Implementing a REST API using ASP.NET Web API

Course code: ASPNET_WEBAPI

Creating REST APIs is all the rage these days. It is used for communication between applications or perhaps within an application, for loading data from client JavaScript. In this training you will learn how to use ASP.NET Core Web API - tools for creating and consuming REST APIs in ASP.NET Core. We will explain the general basics of creating ASP.NET Core applications, the working principles of HTTP and the REST philosophy, and finally the ASP.NET Web API and the different ways of consuming this API. We will also show the OData query protocol and various authentication and authorization options.

Participant requirements
- Knowledge of C# programming at GOC2125 course level
- General programming knowledge in .NET Framework / .NET Core / .NET
- Basic knowledge of the web environment

Teaching methods
- Expert interpretation with practical examples, exercises on computers.

Studying materials
- Online presentation of discussed material and exercises.

Course outline

The outline

Theoretical introduction
- .NET /
- ASP.NET
- Core
- HTTP - Hypertext Transfer Protocol
- REST - Transfer of representative state
- Object serialization and deserialization, XML, JSON, YAML...
- ASP.NET
- Core applications
- The basic structure of an
- ASP.NET
- Core application
- Minimal API
- Core
- ASP.NET
- MVC
- Principle of SOLID, IoC/DI, Dependency Injection in .NET
- Basics of Entity Framework Routing
- Routing attributes
- Route restrictions
- Custom route restrictions OData
- OData query protocol
- Security aspects
- Limitation of query options Security
- Authentication options
- Request authorization

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