understand the Power BI suite of products.

- Connect to data sources and optimize data models.

- Create various data visualizations.

- Transform data using Power Query.

- Utilize DAX (Data Analysis Expressions) for calculations.

- Publish Power BI reports to the web.

- Automate Power BI tasks using Gateway Setup.

Prerequisites:

Participants should have:

- Basic knowledge of the Microsoft Windows operating system.

- Familiarity with data warehousing concepts (beneficial but not required).

- An understanding of business priorities such as revenue, profitability, and financial accounting.

- Familiarity with Microsoft Office applications, particularly Excel.

Instructor Profile:

Samiul Huq
Samiul Huq is a Microsoft Certified Trainer (MCT) and the founder of Bithut Limited Software Firm. He has been involved in corporate training since 2011 and is well-known for his expertise in data analytics. As one of the first trainers to introduce Power BI in 2015, Samiul has trained numerous professionals in both online and offline environments.

Course Outline:

Session 1: Introduction to Power BI & Data Visuals

- Overview of Power BI and its capabilities.

- Importing data from Excel.

- Exploring the Data Tab and creating data models.

- Creating hierarchies and understanding naming conventions.

- Visual exploration: tables, charts, cards, and slicers.

- Formatting visuals for better insights.

Session 2: Advanced Data Visualization

- Working with Timeline charts and Analyze Options.

- Using geographical data with Latitude and Longitude in Maps.

- Utilizing Decomposition Trees for in-depth analysis.

- Adding trend lines and forecasting to visualizations.

- Exploring filters, top N filtering, and multiple charts.

Session 3: Further Data Visualization

- Creating and using Matrix visuals.

- Displaying percentages of totals in tables.

- Applying conditional formatting to visuals.

- Importing and utilizing third-party visuals from the store.

- Exporting data and creating groups/bins.

- Controlling and editing filter connections.

- Creating and managing bookmarks.

Session 4: Power Query & Data Transformation

- Automating data loading from a folder.

- Cleaning and transforming messy data.

- Unpivoting columns for better analysis.

- Ensuring data quality checks.

- Appending and merging data sets.

- Creating conditional columns (e.g., age bins).

Session 5: DAX & Formula Functions

- Introduction to DAX (Data Analysis Expressions) and time intelligence functions.

- Using the RELATED function to replace Excel's VLOOKUP.

- Implementing more powerful IF() statements in Power BI.

- Utilizing CALCULATE functions instead of Excel's SUMIFS.

- Creating and using Measures for advanced calculations.

Session 6: Power BI Web Service

- Introduction to Power BI Service and publishing reports to the web.

- Building dashboards and asking questions using Q&A.

- Creating workspaces and sharing reports with others.

- Analyzing Power BI data with Excel.

- Exporting reports to PDF and PowerPoint.

Session 7: Power BI Automation & Mobile Integration

- Building a Power BI Mobile App.

- Collaborating on reports and dashboards with colleagues.

- Setting up Power BI Gateway for automatic data refresh.

- Utilizing the Power BI App (desktop) for enhanced functionality.

- Embedding Power BI reports into websites.

Assignments & Evaluation:

- After each session, participants will receive an assignment designed to reinforce the topics covered.

- The course will conclude with a capstone project, where participants will apply their skills to solve a real-world business problem using Power BI.