ADO.NET Entity Framework 6.0

(LINQ to EF)

اهداف دوره: **آشنایی با رویکرد مدل سازی بانک اطلاعاتی مبتنی بر کد با استفاده از تکنولوژی** ADO.NET Entity Framework **می باشد.**

مخاطبین دوره : **این دوره برای کلیه برنامه نویسان حرفه ای دات نت (ویندوز / وب) که قصد دارند بانک اطلاعاتی نرم افزار خود را از طریق** CodeFirst **طراحی وپیاده سازی نمایند، توصیه می شود.**

پیشنیاز دوره : **مخاطبین لازم است دوره** Programming In C# (1) **را گذرانده باشند.**

مدت دوره :**مدت زمان آموزشی این دوره ۲۴ ساعت می باشد.**

دست آوردهای دوره : **پس از گذراندن دوره مذکور قادر به انجام فعالیت های زیر خواهید شد :**

- **آشنایی با روش های جستجوی مبتنی بر** LINQ
- **آشنایی با طراحی بانک اطلاعاتی مبتنی بر کد**EFCF

سرفصل مطالب آموزشی :**مطالب آموزشی که در این دوره بررسی خواهد شد شامل سرفصل های ذیل می باشد :**

Module 1: Language Integrated Query (LINQ)
Lessons

- Understanding delegates
- Use lambda expressions
- Creating and Using generic types
    - Generic Class
    - Generic Interface
    - Generic Method
    - Generic Delegate
    - Covariance

- Contavaraince
- Implementing standard .NET Framework Delegates
  - Action
  - Func
  - Predicate
  - Converter
  - Comparer
- Implementing standard .NET Framework interfaces
  - IComparable
  - IEnumerable
  - IEnumerator
- Language features that make LINQ possible
  - Object initialization syntax
  - Lambda expressions
  - Extension methods
  - Anonymous types
  - Using LINQ queries
    - Obtain the data
    - Create a query
    - Query Syntax
    - Method Syntax
    - Execute the query
  - LINQ Operator
  - Yield return & break

Module 2: Entity Framework Code First (EFCF)
Lessons

- Code First
  - Introducing EF to the Domain Classes
  - Overriding Convention with Configurations
  - Understanding How Model Changes Impact Database Initialization
  - Configuring Code First with the Data Annotation
  - Configuring Code First with the Fluent API
- Using Conventions and Configurations for Property Attributes
  - Working with Property Attributes in Code First
  - Mapping Keys
  - Configuring Database-Generated Properties
  - Configuring TimeStamp/RowVersion Fields for Optimistic Concurrency
  - Configuring Non-Timestamp Fields for Concurrency
  - Mapping to Non-Unicode Database Types
  - Affecting the Precision and Scale of Decimals
  - Working with Complex Types in Code First
  - Configuring Properties of Complex Types
- Using Convention and Configuration for Relationships

- Working with Multiplicity
- Working with Foreign Keys
- Working with Inverse Navigation Properties
- Working with Cascade Delete
- Exploring Many-to-Many Relationships
- Working with Relationships that Have Unidirectional Navigation
- Working with One-to-One Relationships

- Using Conventions and Configurations for Database Mappings
  - Mapping Class Name to Database Table and Schema Name
  - Mapping Property Names to Database Columns
  - Allowing Multiple Entities to Map to a Single Table: aka Table Splitting
  - Mapping a Single Entity Across Multiple Tables
  - Controlling Which Types Get Mapped to the Database
  - Understanding Property Mapping and Accessibility
  - Preventing Properties from Being Included in the Model
  - Mapping Inheritance Hierarchies
    - Working with Code First's Default Inheritance: Table Per Hierarchy (TPH)
    - Configuring Table Per Type (TPT) Hierarchy
    - Configuring for Table Per Concrete Type (TPC) Inheritance
  - Working with Abstract Base Classes
  - Mapping Relationships
- Controlling Database Location, Creation Process, and Seed Data
  - Controlling the Database Location
  - Working with Database Initialization
  - Using Database Initializers to Seed Data
  - Using Database Initialization to Further Affect Database Schema
- Fluent Validation
  - Define Rules
  - Validate Entity
  - Exception Handling