

Microsoft Power BI – A Complete Introduction [2023 EDITION]

► Begin

17h 41m • 12 sections

With your instructors

[Academind by Maximilian Schwarzmüller Manuel Lorenz](#)

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Associated roles

[Business analyst](#)

[Business intelligence ...](#)

[Data analyst](#)

Skill covered

[Power BI](#)

 Beginner to intermediate

Appropriate for a learner just starting out in this topic, but looking to quickly progress to an intermediate level.

Learn to achieve your business intelligence goals with Power BI's comprehensive tools in this video course. Whether you need to analyze data from single or multiple sources, create captivating visualizations, or share results with colleagues, Power BI has you covered.

Starting with the course objectives and an introduction to Power BI Desktop, you'll explore connecting Power BI to various source types using the Query Editor. Understand the data model and establish relationships between tables. Develop visuals in the report view and efficiently share your work using Power BI Pro. Practical hands-on assignments will reinforce your learning and application of concepts.

Advance your skills by mastering data import from JSON, REST APIs, and MySQL Server. Discover tips to excel in the Power BI world and create custom visuals using TypeScript and Power BI Developer tools. Engage in exciting projects and revise previous topics to solidify your knowledge.

 June 2022[Packt Publishing](#)[16 reviews](#)

Even if you are a complete beginner, don't worry! The course includes a brief crash course on Power BI Desktop, making it accessible to all levels of learners.

By the end of this course, you'll confidently analyze data from various sources, build your datasets, and adeptly navigate the Power BI universe, understanding how its tools synergize. Propel your business intelligence journey with Power BI expertise!

What You Will Learn

- Understand Power BI Desktop and its components
- Work in different views of the data model
- Build relationships between different tables
- Create a report with interactive visualization types
- Take your project to the cloud with Power BI Pro
- Access your results from multiple devices using Power BI Mobile

Audience

This course is designed for anyone who has never worked with Power BI and wants to understand how to use the different tools; those interested in learning how to connect the different Power BI tools with each other; and others who want to understand how to create customized visuals with Power BI Developer tools. A basic understanding of data analysis will be beneficial but not mandatory.

About The Authors

Academind by Maximilian Schwarzmüller:

Academind GmbH

Bundling the courses and the knowledge of successful instructors, Academind strives to deliver high-quality online education. The platform covers topics such as web development, data analysis, and more in a fun and engaging way.

Maximilian Schwarzmüller



programming skills and languages. In his early days, he started creating websites simply for fun. This passion has remained and shaped his decision to work as a freelance web developer and consultant. Although he started web development on the backend (PHP with Laravel and NodeJS), he has progressed to becoming a front-end developer using modern frameworks such as React, Angular, and VueJS 2 in many projects.

The most rewarding experience for him is to see how people find new and better jobs, build exciting web applications, acquire amazing projects, or simply enjoy their hobby with the help of his content.

Manuel Lorenz: Manuel is a professional business analyst and instructor. Being an early adopter of new and quickly evolving tools, he always enjoyed both learning these tools and passing on his knowledge to his colleagues and fellow students. Since working as a business analyst implies a high affinity for programming, he also enjoys working as a web developer. It's that combination of self-taught knowledge and its application in a highly competitive consulting environment for various clients that gives him the ability to evaluate solutions from an industry perspective as well as from a learner's perspective. The latter also allows him to identify the pain points students might hit when learning these tools. As he always found it hard to find high-quality,

understandable, and comprehensive learning materials, he decided to create such materials on his own.

Together with Maximilian Schwarzmüller, he founded Academind to offer the best possible learning experience on web development and data science to more than 300,000 students.

Resources

[Supplemental Content](#)

Course Outline

Chapter 1 : Getting Started



55m

Welcome to This Course

3m 12s



Module Introduction

55s

What Is Power BI?

5m 46s

Installing Power BI Desktop

3m 33s

Connecting Power BI Desktop to Source Files

10m 7s

Creating Our First Visuals

7m 34s

Comparing Excel and Power BI

3m 20s

Course Outline

5m 30s

The Two Ways (Paths) of Taking This Course

2m 22s

How to Get the Most Out of This Course

3m 15s

Important: How to Access Course Resources, Project Files, and Slides

9m 48s

Chapter 2 : Understanding the Power BI Desktop Basics and Preparing the Course Project



22m

Module Introduction

1m 26s

The Power BI Desktop Workflow

5m 15s

Interface Tour

9m 28s

Important! Creating the Project Template and Recommended Settings

5m 38s

Chapter 3 : Data Preparation in the Power Query Editor



2h 8m

Module Introduction

1m 12s

Understanding Data Preparation / Cleaning / Cleansing

4m 50s

Connecting Power BI Desktop to Source Files

10m 36s

How Power BI Queries Data

5m 1s

Understanding Basic Row Operations

9m 7s

Filtering Data

6m

Analyzing Columns and Removing Blank Fields

11m

Understanding and Using the Append Feature

8m 28s

Choosing and Removing Columns

7m 6s

Append Behind the Scenes

2m 50s

Understanding the Transpose Feature

2m 58s

Replacing Values

7m 36s

Working with Dates – The Basics

6m 50s

Understanding Data Formats

5m 50s

Handling Data Format Errors

8m 19s

Understanding Pivoting and Unpivoting

4m 30s

Applying Pivoting and Unpivoting

3m 56s

Fixing a Sorting Problem

2m 11s

Extracting Data, Splitting Columns, and Sorting Multiple Columns

9m 24s

Introducing the "Group By" Feature

4m 20s

Improving the Project Structure

3m 16s

Wrap Up

3m 6s

Chapter 4 : Data Transformation in ^ the Power Query Editor

2h 6m

Module Introduction

57s

Data Warehouse, Data Model, and Data Schema

5m 45s

The Star Schema - Theory

6m 14s

Applying the Star Schema to Our Project

2m 26s

Understanding References

4m 7s

Comparing References and Duplicates

6m 40s

Importing Country and Region Codes

7m 54s

Using "Enter Data" to Create a Table

3m 2s

Understanding the Merge Feature

3m 29s

How to Join Tables

3m 19s

Understanding Outer, Inner, and Anti Joins

5m 37s

Join Kind in Practice

5m 2s

Handling Merge Errors

11m 31s

Understanding the DIM-age Table

3m 26s

Bringing Back the "age-group" Column

4m 41s

Getting the Maximum Values from Each Age Group

3m 31s

Creating Conditional Columns

7m 23s

Creating an Index Column

2m 26s

Creating a DIM-gender Table

3m 17s

Understanding the FACT Table

3m 2s

Finishing the FACT Table

8m 50s

Applying Basic Mathematical Operations

2m 31s

Using the Enable Load Feature

6m 59s

Wrap Up

2m 46s

Query Editor – Assignment Problem

54s

Query Editor – Assignment Solution

10m 23s

Chapter 5 : The Data Model – Working with Relationships and DAX (Data Analysis Expressions)



3h 2m

Module Introduction

1m 26s

Query Editor Versus Data Model

4m 40s

Understanding Relationships

2m 35s

Creating Our First Relationship

9m 59s

Understanding Cardinality and Difference Relationship Types

2m 23s

One to Many and Many to One

2m 23s

One to One

1m 38s

Many to Many

3m 28s

Fixing the Column Order Bug

3m 34s

Understanding the Cross-Filter Direction

11m 16s

Understanding Active Properties

1m 41s

Adding Relationships to the Project

6m 57s

M-Language Versus DAX (Data Analysis Expressions)

4m 18s

Creating a Custom Column with the M-Language

6m 30s

Creating a Calculated Column with DAX

7m 1s

M Versus DAX - What Should I Choose?

2m 25s

The DAX Basics

3m

The Core DAX Syntax

4m 1s

DAX Data Types

3m

DAX Operators

4m 55s

DAX Core Functions

4m 20s

Creating a Table with the CALENDAR Function

11m 48s

Extracting Data with the DOT Notation

4m 5s

Adding and Dividing Columns

8m 1s

Working with IF Functions

6m 43s

Understanding Relationship Functions

4m 40s

Calculated Column Versus Measure

1m 51s

Understanding and Creating Measures

5m 14s

Working with FILTER and CALCULATE

Functions – Theory

5m 45s

Combining CALCULATED and FILTER Functions

9m 11s

Adding the Filter Condition to CALCULATE

3m 32s

Using Measures in Measures

4m 25s

Changing the Measure's Home Table

4m 21s

Understanding the Data Category

3m

Wrap Up

2m 40s

Data Model and RelationshipView –

Assignment Problem

1m

Data Model and RelationshipView –

Assignment Solution

14m 44s

Chapter 6 : Creating Visuals in the Report View

2h 48m

Module Introduction

1m 3s

The Power BI Workflow and Understanding Basic Visual Elements

4m 49s

Creating and Duplicating Pages

2m 8s

Organizing Visuals

6m 3s

Creating a New Visual

3m

Creating Line and Column Charts

7m 3s

How FILTER Affects the Visual

6m 40s

Understanding Interactions

5m 23s

Hierarchies and Drill Down

7m 31s

Formatting Chart Colors

7m 50s

The Canvas

3m

Formatting the Page Background / Wallpaper

2m 37s

Formatting the Filter Pane and Filter Cards

7m 17s

Formatting Visuals: General Settings

4m 42s

Diving Deeper into Formatting Visuals

8m 4s

Working with Report Themes

7m 13s

Finishing the Report Theme

2m 24s

Understanding the Slicer

9m 36s

Default Summarization and Sorting Order

4m 20s

Creating Treemaps and Working with Multiple Slicers

6m 36s

Creating Tables

6m 36s

Syncing Slicers

3m 12s

Filter on Visual, Page, and Report Level

9m 48s

Creating Single and Multi-Row Cards

7m 48s

Adding a Secondary Y-Axis

4m 35s

Combining Column and Line Charts

2m 51s

The Waterfall Chart

3m 12s

Importing Visuals

2m 19s

Finishing Touches

5m 10s

Wrap Up

4m 25s

Report Visualizations – Assignment Problem

50s

Report Visualizations – Assignment Solution

10m 5s

Chapter 7 : Power BI Pro and Mobile - Sharing and Collaborating with Workspaces and Apps



2h 4m

Module Introduction

1m 52s

The Next Steps

4m 58s

Power BI Pro Pricing

4m 14s

Power BI Pro Interface Tour

6m 38s

Publishing and My Workspace - Theory

3m 19s

Publishing/Importing Power BI Desktop Projects to Pro

4m 10s

Datasets Walkthrough

4m 26s

List View Versus Lineage View

4m 3s

Exploring Reports in Pro

4m 47s

Understanding Dashboards

7m 21s

Creating Reports and Dashboards

7m 32s

Diving Deeper into "My Workspace", Understanding Refresh and a Refresh Error

4m 34s

Gateways - Theory

1m 40s

Gateways: Configuring Manual and Scheduled Refresh

11m 53s

Sharing Data from "My Workspace" Through Direct Access

13m 45s

Sharing Links

5m 42s

Understanding Collaboration Workspaces - Theory

1m 38s

Creating Collaboration Workspaces

8m 10s

Sharing Data Through Apps

1m 39s

Publishing and Unpublishing Apps

9m 21s

Deleting Collaboration Workspaces

1m 15s

Workspaces Versus Apps

2m 19s

Working with Power BI Mobile

5m 48s

Wrap Up

2m 48s

Chapter 8 : Other Data Sources



29m

Module Introduction

1m 22s

Importing JSON Data

6m 28s

Importing Data from REST APIs

5m 1s

Preparation: Setting Up a MySQL Server

8m 9s

Importing Data from a MySQL Server (and Other SQL Servers)

6m 38s

Wrap Up

56s

Chapter 9 : How to Stay Up-To-Date in the Power BI World



7m

Module Introduction

43s

Helpful Resources

5m 2s

Using Preview Features

1m 17s

Chapter 10 : Course Round-Up



7m

Congratulations!

6m 36s

Chapter 11 : Optional - Power BI Desktop Crash Course (Introduction and Summary)



2h 17m

Module Introduction

1m 30s

Project Setup

3m 55s

Connecting Power BI Desktop to the Source Files

1m 53s

Query Editor Walkthrough

4m 27s

Removing Blank Rows and Fixing Format Errors

5m 8s

Saving the Project

55s

Duplicates Versus References

7m 28s

Appending Queries

4m 47s

Splitting Columns and Extracting Data

3m 4s

Basic Column Interactions

2m 57s

Data Modelling Theory

6m 20s

Creating the "Orders" Table

3m 41s

Working with Indexes

3m 16s

The Formula Bar

4m 17s

Merging Queries

4m 25s

Loading Data Into the Data Model

6m 11s

Creating Line Charts

5m 28s

Understanding Relationships

5m 32s

Formatting Numbers in Charts

3m 16s

Understanding Interactions

3m 12s

Hierarchies and Drill-Down

5m 10s

Sorting Axis Values

1m 37s

Formatting Visuals and Applying Report Themes

3m 16s

Reports, Map Visuals, and Default Summarization

4m 35s

The Data Category

1m 40s

Applying Filters to Visuals

4m 53s

Understanding Slicers

4m 10s

Creating Tables

5m

Working with DAX ("Data Analytics Expressions")

6m 7s

Sorting Weekdays with Calculated Columns

4m 25s

Fixing the Revenue Calculation

1m 50s

Introducing Measures

7m 15s

Working with Quick Measures

5m 3s

Chapter 12 : Bonus - Selected Features by Example and Refresher Project



1h 16m

Understanding Column from Examples

6m 35s

Group By, Big Data, and DAX Studio

9m 43s

Taxi Project - Query Editor

22m 12s

Taxi Project - Data Model and Visuals

22m 20s

Taxi Project - Power BI Service

15m 32s