# Develop data-driven applications with Azure SQL Database (DP-3020)

**ID** DP-3020   **Price** 690.— €(excl. tax)   **Duration** 1 day

## Course Overview

This learning path prepares you for the task of developing data-driven applications by using Microsoft Azure SQL Database.

You'll learn how to create and configure an Azure SQL Database, build and deploy database projects using GitHub Actions and Azure Pipelines, and automate the publishing process. Additionally, you'll explore how to use Data API builder for Azure SQL Database and develop a data API with Azure Web Apps and Static Web App.

Furthermore, you'll gain skills in importing data via an external REST endpoint, exporting data using an Azure Function, and securing an Azure SQL Database. These essential skills will empower you to effectively develop and manage applications using Azure SQL Database.

## Prerequisites

- Experience with relational databases.
- Basic knowledge of security concepts like identities and permissions.
- Experience using the Azure portal to create resources and set permissions.

## Course Content

### Get started with Azure SQL Database for modern application development

You'll explore different features and tools to help you develop in Azure SQL Database.

- Introduction
- Explain deployment options
- Explore Hyperscale capabilities
- Understand the serverless compute tier
- Enable application resilience with Azure SQL Database
- Understand AI capabilities for Azure SQL Database

- Exercise: Enable application resilience with Azure SQL Database
- Knowledge check
- Summary

### Develop for Azure SQL Database

You'll learn different methods to develop and automate Azure SQL Database publishing for development purposes.

- Introduction
- Create and configure an Azure SQL Database
- Use SQL Database Projects
- Build and deploy database projects in GitHub Actions and Azure DevOps
- Secure and monitor Continuous Integration and Continuous Deployment (CI/CD)
- Exercise: Configure and deploy CI/CD pipelines for Azure SQL Database projects
- Knowledge check
- Summary

### Develop a data API for Azure SQL Database

We'll explore the use of Azure's Data API Builder, a powerful tool that simplifies the creation of REST and GraphQL endpoints for your Azure SQL Database. With features like automatic query generation, granular security controls, and seamless integration with other Azure services, the Data API Builder can transform your database into a versatile API with minimal effort.

- Introduction
- Explore Data API Builder for Azure SQL Database
- Develop a data API using Azure Static Web Apps
- Develop a data API using Azure Web App for Containers
- Exercise: Develop a Data API for Azure SQL Database
- Knowledge check
- Summary

### Explore data manipulation options in Azure SQL Database

Azure SQL Database allows you to import data using RESTful endpoints. This capability integrates Azure SQL Database with

various external services and APIs, making it a versatile and user-friendly platform. Also, by combining Azure Functions with Azure SQL Database, you can create seamless workflows that automate data processing and enhance the functionality of your applications.

- Introduction
- Use RESTful endpoints to import data to Azure SQL Database
- Manipulate data in Azure SQL Database with Azure Functions
- Understand the data movement tools available
- Exercise: Develop a Data API for Azure SQL Database
- Knowledge check
- Summary

## Explore security practices for Azure SQL Database

You'll explore different features and tools to help you secure an Azure SQL Database.

- Introduction
- Explore authentication methods
- Configure managed identity
- Understand firewall rules
- Explore advanced data security
- Exercise: Configure managed identity for Azure SQL Database
- Knowledge check
- Summary

# About Fast Lane


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