

02 Create Table Products

Goal

Create a Products table using a Product model and EF Core.

Step 1. Create the Product model

In the Models folder create Product.cs.

```
1. using System.ComponentModel.DataAnnotations;
2.
3. namespace RTWebApplication.Models
4. {
5.     public class Product
6.     {
7.         public int Id { get; set; }
8.
9.         [Required]
10.        [MaxLength(100)]
11.        public string Name { get; set; } = "";
12.
13.        [Required]
14.        [MaxLength(500)]
15.        public string Description { get; set; } = "";
16.
17.        [Range(0.01, 1000000)]
18.        public decimal Price { get; set; }
19.
20.        [MaxLength(255)]
21.        public string ImageFileName { get; set; } = "";
22.
23.        public DateTime CreatedAt { get; set; } =
24.            DateTime.UtcNow;
25.    }
```

Explanation

Id becomes the primary key automatically.

Required prevents empty input.

MaxLength controls database column size.

Range validates price values.

CreatedAt stores creation time.

Step 2. Add DbSet to ApplicationDbContext

Open ApplicationDbContext.cs and add

```
1. using RTWebApplication.Models;  
2.
```

Then add inside the class

```
1. public DbSet<Product> Products { get; set; }  
2.
```

Full example

```
1. using Microsoft.EntityFrameworkCore;  
2. using RTWebApplication.Models;  
3.  
4. namespace RTWebApplication.Data  
5. {  
6.     public class ApplicationDbContext : DbContext  
7.     {  
8.         public ApplicationDbContext(DbContextOptions<ApplicationDbContext>  
options) : base(options)  
10.        {  
11.        }  
12.  
13.        public DbSet<Product> Products { get; set; }  
14.    }  
15. }  
16.
```

Explanation

DbSet<Product> tells EF Core to create a Products table.

Step 3. Create migration and update database

Run in Package Manager Console

```
1. Add-Migration CreateProductsTable  
2. Update-Database  
3.
```

End result checklist

- Product model exists
- DbSet<Product> added
- Migration created
- Products table appears in database