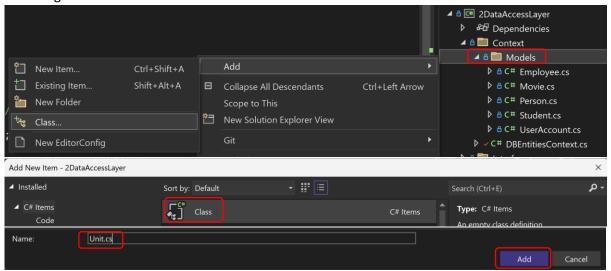
Steps to add end-to-end.

- 1. Add a new entity class in the Models folder under the Data Access Layer.
 - Right-click on the Models folder.
 - Add > Class
 - Change the name to "Unit.cs" and click Add.



2. Add the following -

```
public class Unit
{
    public int UnitId { get; set; } // int
    public string UnitCode { get; set; } // nvarchar(400)
    public string UnitName { get; set; } // nvarchar(400)
}
```

```
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DataAccesslayer

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```

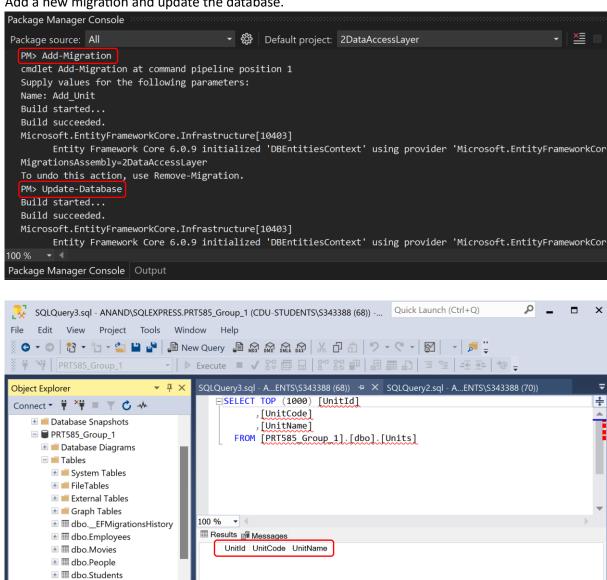
3. Add context.

public DbSet<Unit> Units { get; set; }

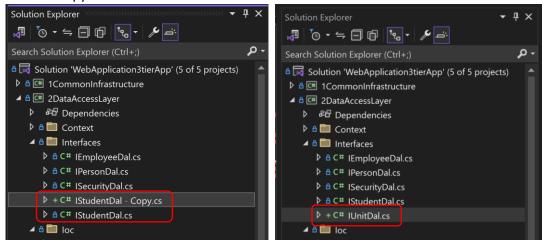
```
3 0 · ⇒ 3 6 7 · > 3
 treferences
public DBEntitiesContext(DbContextOptions<DBEntitiesContext> options) : base(options)
public DbSet<Person> People { get; set; }
public DbSet<Unit> Units { get; set; }
  ublic DbSet<Employee> <mark>Employees {</mark>    get;    set;
```

4. Add a new migration and update the database.

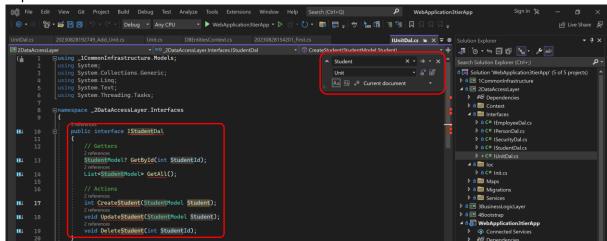
 \blacksquare dbo.SystemActionUserAcco



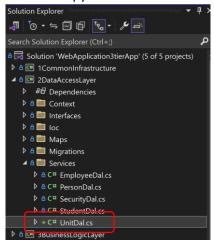
5. Create a copy of "IStudentDal.cs" in the Interfaces folder under DAL and rename it "IUnitDal.cs".



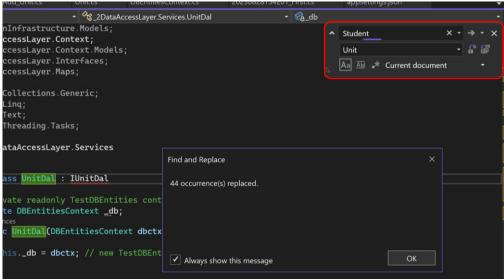
Replace all the words "Student" with "Unit".



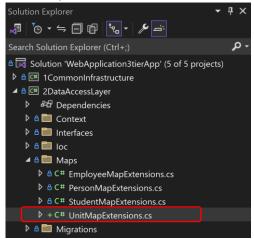
6. Create a copy of "StudentDal.cs" in the Services folder under DAL and rename it "UnitDal.cs".



Replace all the words "Student" with "Unit".



7. Create a copy of "StudentMapExtensions.cs" in the Maps folder under DAL and rename it "UnitMapExtensions.cs".



Replace all the words "Student" with "Unit". And add the following - dst.UnitCode = src.UnitCode;

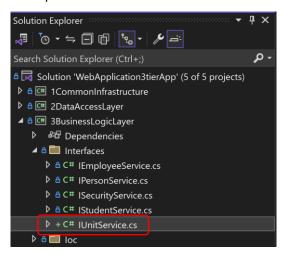
 Open "Init.cs" from the loc folder under DAL. Add the following services. AddScoped<IUnitDal, UnitDal>();

```
▶ ♣☐ Dependencies
public static class Init

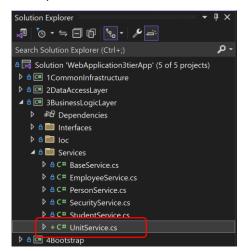
■ 6   Context

                                                                                                                                                                                                                    ▶ 8 ■ Models
                                                                                                                                                                                                                      ▶ ✓ C# DBEntitiesContext.cs
      public static void InitializeDependencies(IServiceCollection services, IConfiguration configuration)
                                                                                                                                                                                                                 ▶ 🗈 🛅 Interfaces
             //services.AddScoped<IAuditDal, AuditDal>();
//services.AddScoped<IApplicationLogDal, ApplicationLogDal>();
//services.AddScoped<IAuthDal, AuthDal>();
//services.AddScoped<ICodeDal, CodeDal>();
                                                                                                                                                                                                                ⊿ 8 🛅 loc
                                                                                                                                                                                                                 P 🗂 🔲 Maps
                                                                                                                                                                                                                  ▶ a ■ Migrations
             //services.AddScoped<IConfigurationDal, ConfigurationDal>();
//services.AddScoped<IDocumentDataDal, DocumentDataDal>();
//services.AddScoped<IDocumentDataTempDal, DocumentDataTempDal>();
//services.AddScoped<IUserDal, UserDal>();
                                                                                                                                                                                                                 ▶ a ■ Services
                                                                                                                                                                                                              🗸 🔓 💷 3BusinessLogicLayer
                                                                                                                                                                                                                 Dependencies
                                                                                                                                                                                                                  ▲ 6 Interfaces
           services.AddScoped<IPersonDal, PersonDal>();
services.AddScoped<IStudentDal, StudentDal>();
services.AddScoped<IEmployeeDal, EmployeeDal>();
services.AddScoped<IUnitDal, UnitDal>();
                                                                                                                                                                                                                     ▶ & C# IEmployeeService.cs
                                                                                                                                                                                                                      ▶ 8 C# ISecurityService.cs
                                                                                                                                                                                                                      ▶ B C# IStudentService.cs
             services.AddScoped<ISecurityDal, SecurityDal>();
```

- 9. Repeat the steps in the Business Logic Layer (BLL).
 - Create a copy of "IStudentService.cs" in the Interfaces folder under BLL and rename it "IUnitService.cs".
 - Replace all the words "Student" with "Unit".



- Create a copy of "StudentService.cs" in the Services folder under BLL and rename it "UnitService.cs".
- Replace all the words "Student" with "Unit".



 Open "Init.cs" from the loc folder under BLL. Add the following services. AddScoped<IUnitService, UnitService>();

```
3 6 · ≒ ∃ ⊕ % · ⊁ ≓
using _BlusinessLogicLayer.Interfaces;
using _BlusinessLogicLayer.Services;
using Microsoft.Extensions.Configuration;
using Microsoft.Extensions.DependencyInjection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           △ 🗔 Solution 'WebApplication3tierApp' (5 of 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ▶ a ☐ 1CommonInfrastructure

▲ BusinessLogicLaver

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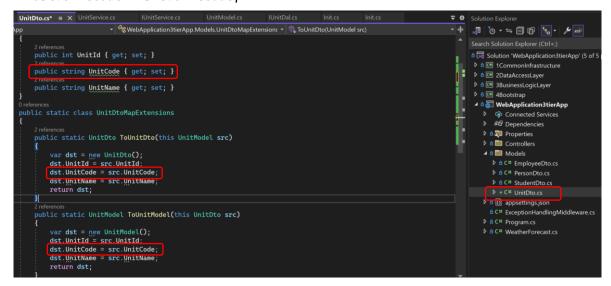
6 BusinessLogicLaver

7 BusinessLogicLaver

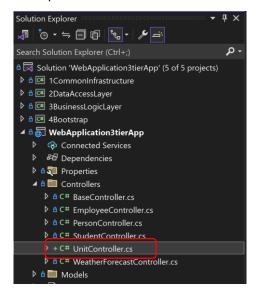
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8 BusinessLogicLav
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D & Dependencies
D & Dependencies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ⊿ a 🛅 loc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ▶ ✓ C# Init.cs
                                                          blic static void InitializeDependencies(IServiceCollection services, IConfiguration configuration)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D Connected Service
D ₽₽ Dependencies
                                                                     // Services
services.AddScoped<IPersonService, PersonService>();
services.AddScoped<IStudentService, StudentService>();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pa Properties
Controllers
                                                            services.AddScoped<IEmployeeService, EmployeeService();
services.AddScoped<IUnitService, UnitService();
services.AddScoped<ISecurityService, SecurityService();
//services.AddScoped<ICategoryService, CategoryService()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ▶ a ■ Models
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D appsettings.json
```

- 10.Create a copy of "StudentDto.cs" in the Models folder under WebApplication3tierApp and rename it "UnitDto.cs".
 - Replace all the words "Student" with "Unit".
 - Add the following in public class UnitDto public string UnitCode { get; set; }
 - Add the following in public static class UnitDtoMapExtensions dst.UnitCode = src.UnitCode;



- 11.Create a copy of "StudentController.cs" in the Controllers folder under WebApplication3tierApp and rename it "UnitController.cs".
 - Replace all the words "Student" with "Unit".



12.Create a copy of "StudentModel.cs" in the Models folder under the Common Infrastructure Layer and rename it "UnitModel.cs".

```
A Solution 'WebApplication3tierApp' (5 of 5 projects)

A A C 1CommonInfrastructure

Dependencies

Dependencies

Dependencies

Dependencies

A Dependencies

A Dependencies

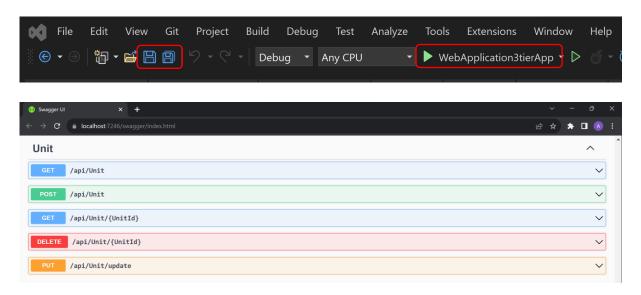
Dependencie
```

Add the following –

```
public class UnitModel
{
    public int UnitId { get; set; } // int
    public string UnitCode { get; set; } // nvarchar(400)
    public string UnitName { get; set; } // nvarchar(400)
}
```

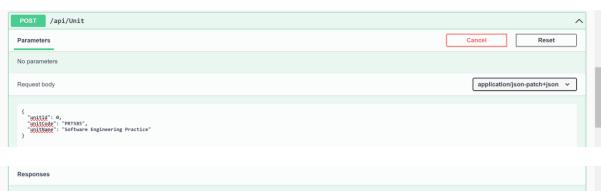
```
pnamespace _1CommonInfrastructure.Models
{
    23 references
    public class UnitModel
    {
        6 references
        public int UnitId { get; set; } // int
        4 references
        public string UnitCode { get; set; } // nvarchar(400)
        4 references
        public string UnitName { get; set; } // nvarchar(400)
```

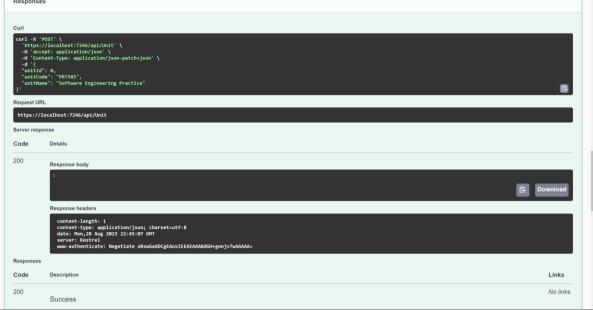
13. Save the project and run the app.



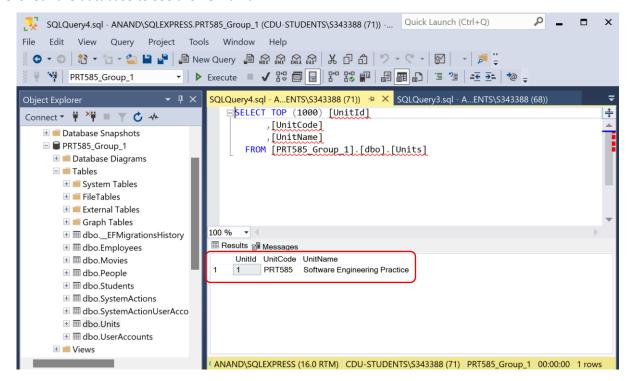
14. Make a request.

- Expand the **POST Student** endpoint.
- Click **Try it out**.
- Add unit code and unit name.
- Execute.





15. Check the database to see the new unit.



16. Next step – Use Angular on the client side to perform CRUD operations.

https://www.youtube.com/watch?v=CdE6rVfPJ9I&t=130s