

Power BI from CSV to Interactive Reports

Power Query, relational modelling and DAX foundations

FA-0746 · 3 days

Data & Analytics

Introduction

Turn supplied CSV data into a practical Power BI report. Work through the business-intelligence workflow from data connection and transformation to model relationships, DAX calculations and interactive report design.

This beginner-to-intermediate course uses guided examples across three days. Reports are developed in Power BI Desktop; a service dashboard demonstration requires suitable service access and is distinct from the report itself.

Learning outcomes

- Explain the data-to-report BI workflow.
- Prepare CSV/folder data with Power Query transformations.
- Build fact/dimension relationships and reason about filter propagation.
- Create selected calculated columns and measures using DAX.
- Design interactive report pages with visuals, slicers, bookmarks and drillthrough.
- Distinguish reports from service dashboards and explain how selected report visuals can be pinned where access permits.

Prerequisites

- Basic spreadsheet/tabular-data and computer skills.

- Access to a compatible Power BI Desktop installation and the supplied sample files.
- Suitable Power BI service access/licensing and permissions if participating in the dashboard demonstration.

Training outline

1. Day 1 – Data Connections and Transformation

- Power BI Desktop, Power Query Editor and the learning environment.
- Explore connectors, with practical exercises using CSV and folder data.
- Basic transformations; string/numeric tools; index and conditional columns.
- Group/aggregate data, pivot/unpivot and modify queries.
- Merge and append queries and inspect row/data-type results.
- Introduce hierarchies and data categories; preparation best practices.

2. Day 2 – Data Models and DAX Foundations

- Normalisation and denormalisation in reporting models.
- Fact versus dimension tables; compare schemas and maintain consistent grain.
- Create relationships, cardinality and active/inactive paths.
- Connect multiple fact tables through suitable dimensions rather than arbitrary joins.
- Filtering/cross-filtering and hiding fields for report authors.
- DAX syntax, calculated columns versus measures, row/filter context and common functions.
- Basic date/time formulas using suitable date data.

3. Day 3 – DAX and Interactive Reporting

- Logical/conditional expressions and text, maths and statistics functions.
- Use RELATED to retrieve values through an existing compatible relationship; distinguish it from a SQL join.
- CALCULATE, ALL, FILTER and selected iterators.
- Introduce time intelligence and validate date/model requirements.
- Charts, matrix visuals, slicers/date controls, cards and KPIs.
- Maps where enabled, treemaps, line/area charts and gauges; formatting and filter choices.
- Report interactions, drillthrough and bookmarks.
- Review the completed report; demonstrate pinning selected report visuals to a service dashboard when the lab permissions allow.

