



Entity Framework

Training Assignment

Document Code	25e-BM/HR/HDCV/FSOFT
Version	1.1
Effective Date	20/11/2012

RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	25/09/2019	Create assignments		TuTB	VinhNV

Contents

Technologies	4
Working Environment	4
Database Relationship	4
Assignment_01	Error! Bookmark not defined.
Create solution and setup environment	Error! Bookmark not defined.
Assignment_02	Error! Bookmark not defined.
Create models.....	Error! Bookmark not defined.
Assignment_03	Error! Bookmark not defined.
Create context.....	Error! Bookmark not defined.
Assignment_04	Error! Bookmark not defined.
Configure Fluent API for the Many-To-Many relationship	Error! Bookmark not defined.
Assignment_05	Error! Bookmark not defined.
Setup Database Initialization Strategy	Error! Bookmark not defined.
Assignment_06	Error! Bookmark not defined.
Create repositories.....	Error! Bookmark not defined.
Assignment_07	Error! Bookmark not defined.
Unit Test	Error! Bookmark not defined.
Assignment_08	Error! Bookmark not defined.
Code-first migration.....	Error! Bookmark not defined.



CODE:	NEFW.A.L001
TYPE:	Long
LOC:	NA
DURATION:	Complete in 3 days

Purpose of Assignments

Use Entity Framework to manage a simple book store.

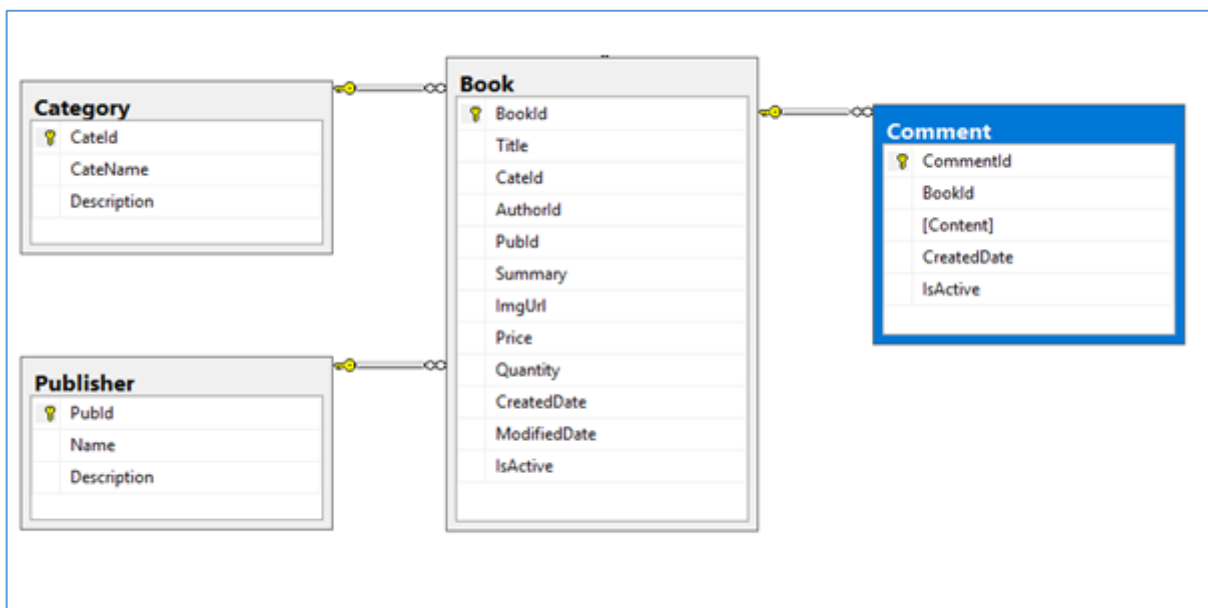
Technologies

- Entity Framework 6.0
- MS .net Framework 4.5
- MS C# 6.0
- Linq
- Repository Design pattern.

Working Environment

- MS SQL Server,
- Visual Studio 2017,

Database Relationship



In this series of assignments, student will use technical points in Entity Framework 6.2 to create, manage a database for the blog.

- ❖ Based on database design, create models and context to generate database
- ❖ Create repositories to manipulate data
- ❖ Use migration to apply changes
- ❖ Create unit test project and test

These assignments should be performed by individuals.

Assignment_01

Create solution and setup environment
Create new blank solution named: **FA.BookStore**

Add new project type Class Library into the solution. Project name: FA.BookStore.Core

Install Entity Framework from Nuget

Estimated time: 10 minutes

Assignment_02

Create models
Add new folder named Models into the project.

Create model class for each object:

- Category
- Publisher
- Book

Configure Data Annotations Attributes for each class/property

Estimated time: 1 hour

Assignment_03

Create context
Create **BookStoreContext** and add appropriate DbSet properties.

Setup Database Initialization Strategy by use CreateDatabaseIfNotExists

Create Seed data: create 3 records for each data table

Estimated time: 30 minutes

Assignment_04

Create repositories
Add new folder Repositories

Inside Repositories folder, create repository for each entity with methods

- Category
 - Find(int categoryId)
 - AddCategory
 - UpdateCategory
 - DeleteCategory
 - GetAllCategories
- Publisher
 - Find
 - AddPublisher
 - UpdatePublisher
 - DeletePublisher

- GetAllPublisher
- Book
 - FindBook(int bookId)
 - AddBook
 - UpdateBook
 - DeleteBook
 - GetAllBook
 - FindBookByTitle(string title)
 - FindBookBySummary(string summary)
 - GetLatestBook(int size)
 - GetBooksByMonth(DateTime monthYear)
 - CountBooksForCategory(string category)
 - GetBooksByCategory(string category)
 - CountBooksForPublisher(string publisher)
 - GetBooksByPublisher(string publisher)

Estimated time: 3 hours

Assignment_05

Test

Create new project named FA.BookStore.Test using project template NUnit

Configure connection string for **BookStoreContext**

Create test case, test data

Run test and check result

Estimated time: 3 hours

Assignment_06

Code-first migration

Enable code-first migration for **BookStoreContext**

Add first migration and update database

Add new entity named **Comment**

Add DbSet for Comment entity

Add migration and update database

Add repository for Comment

- Find(int commentId)
- AddComment
- UpdateComment
- DeleteComment
- GetAllComments
- GetCommentByBook(string bookId)

Add new test case, test data

Run test case and check result

Estimated time: 3 hours

-- THE END --