

Power Bl

A comprehensive journey through Power BI development, from basic DAX functions to advanced data modeling and enterprise deployment.

Learning Journey Overview

O1O2O3FoundationDAX MasteryData ModelingIntroduction and basic conceptsEssential functions and calculationsRelationships and advanced techniquesO4O5

Service & Security

Publishing and enterprise features

Real-World Application

Healthcare project implementation

Module 1: Foundation

Getting Started

Introduction to Power BI
fundamentals and core concepts
that form the foundation of your
analytics journey.

Assessment

Previous 3 modules test to evaluate your understanding and readiness for advanced topics.



Module 2: Essential DAX Functions

Basic Aggregations

SUM, COUNT, AVERAGE fundamental calculations for data analysis

Iterator Functions

SUMX, COUNTX, AVERAGEX - row-by-row calculations for complex scenarios

Context Control

CALCULATE DAX - modify filter context for precise calculations

Advanced DAX Techniques

1

Conditional Logic

SWITCH function for multiple condition handling

Data Retrieval

LOOKUPVALUE for finding specific values across tables

3

Ranking & Selection

TOPN DAX for identifying top performers

Variables

Optimize performance and readability with DAX variables

Time Intelligence Mastery

1 Calendar Setup

CALENDAR & CALENDARAUTO for date table creation

2 — Date Navigation

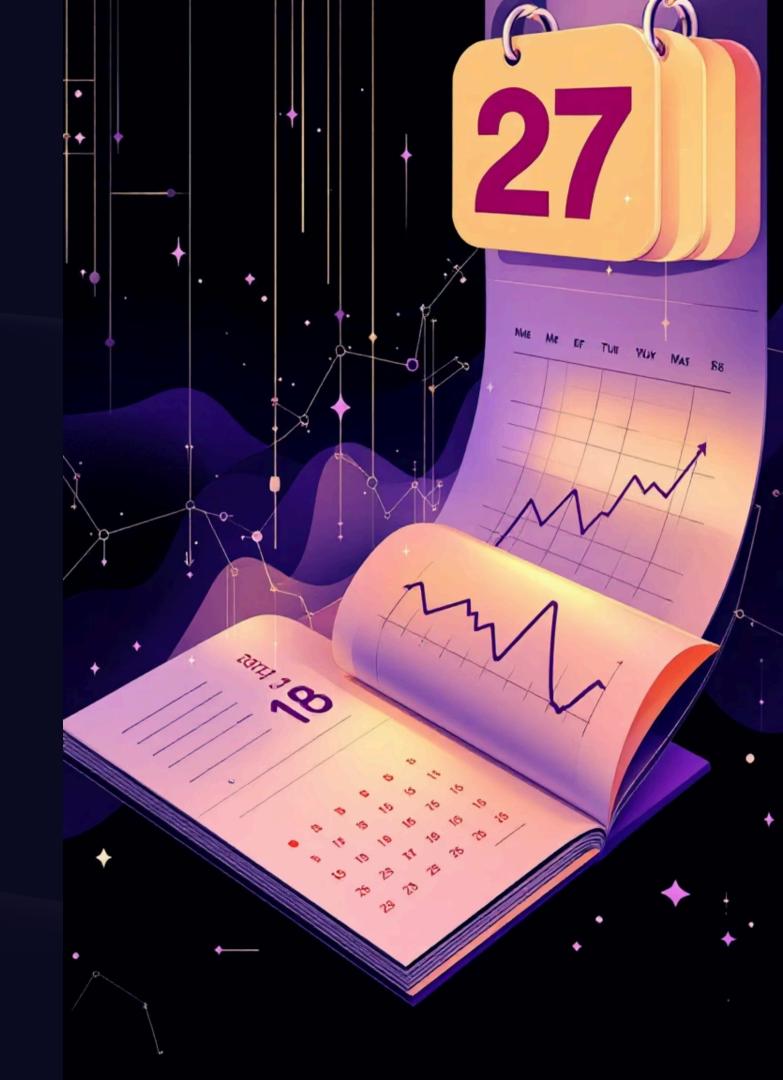
DATEADD & DATESINPERIOD for time-based calculations

3 — Period Comparisons

PARALLEL PERIOD for year-over-year analysis

4 Running Totals

TOTALYTD, QTD, MTD for cumulative metrics



Module 3: Data Modeling Excellence

One-to-Many

Standard relationship for dimension to fact tables

2

Many-to-One

Reverse relationship handling for specific scenarios

One-to-One

Direct relationships between unique records



Many-to-Many

Complex relationships requiring bridge tables

Advanced Data Control

Filter Context Management

- ALL Remove all filters from context
- ALLSELECTED Respect visual-level filters
- ALLEXCEPT Remove all filters except specified
- USERRELATIONSHIP Activate inactive relationships

Data Aggregation

- GROUPBY Group data with custom aggregations
- SUMMARIZE Create summary tables with calculations



Module 4: Enterprise Deployment



Power BI Service

Publishing reports and importing data from desktop to service



Row-Level Security

Static and dynamic security implementation for data protection



Advanced Editor

Power Query customization for complex data transformations



Service Comparison

Power BI Free vs Premium features and capabilities

Capstone Project: Healthcare Analytics



Real-World Application

Apply all learned concepts in a comprehensive healthcare analytics project, demonstrating mastery of Power BI development.

This major project integrates DAX functions, data modeling, security implementation, and service deployment to create a production-ready healthcare analytics solution.