

Entity Framework Syllabus

Overview:

The Microsoft ADO.NET Entity Framework is an Object/Relational Mapping (ORM) framework that enables developers to work with relational data as domain-specific objects and properties, eliminating the need for most of the data access plumbing code that developers usually need to write. Using the Entity Framework, developers issue queries using LINQ, then retrieve and manipulate data as strongly typed objects.

Course Objectives:

- ❖ Understand the EDMX file generation from an existing database.
- ❖ Using Entity Objects with LINQ Queries
- ❖ Performing CRUD Operations using LINQ to Entities
- ❖ Learning and executing Entity SQL Queries
- ❖ Understand the benefits of Eager and Lazy Loading
- ❖ Modelling techniques.

Target Audience:

This course is intended for developers new to Entity Framework and for those who would like to become proficient

Pre-requisite: we should have a basic knowledge of Visual Studio, C# and MS SQL Server

Module 1: Entity Framework Introduction

In this module introduces Entity Framework to absolute beginners. ADO.NET is a very strong framework for data access, and give you below example how to implementing the Framework for accessing data.

- ❖ Entity Framework Introduction and First Example

Module 2: CRUD Operations

In this module learn Performing CURD operations, and will get easy way to build the CURD operations

- ❖ CRUD Operations
- ❖ CRUD Operations with BO Class
- ❖ Stored Procedure Execution

Module 3: Querying Database

We have created EDM, DbContext, and entity classes in the previous sections. Here, you will learn the different types of queries an entity framework supports, which is in turn converted into SQL query for the database.

- ❖ Entity SQL
- ❖ Eager and Lazy Loading Queries

Module 5: Additional Features

We will learn about the new features introduced in Entity Framework 6.0 has introduced many new exciting features for Database-First (designer) and Code-First approaches.

- ❖ Inheritance of Entities
- ❖ Modelling Techniques
- ❖ Modelling Techniques

At the end of the course participants will be able to

1. Understand the differences between database-first and code-first workflows
2. Build a domain model using database-first workflow
3. Use eager loading, lazy loading and explicit loading effectively
4. Add, update and remove objects
5. Understand what the repository pattern is, what and if you need it, and how to implement it
6. Apply best practices with Entity Framework