BTK AKADEMİ

Asp.Net ile Web Programlama

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BTK AKADEMİ

Bölüm 7

EF Core ile CRUD

Giriş

İçerik

- EntityFramework Core Kurulumları
- DbContext ve DbSet
- IEntityTypeConfiguration
- ModelBuilder
- Fluent API
- ToTable, HasKey, Property, HasIndex, HasData
- Migrations
- Development ve Production Yapılandırması

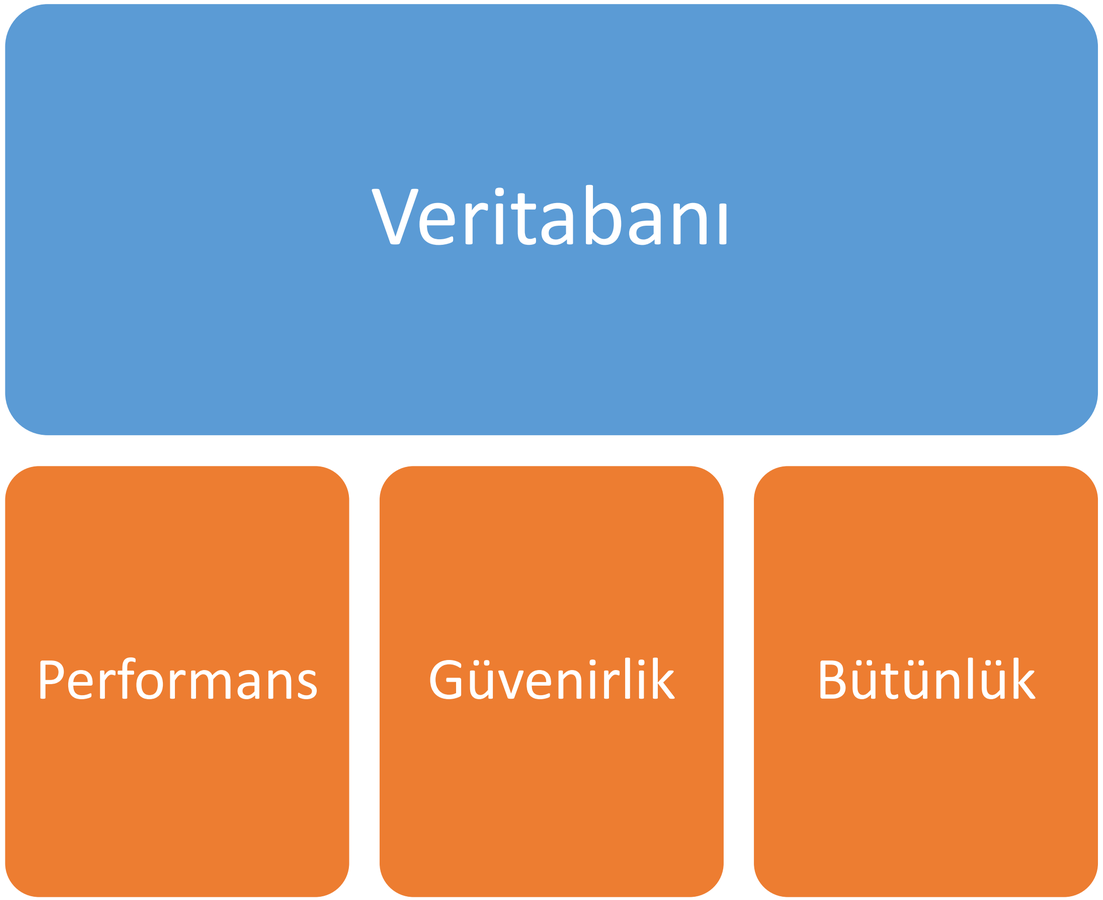
Veritabanı

Modern yazılım için temel bileşen

Dosya sistemlerine göre üstünlük

Performans, güvenilirlik ve bütünlük

Sürdürülebilirlik ve ölçeklenebilirlik



Veritabanı Bileşenleri

- Tablo
- Satır
- Sütun

Komut seti

- DDL
- DML
- DCL

Razor Pages

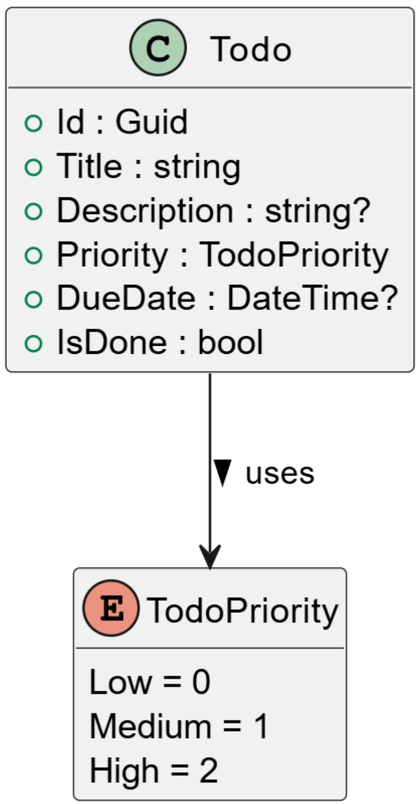
Fluent API

- Programatik model yapılandırma
- Esnek ve merkezi yönetim
- Karmaşık ilişkiler desteği
- Veritabanı bağımsızlığı
- İleri seviye özellikler

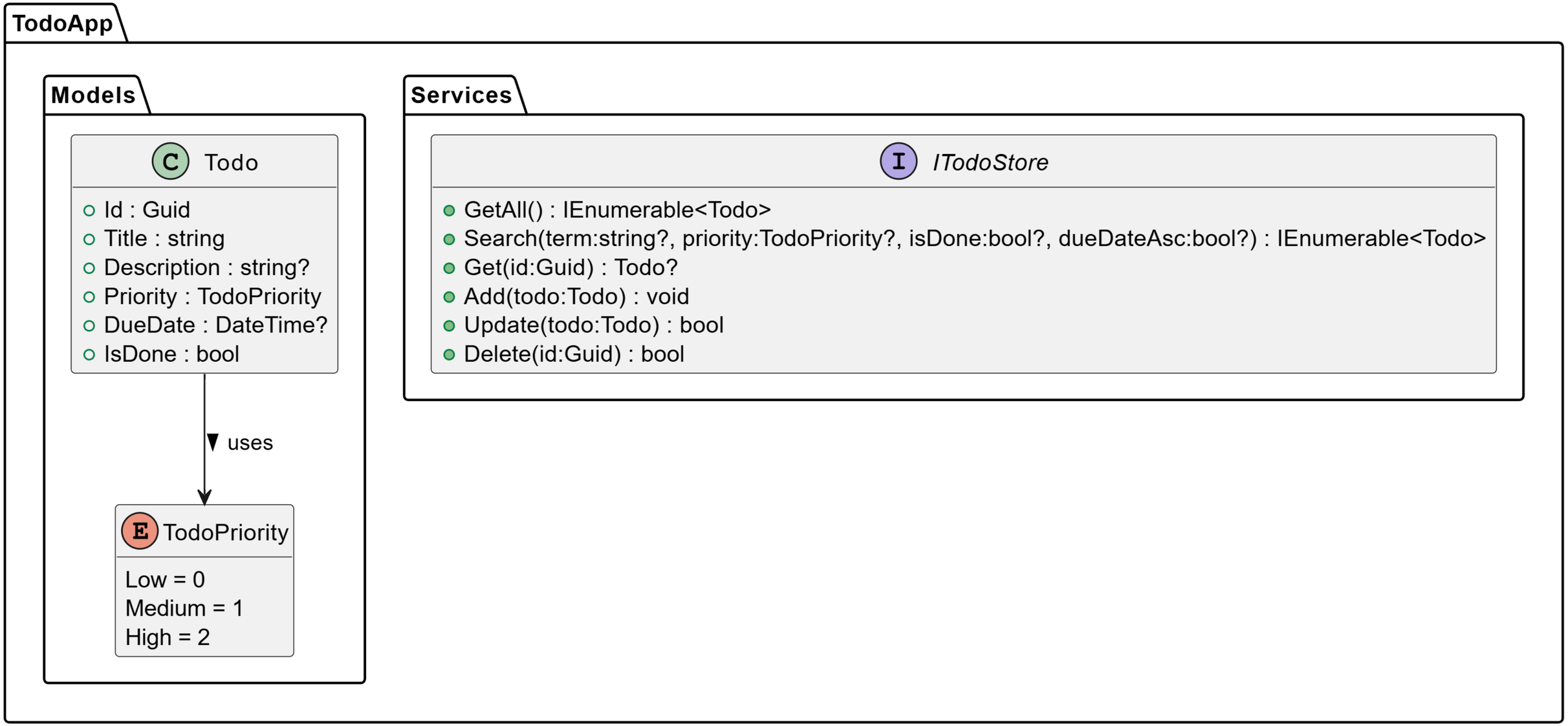
```
builder.ToTable("Todos");
        builder.HasKey(x => x.Id);

        builder.Property(x => x.Title)
            .IsRequired()
            .HasMaxLength(200);

        builder.Property(x => x.Description)
            .HasMaxLength(1000);

        builder.Property(x => x.Priority)
            .HasConversion<int>()
            .HasDefaultValue(TodoPriority.Low)
            .IsRequired();

        builder.Property(x => x.DueDate);
        builder.Property(x => x.IsDone)
            .HasDefaultValue(false)
            .IsRequired();
```

Models

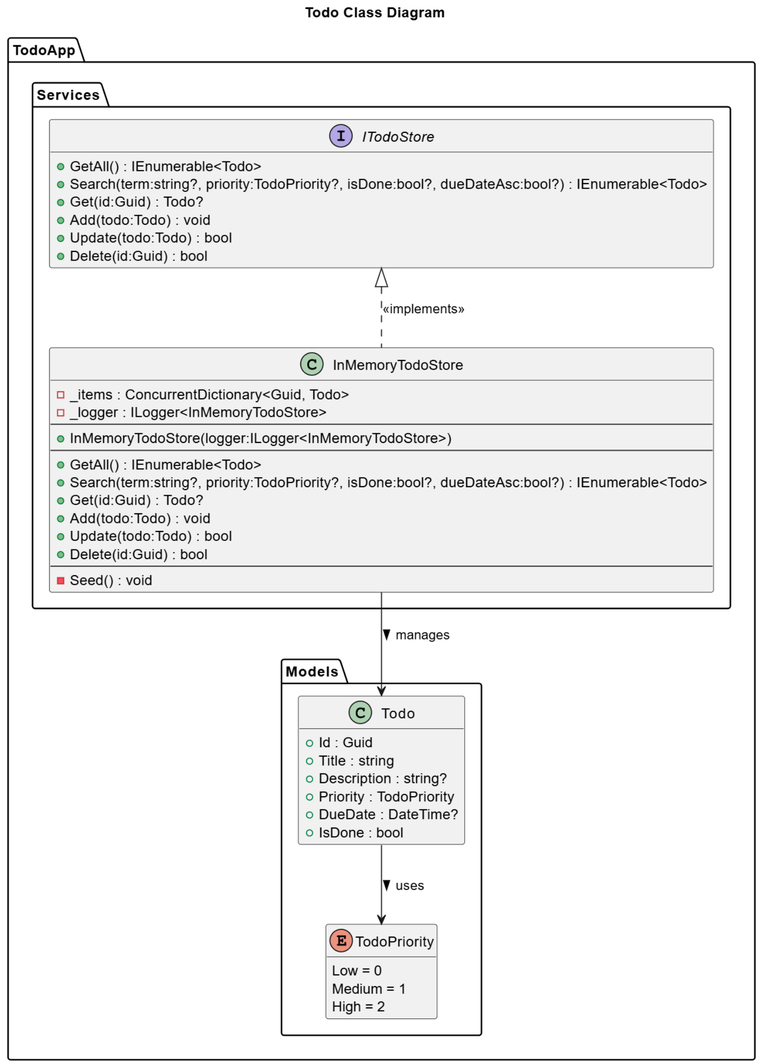
Todo Class Diagram



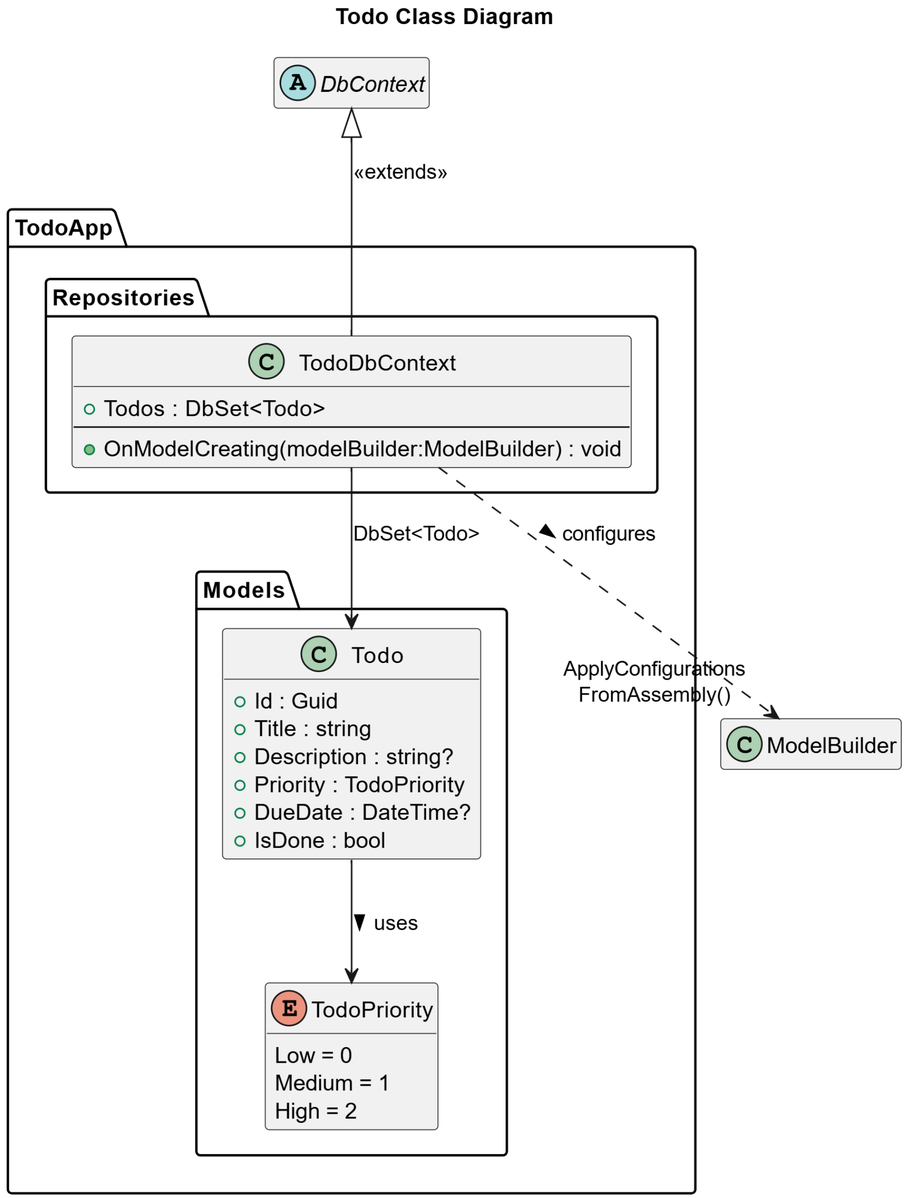
Todo Class Diagram



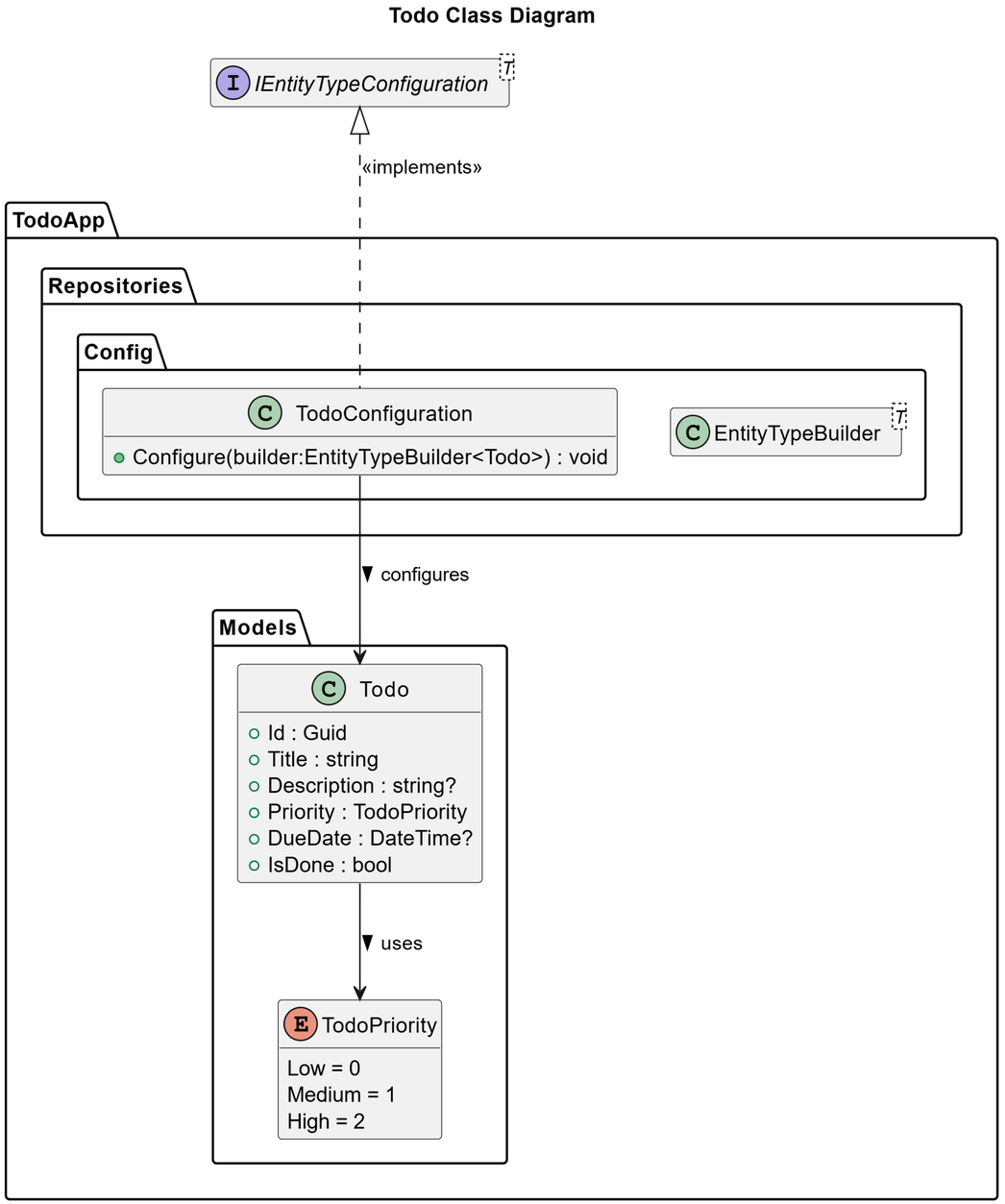
Models ve Services



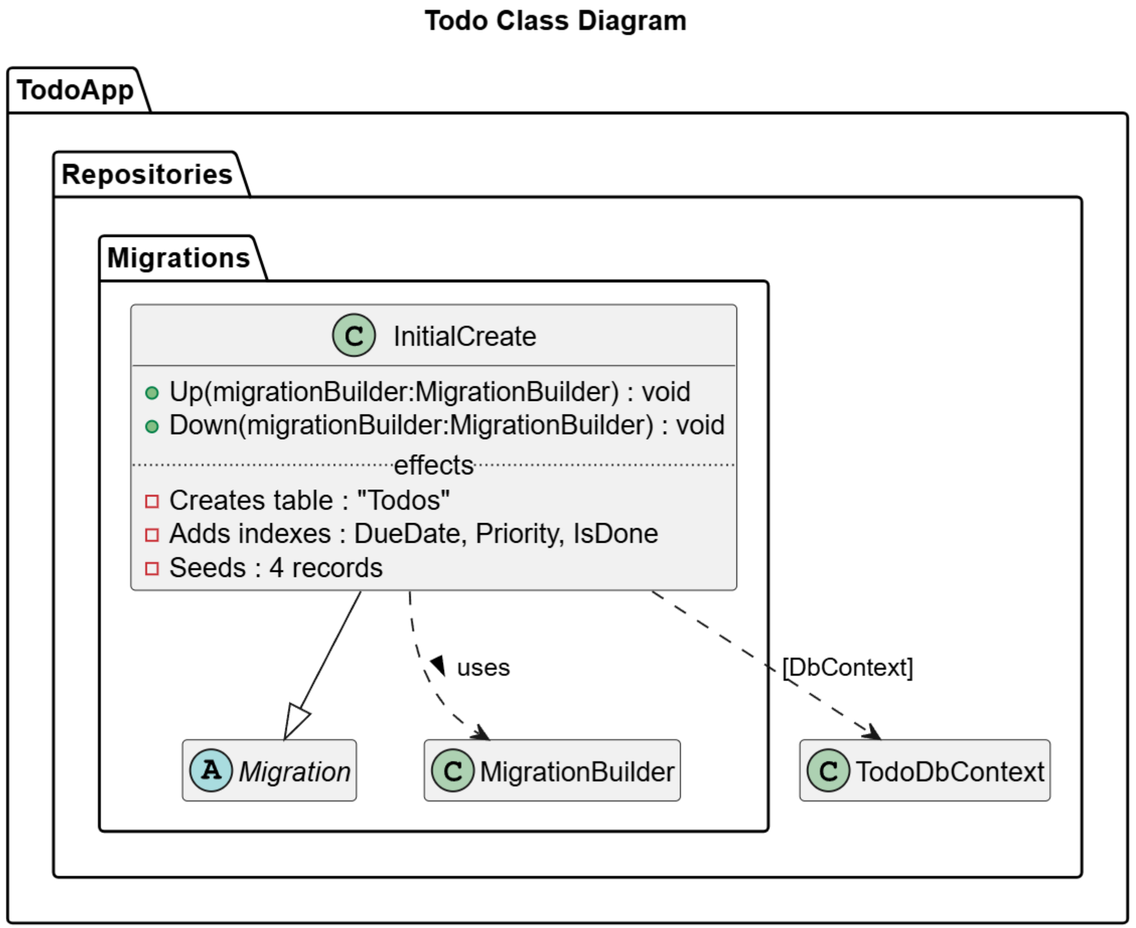
DbContext


Todo Class Diagram
DbContext
«extends»
TodoApp
Repositories
TodoDbContext
Todos : DbSet<Todo>
OnModelCreating(modelBuilder:ModelBuilder) : void
DbSet<Todo>
configures
Models
Todo
Id : Guid
Title : string
Description : string?
Priority : TodoPriority
DueDate : DateTime?
IsDone : bool
uses
TodoPriority
Low = 0
Medium = 1
High = 2
ApplyConfigurations
FromAssembly()
ModelBuilder

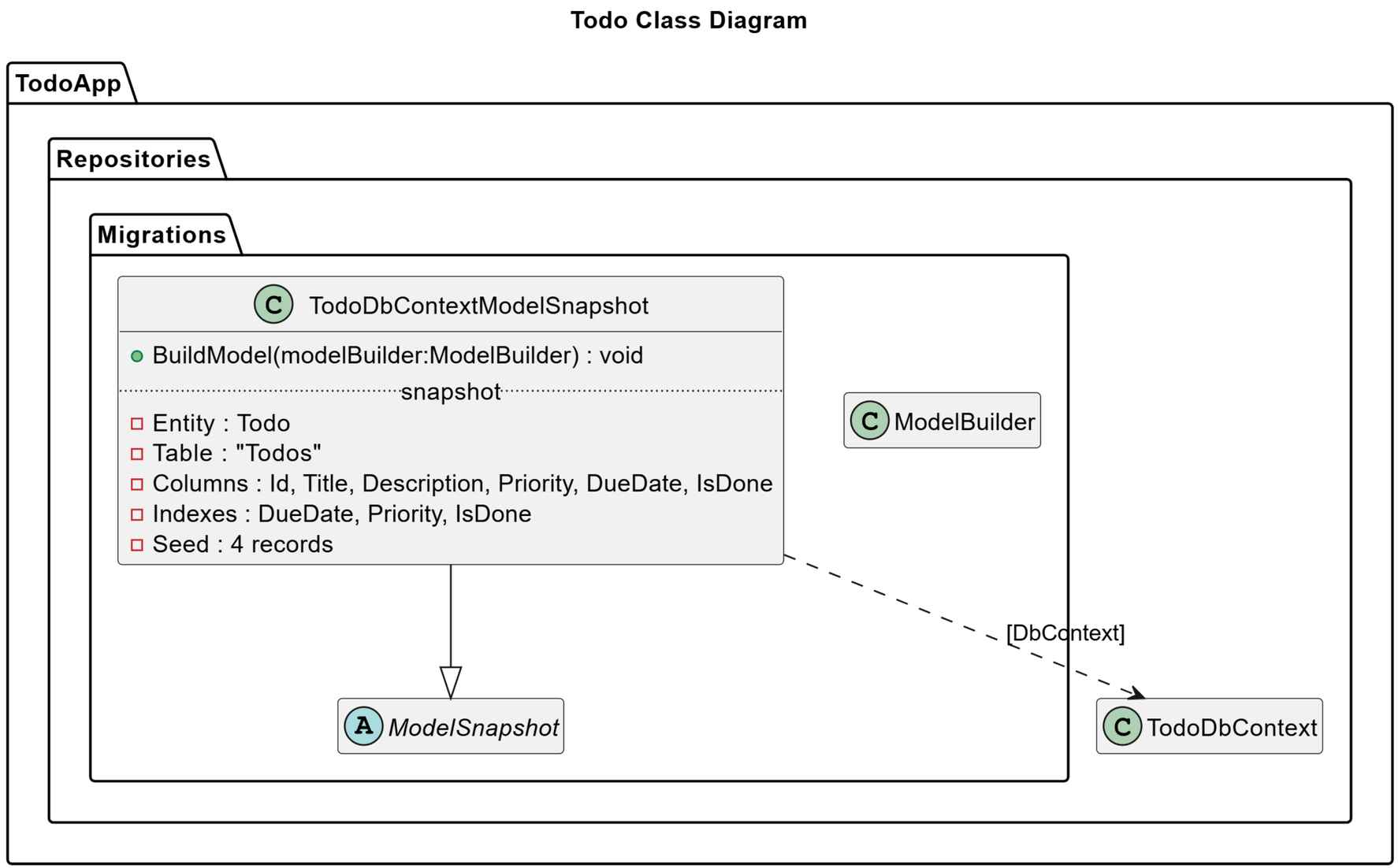
EntityTypeBuilder



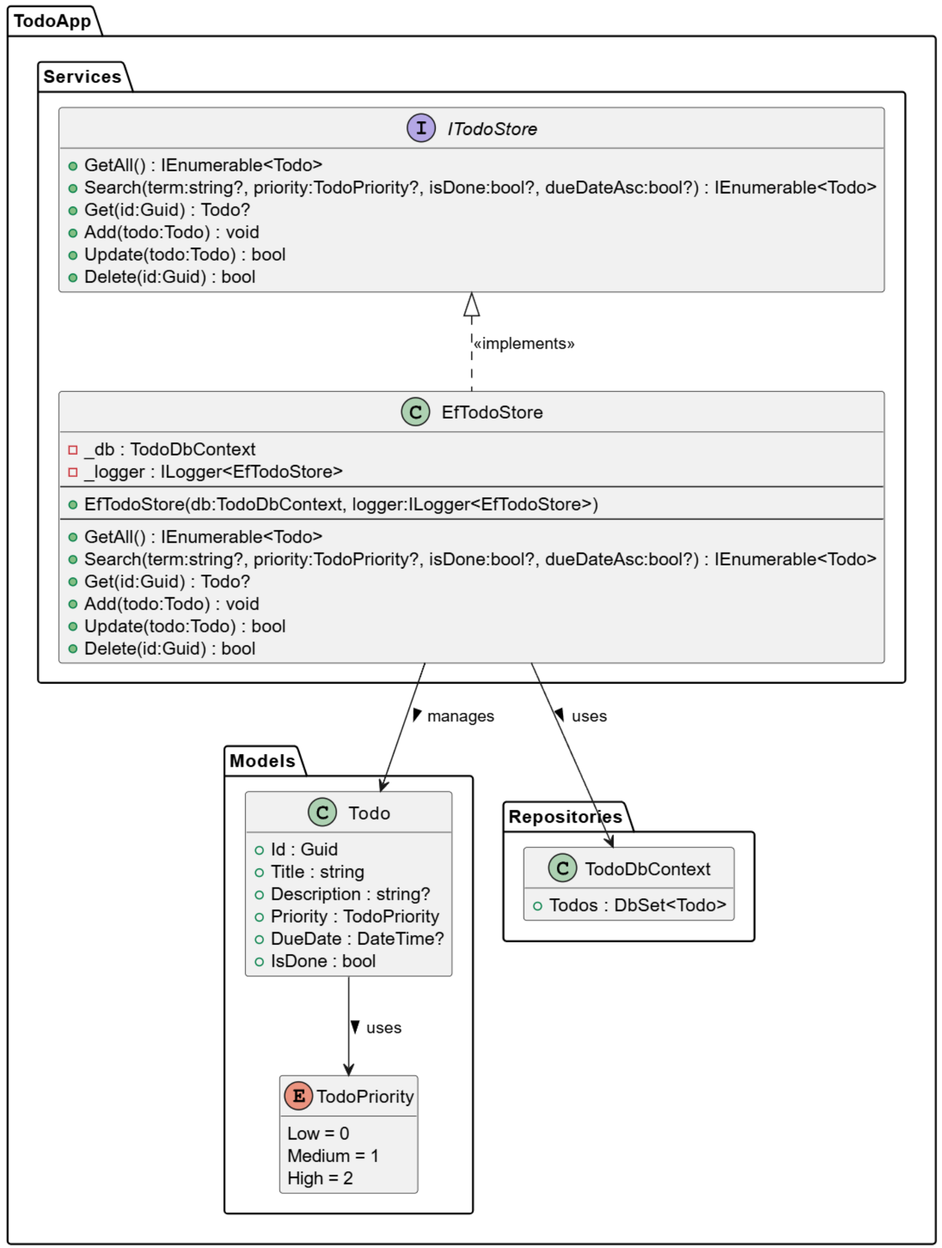
Migrations


Todo Class Diagram
TodoApp
Repositories
Migrations
InitialCreate
Up(migrationBuilder:MigrationBuilder) : void
Down(migrationBuilder:MigrationBuilder) : void
effects
Creates table : "Todos"
Adds indexes : DueDate, Priority, IsDone
Seeds : 4 records
uses
[DbContext]
Migration
MigrationBuilder
TodoDbContext

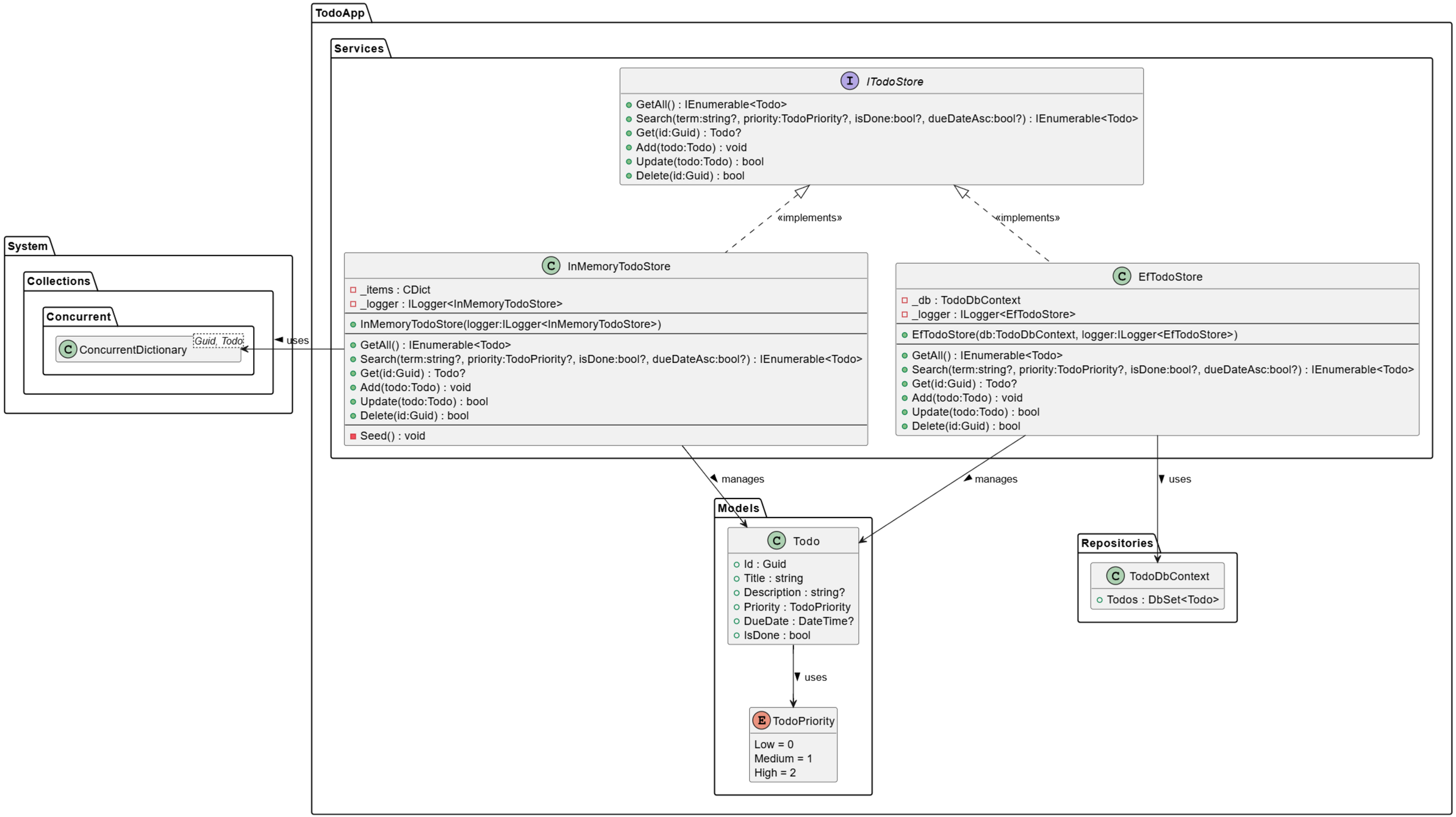
Migrations


Todo Class Diagram
TodoApp
Repositories
Migrations
TodoDbContextModelSnapshot
BuildModel(modelBuilder:ModelBuilder) : void
snapshot
Entity : Todo
Table : "Todos"
Columns : Id, Title, Description, Priority, DueDate, IsDone
Indexes : DueDate, Priority, IsDone
Seed : 4 records
ModelBuilder
[DbContext]
ModelSnapshot
TodoDbContext

EfTodoStore

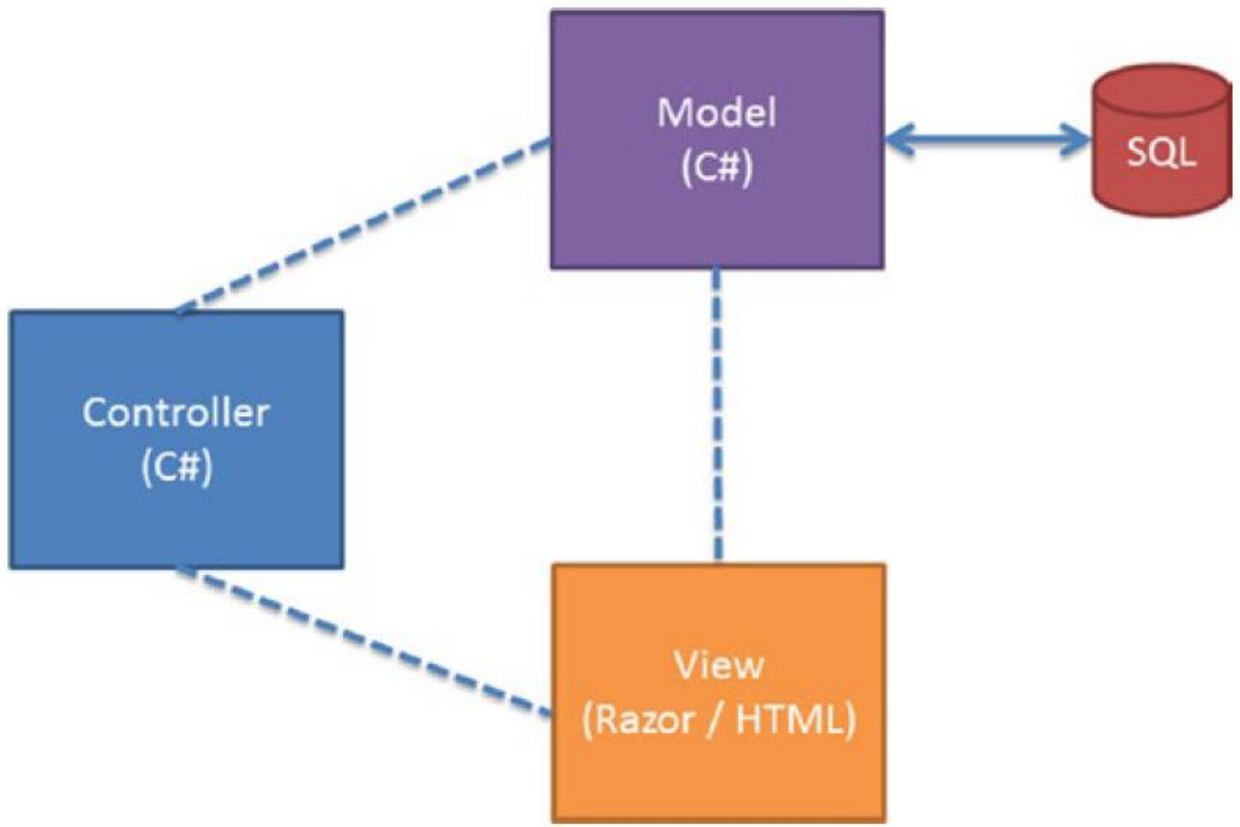


Todo Class Diagram



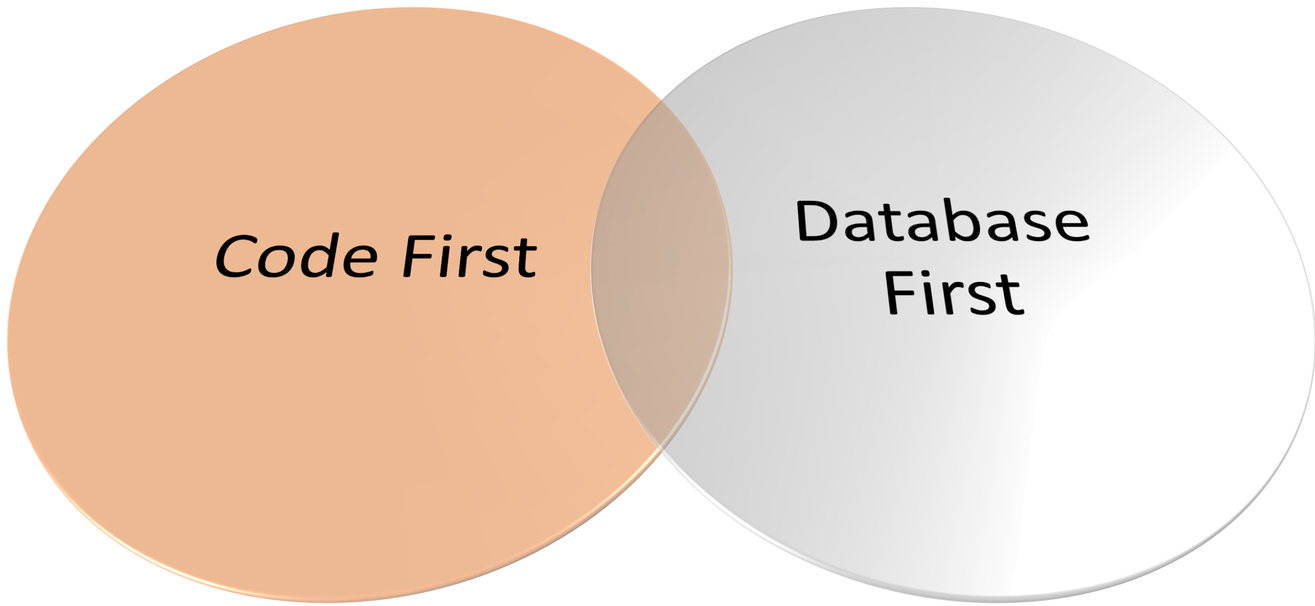
MVC

- MVC, mimarisel bir tasarım desenidir.



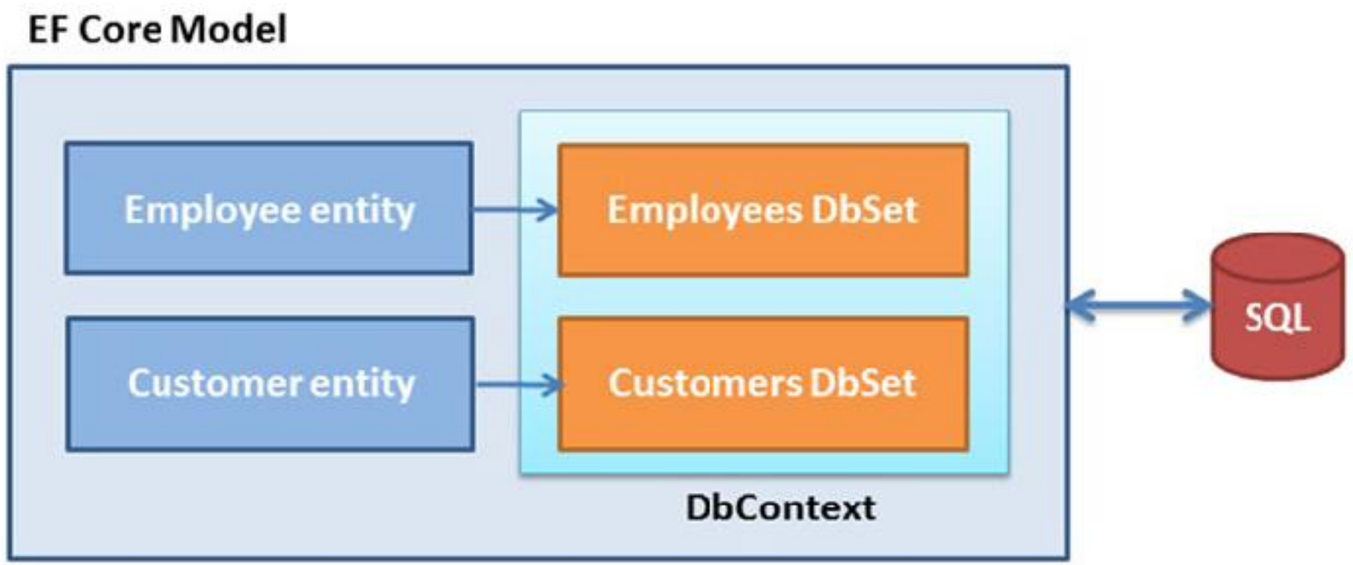
https://learn.microsoft.com/en-us/nuget/what-is-nuget

EF Core



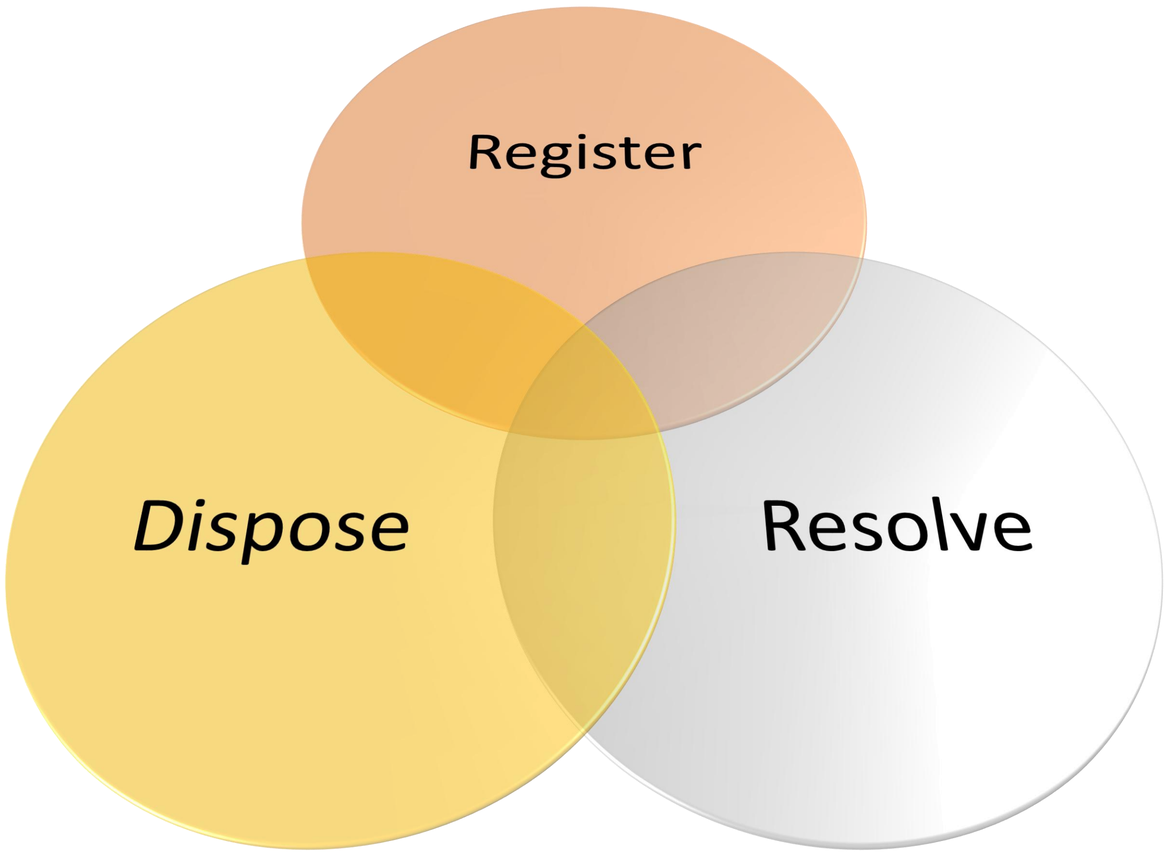
https://learn.microsoft.com/en-us/ef/core/

DbContext



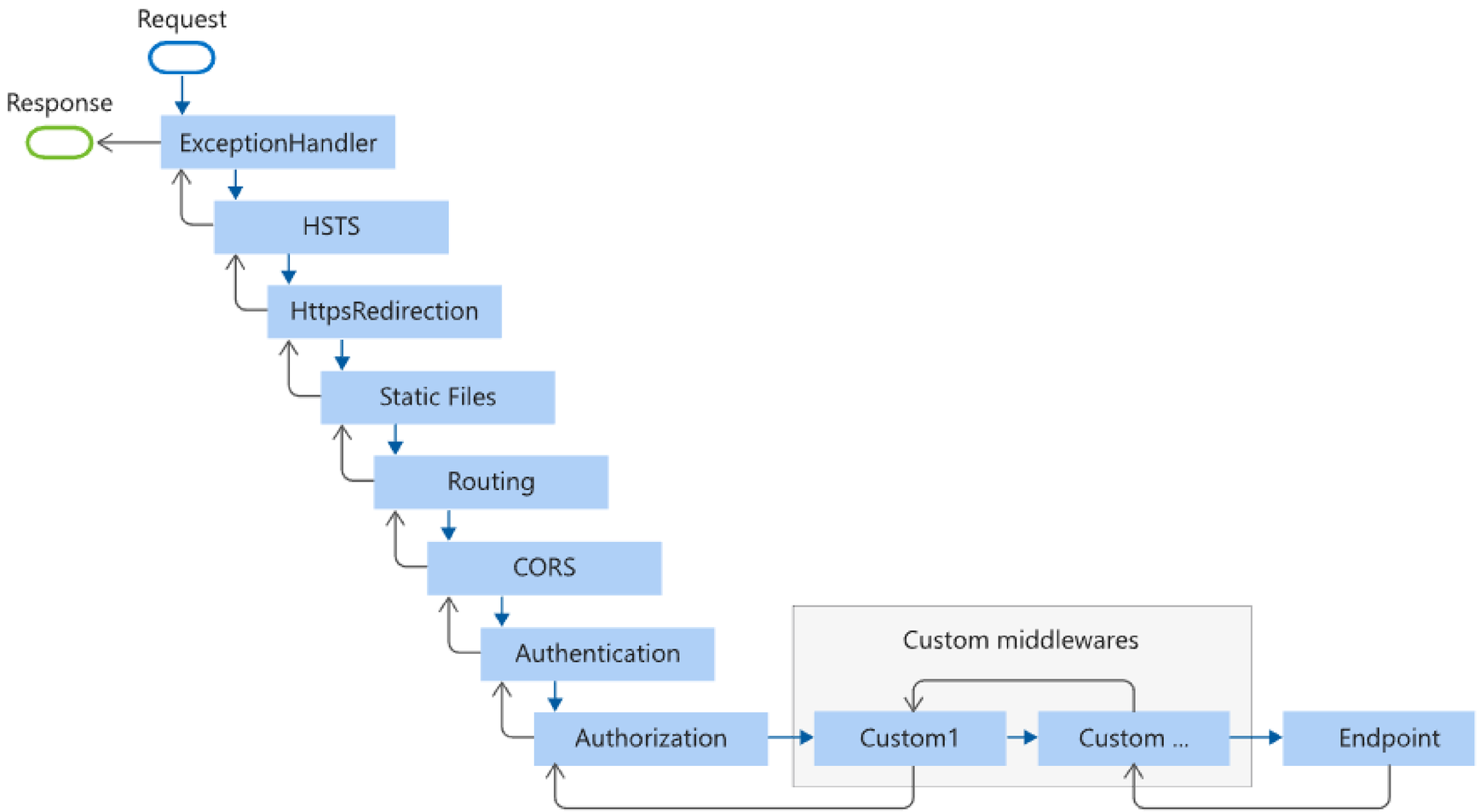
https://learn.microsoft.com/en-us/ef/core/

Dependency Injection

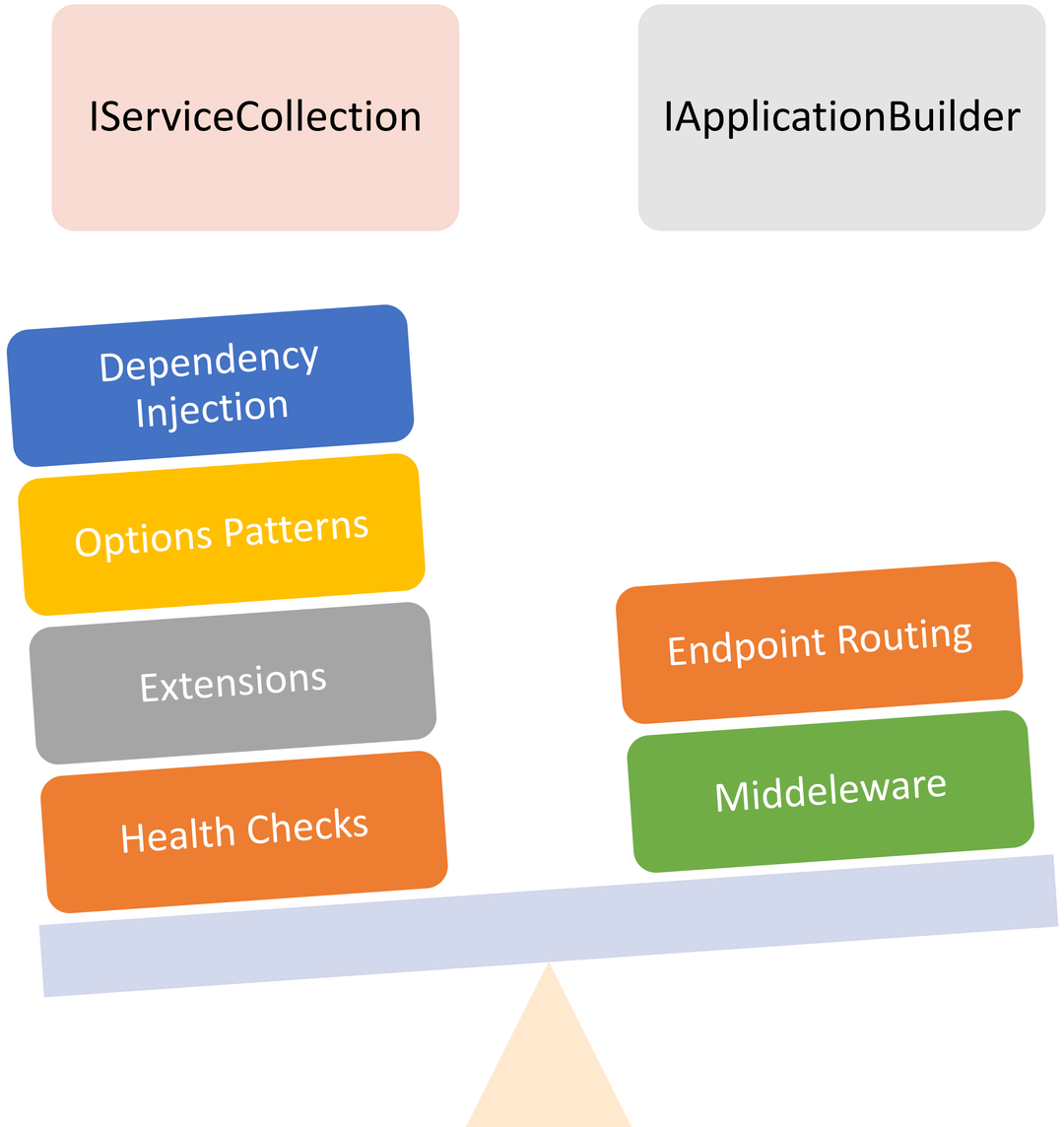


https://learn.microsoft.com/en-us/aspnet/core/fundamentals/dependency-injection?view=aspnetcore-7.0

Pipeline

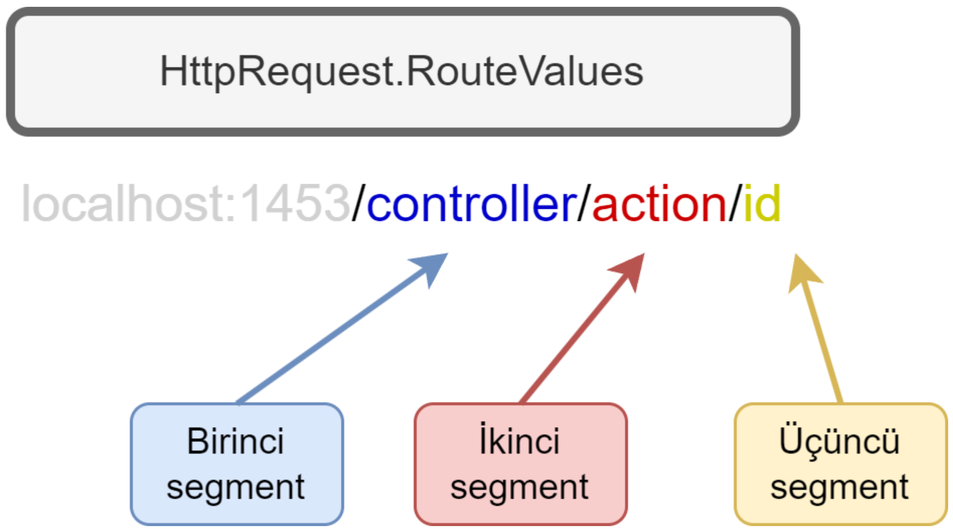


https://learn.microsoft.com/en-us/aspnet/core/fundamentals/middleware/?view=aspnetcore-7.0

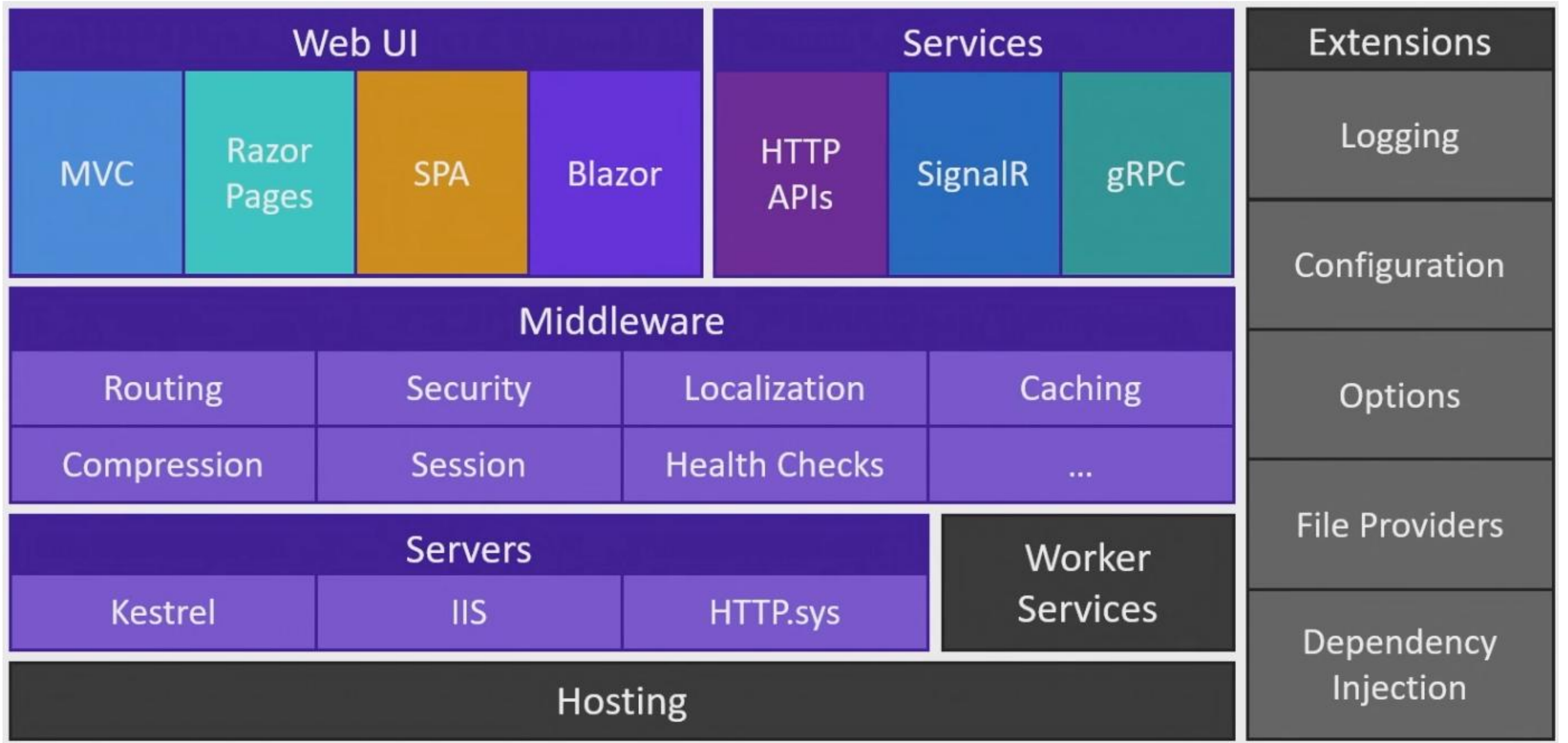


IServiceCollection’da Servisler Dependency Injection ile yönetilir. IApplicationBuilder ise Middleware zincirleri kurmak için kullanılır.

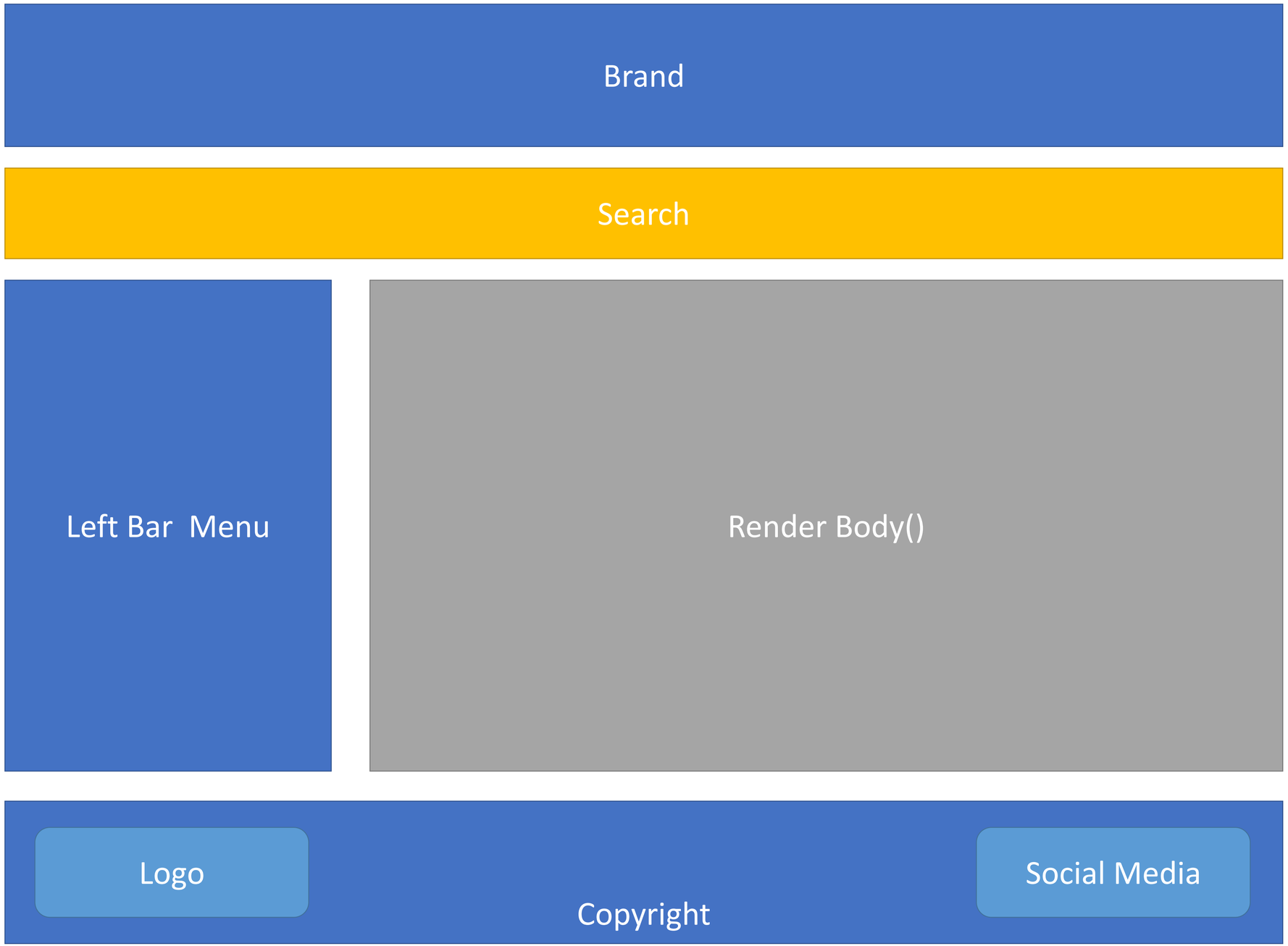
Routing



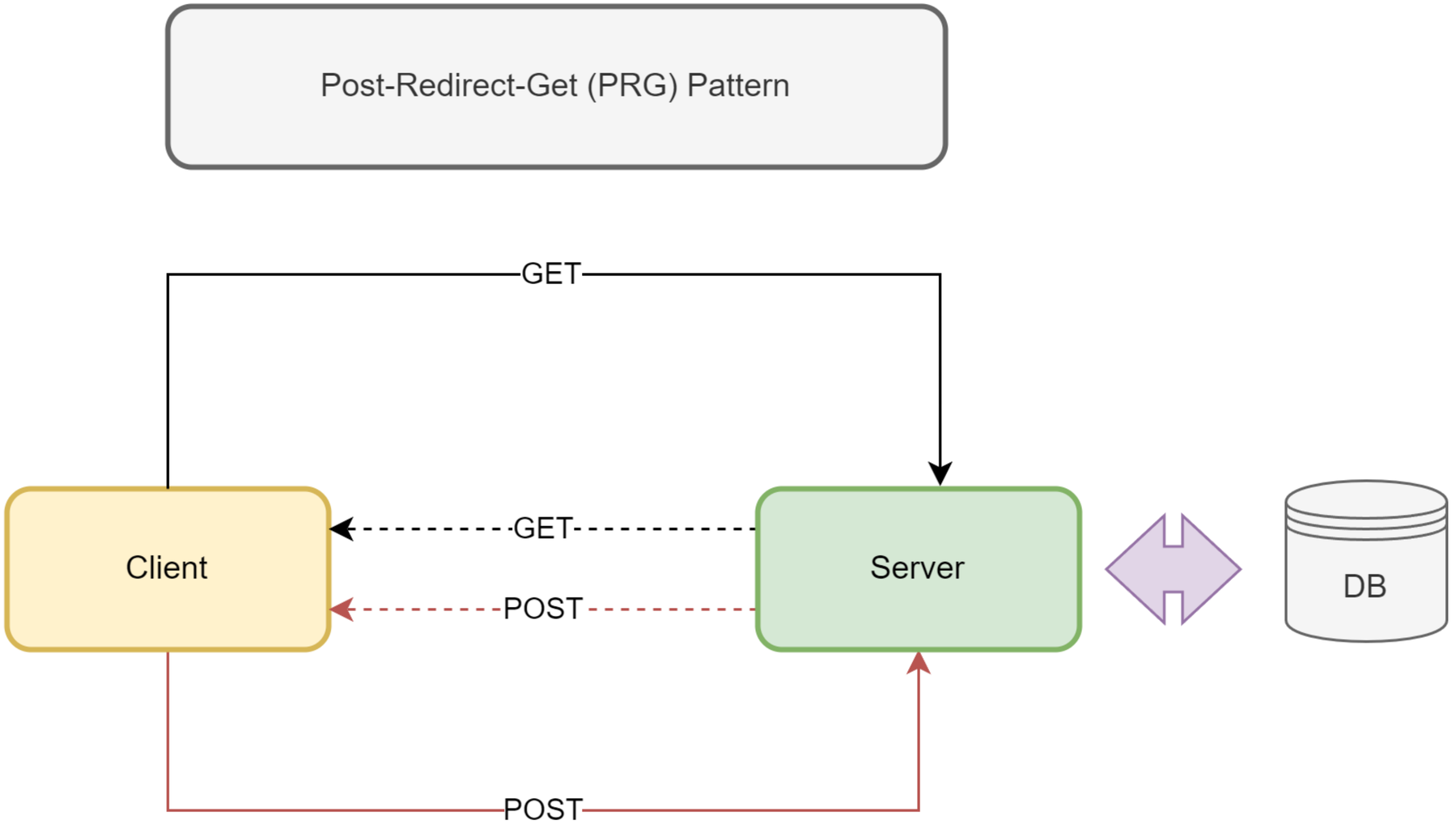

```
1  app.MapControllerRoute(
2      name: "default",
3      pattern: "{controller=Home}/{action=Index}/{id?}")
4      .WithStaticAssets();
```


Web UI
MVC
Razor Pages
SPA
Blazor
Services
HTTP APIs
SignalR
gRPC
Extensions
Logging
Configuration
Options
File Providers
Dependency Injection
Middleware
Routing
Security
Localization
Caching
Compression
Session
Health Checks
...
Servers
Kestrel
IIS
HTTP.sys
Worker Services
Hosting

*


Brand
Search
Left Bar Menu
Render Body()
Logo
Copyright
Social Media

PRG Pattern


Post-Redirect-Get (PRG) Pattern
GET
Client
GET
Server
DB
POST
POST

Teşekkürler

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Öğretim Üyesi