

# Accessing data from .NET

Course code: ASPNET\_DATA

This course will teach you how to access different types of data in .NET applications. We will talk about more advanced use of the Entity Framework Core, but also about storing binary data, cloud storage for blobs, queues or semi-structured data and so on. The course will be taught primarily from a web application development perspective, but the technologies discussed have general applications for other kinds of applications as well.

Affiliate	Duration	Course price	ITB
Praha	3	16 200 Kč	30
Brno	3	16 200 Kč	30
Bratislava	3	750 €	30

The prices are without VAT.

## Course terms

Date	Duration	Course price	Type	Course language	Location
28.04.2025	3	16 200 Kč	Presence	CZ/SK	Gopas Praha Prezenční
05.05.2025	3	750 €	Presence	CZ/SK	Gopas Bratislava Prezenční
09.06.2025	3	16 200 Kč	Online	CZ/SK	Gopas Praha Online

The prices are without VAT.

## Participant requirements

- Knowledge of C# programming at the GOC2125 course level
- Knowledge at ASPNET\_INTRO, ASPNET\_ADV or DOTNET\_DB course level

## Teaching methods

- Expert commentary with practical demonstrations, computer exercises.

## Study materials

- Presentation of the material covered in printed or online form.

## Course outline

- .NET and relational databases
- Entity Framework Core - model creation
- Code First
- Database First
- Code second - taking an existing model into EF
- Migration
- Migration from command line and Visual Studio
- Migration at application startup, generation of migration SQL batch
- Migration editing, data transformation
- Seeding data, populating dials
- EF Core as database abstraction
- Introduction to embedded database Sqlite, when to use it and when not to use it
- Database independence - applications working against MS SQL and Sqlite
- Backing up Sqlite database files
- More advanced use of EF Core
- Mapping to JSON structures
- Mapping to stored procedures

### GOPAS Praha

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Brno

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

### GOPAS Bratislava

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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- General use of stored procedures from EF
- Full-text search in Microsoft SQL Server
- General operation of fulltext indexes in MS SQL
- Query language for fulltext
- Google-like syntax translator
- Connection to Entity Framework
- .NET and non-relational data
- Binary data storage
- Storing binary data in a database
- Storing binary data in the file system
- Storing binary data in Azure Blob Storage
- Using SAS (Shared Access Signatures)
- FluentStorage - an abstraction for storing binary data and why to use it
- Storing semistructured data - Azure Table Storage
- Working with queues - Azure Queue Storage

## **GOPAS Praha**

Kodaňská 1441/46  
101 00 Praha 10  
Tel.: +420 234 064 900-3  
[info@gopas.cz](mailto:info@gopas.cz)

## **GOPAS Brno**

Nové sady 996/25  
602 00 Brno  
Tel.: +420 542 422 111  
[info@gopas.cz](mailto:info@gopas.cz)

## **GOPAS Bratislava**

Dr. Vladimíra Clementisa 10  
Bratislava, 821 02  
Tel.: +421 248 282 701-2  
[info@gopas.sk](mailto:info@gopas.sk)



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