



Power BI Developer

Table of Contents

Day 1

Module 01: Power BI Desktop Primer

- Quick revisit with Working flow of Power BI
- Getting Data from different types of sources.
- Designing Queries using the Query Editor Window
- Understanding importance of Data Model
- Designing Interactive Reports with Bookmarks
- Designing Reports with Drill through
- Publishing PBIX Project Files to the Power BI Service

Module 02: Working with Data model and DAX

- Importing Data into a Star Schema
- Dealing Many to many relationship
- Building DAX Expressions
- Working with Variables in DAX

Module 03: Designing Advanced Queries using M

- Understanding Query Design and the ETL Process
- Introduction to Programming with M
- Understanding Query Folding
- Designing with Query Functions
- Designing with Query Parameters
- Creating Reusable Project Template Files

Day 2

Module 04: Power BI Service Primer

- Understanding Workspace
- Adding users
- Sharing and Accessing Workspace
- Distribution of Power BI App
- Exploring Power BI Admin
- Creating Dashboard





Module 05: Developing Streaming Datasets and Real-time Dashboards

- Introduction to Real-time Datasets
- Creating a Streaming Dataset using python Code
- Designing Dashboards with Streaming Data Tiles
- Creating a Push Dataset with Real-time Data

Module 06: Getting Started with the Power BI Developer Tools

- Getting Started with Visual Studio Code
- Getting Started with Visual Studio 2019
- Working with Node.js and Node Package Manager
- Data Gateway

Day 3

Module 07: Developing Custom Data Connectors

- Understanding the Role of Custom Data Connectors
- Developing with the Power Query SDK
- Packaging, Deploying and Testing a Custom Data Connector
- Configuring Authentication for a Custom Data Connector
- Understanding Authentication Flows with OAuth2
- Creating a Custom Data Connector for the Microsoft Graph API

Module 08: Programming with TypeScript and the D3.js Library

- TypeScript Language Primer
- Getting Started with D3 and SVG Graphics
- Creating Data-driven Visuals
- Enhancing Visuals with Scales and Axes
- Using D3 Layouts
- Event Handling and Transitions

Day 4

Module 09: Developing and Distributing Custom Visuals

- Understanding the Power BI Visuals API
- Creating Custom Visual Projects with PBIVIZ
- Understanding the Custom Visual Build Process
- Testing and Debugging a Custom Visual
- Defining Visual Capabilities and Data Mappings





- Programming D3-style Data Binding using Categorical Data
- Extending a Visual with Custom Properties
- Packaging and Distributing Custom Visuals

Module 10: Programming the Power BI Service API

- Power BI Service API Overview
- Registering Applications with Azure AD
- Programming Authentication and Managing Access Tokens
- Developing Custom Applications to Publish PBIX Project Files
- Patching Data source Credentials and Refreshing Datasets

Day 5

Module 11: Developing with Power BI Embedded

- Overview of the Embedding Features in Power BI
- Understanding Premium Capacities versus Embedded Capacities
- Retrieving Embedding Data using the Power BI Service API
- Generating and Managing Embed Tokens
- Using the Power BI JavaScript API to Embed Reports and Dashboards
- Writing Client-side Code to Interact with an Embedded Report

Module 12: Securing Datasets using Row Level Security

- Understanding Row Level Security (RLS)
- Implementing RLS in a Power BI Desktop Project
- Designing for RLS with the User-Owns-Data Model
- Implementing RLS Dynamically using the USERNAME Function
- Designing for RLS with the App-Owns-Data Model
- Generating Embed Tokens Restricted by RLS Roles