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# *.NET Fundamentals Eğitimi*

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## Eğitim Hakkında

NET Fundamentals Eğitimi; web tabanlı uygulamalar oluşturmak için .NET kullanmanın temel yönlerine odaklanır.

Kurs, uygulama yapısı ve nesne yönelimli uygulamalara derinlemesine bir bakış dahil olmak üzere Core C#'a genel bir bakışla başlar. Ardından, öğrenciler MVC ile web geliştirme hakkında bilgi edinecekler. Kurs, veritabanı erişimi üzerine bir ders ile sona ermektedir.

Bu kurs, C#, Java, SmallTalk veya C++ gibi nesne yönelimli bir dile biraz aşina olduğunuzu varsayar.

## Neler Öğreneceksiniz

- Describe the difference between a value type and a reference type.
- Read and write file system data.
- Discover Structured Exception Handling to handle errors with grace.
- Leverage WCF to build REST based services.
- Apply LINQ to perform database queries against SQL server.

## Eğitim İçeriği

### C#

#### Introductions

- A Heritage of Curly Braces
- Multiple Paradigms: Procedural, Object-oriented, Declarative, Functional
- Hello World!

#### Application Structure

- Review of Object-oriented Concepts
- Static Classes
- Classes and Structs
- Properties and Fields
- Enumerations
- Namespaces

## Object-Oriented, In-depth

- Implementation Inheritance
- Virtual and Sealed
- Interface Inheritance
- Polymorphism

## Flow Control

- Evaluating Conditionals
- Ifs and Thens
- Switch Statements
- Collections
- Loops Loops Loops!

## Events and Exceptions

- Event Motivations
- Event Patterns
- Gotchas
- Event Alternatives

## Advanced Topics

- Encryption
- Working with Unmanaged Resources
- Essential Patterns in Modern C#

## Web Development with MVC

- ASP Web Forms Refresher

## Introducing ASP MVC

- Fundamental Pattern: Model-View-Controller
- MVC and Webforms compared

## Controllers

- Convention over Configuration
- Flavors of ActionResult
- Writing an ActionFilter

## Views

- View Engines and Razor
- HTML Helpers

## Routing

- RESTful resource identification
- Structuring your application

## WCF Fundamentals

- Introduction to WCF
- What is a Service
- Developing services
- Developing clients
- REST Services

## Database Access

- What is SQL?
- Introduction to SQL
  - How does SQL differ based on database vendor?
    - Current SQL ANSI Standards
    - Functionality supported by SQL

## Database Concepts

- Core database terminologies
- Database design process
- Overview of Database Normalization

## Introduction to SQL Server

- Setting up SQL Server
- Selecting installation options
- Installing a named instance
- Creating Users
- Setting up databases and tables
- Granting remote access

## Introducing Entity Framework

- Impedance Mismatch
- Relationship to Traditional ADO.NET
- What EF Brings
- Alternatives to EF

## LINQ LINQ LINQ!

- History and Motivations
- Query Syntax vs. Object Syntax
- Cheatsheet
- LINQ Backends – Objects, XML, Entities

## Bootstrapping Entity Framework

- Design Patterns
- Code First and POCOs
- Mapping Considerations
- Common Scenarios

## Making Your Database Happy

- Using Stored Procedures
- Managing Concurrency
- Joining Transactions

## Advanced Entity Framework

- Loading: Lazy and Eager
- More patterns: Entities and Aggregates
- Fine-tuning Queries