Step 1: Create a .NET 6 Console Application

1. Create a new .NET 6 console application
2. Install Entity Framework Core Packages
3. Install the required NuGet packages for Entity Framework Core:

dotnet add package Microsoft.EntityFrameworkCore.SqlServer

dotnet add package Microsoft.EntityFrameworkCore.Design

1. Define Your Model Classes (Author and Book)

Author.cs

public class Author

{

public int AuthorId { get; set; }

public string Name { get; set; }

public List<Book> Books { get; set; } = new List<Book>();

}

public class Book

{

public int BookId { get; set; }

public string Title { get; set; }

public int AuthorId { get; set; }

public Author Author { get; set; }

}

1. Create the DbContext

using Microsoft.EntityFrameworkCore;

public class AppDbContext : DbContext

{

public DbSet<Author> Authors { get; set; }

public DbSet<Book> Books { get; set; }

protected override void OnConfiguring(DbContextOptionsBuilder optionsBuilder)

{

// Configure your database provider and connection string

optionsBuilder.UseSqlServer("YourConnectionString");

}

protected override void OnModelCreating(ModelBuilder modelBuilder)

{

// Define relationships

modelBuilder.Entity<Book>()

.HasOne(b => b.Author)

.WithMany(a => a.Books)

.HasForeignKey(b => b.AuthorId)

.OnDelete(DeleteBehavior.Cascade);

}

}

```

1. Write a DataOperation Class

using System;

using System.Collections.Generic;

using System.Linq;

using Microsoft.EntityFrameworkCore;

public class DataOperations

{

private readonly AppDbContext \_context;

public DataOperations(AppDbContext context)

{

\_context = context;

}

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public void AddData()

{

var author = new Author { Name = "John Doe" };

var book = new Book { Title = "Entity Framework Core 101", Author = author };

\_context.Authors.Add(author);

\_context.Books.Add(book);

\_context.SaveChanges();

}

public void QueryData()

{

var authorsWithBooks = \_context.Authors.Include(a => a.Books).ToList();

foreach (var a in authorsWithBooks)

{

Console.WriteLine($"Author: {a.Name}");

foreach (var b in a.Books)

{

Console.WriteLine($"- Book: {b.Title}");

}

}

}

public void DisplayResults()

{

QueryData();

}

}

6. Call in Main Method

using System;

class Program

{

}