

Creating the Infrastructure Project



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Overview

Understanding the goal of the infrastructure projects

Adding Entity Framework Core 6

Implementing other infrastructure tasks

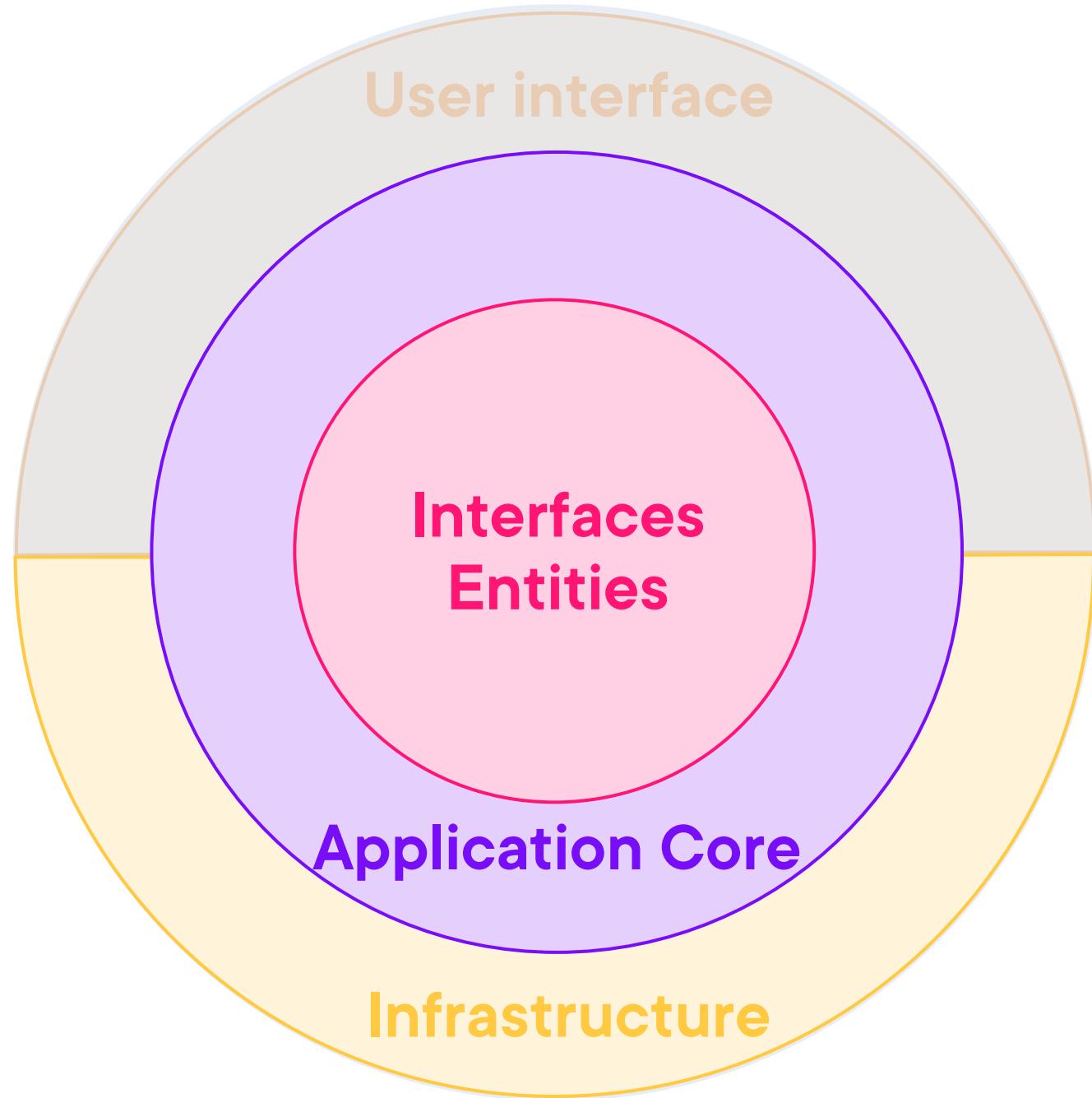




Understanding the Goal of the Infrastructure Projects



The Infrastructure Layer

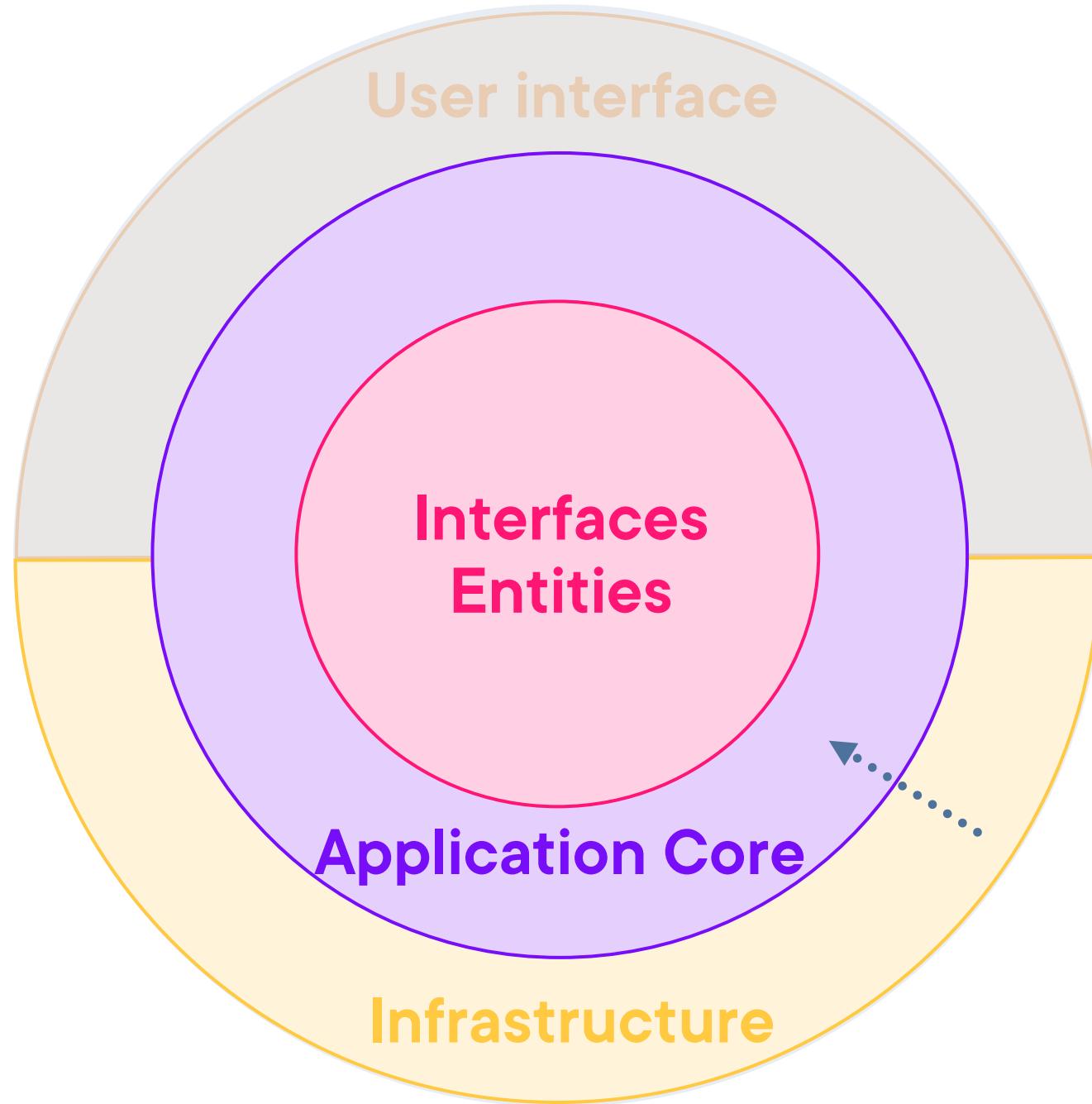


All external or I/O components

- Database
 - EF Core
 - DbContext
- Files
- Service bus
- Service client
- Logging



The Infrastructure Layer

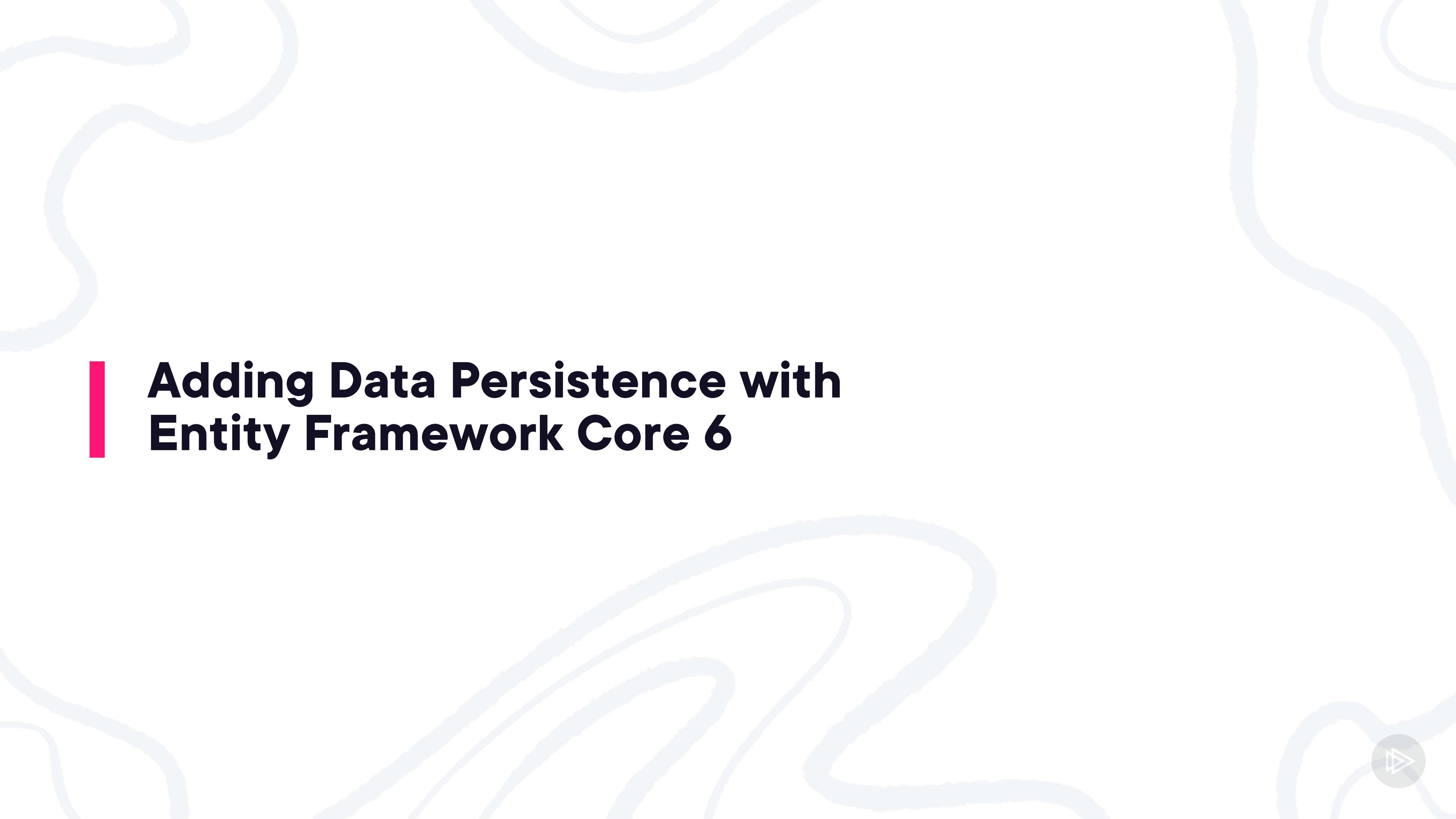


Implementations for contracts defined in the Core project

Reference to Core project

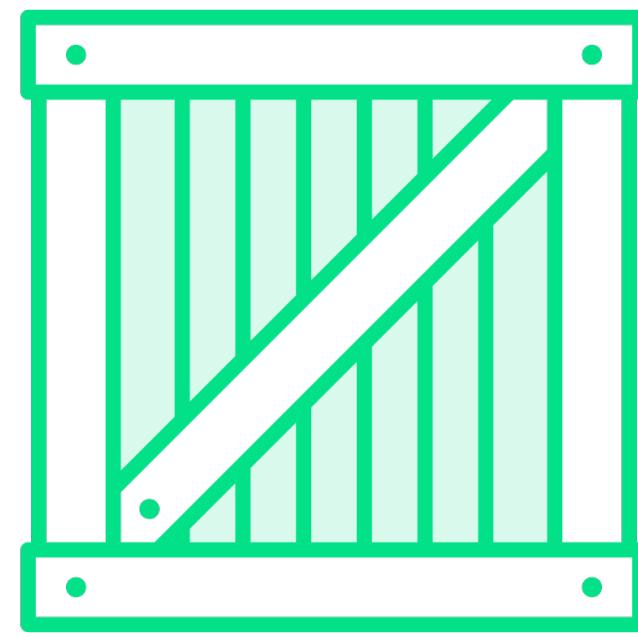
- Through dependency inversion and dependency injection, services get implemented





Adding Data Persistence with Entity Framework Core 6

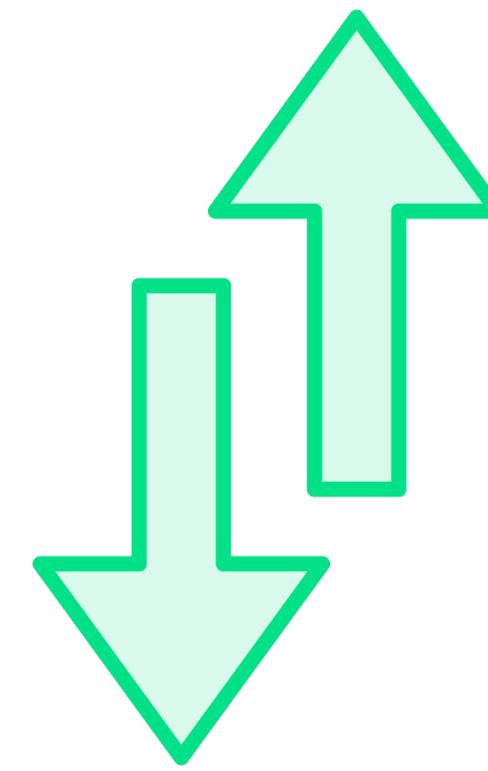
Adding EF Core



NuGet packages



DbContext



Migrations



Registrations





Repository implementations

Generic repository contract in Core
project

Base repository implementation

Specific repositories if needed



Base Repository

```
public class BaseRepository<T> : IAsyncRepository<T> where T : class
{
    protected readonly GloboTicketDbContext _dbContext;
    public BaseRepository(GloboTicketDbContext dbContext)
    {
        _dbContext = dbContext;
    }
    public virtual async Task<T> GetByIdAsync(Guid id)
    {
        return await _dbContext.Set<T>().FindAsync(id);
    }
}
```

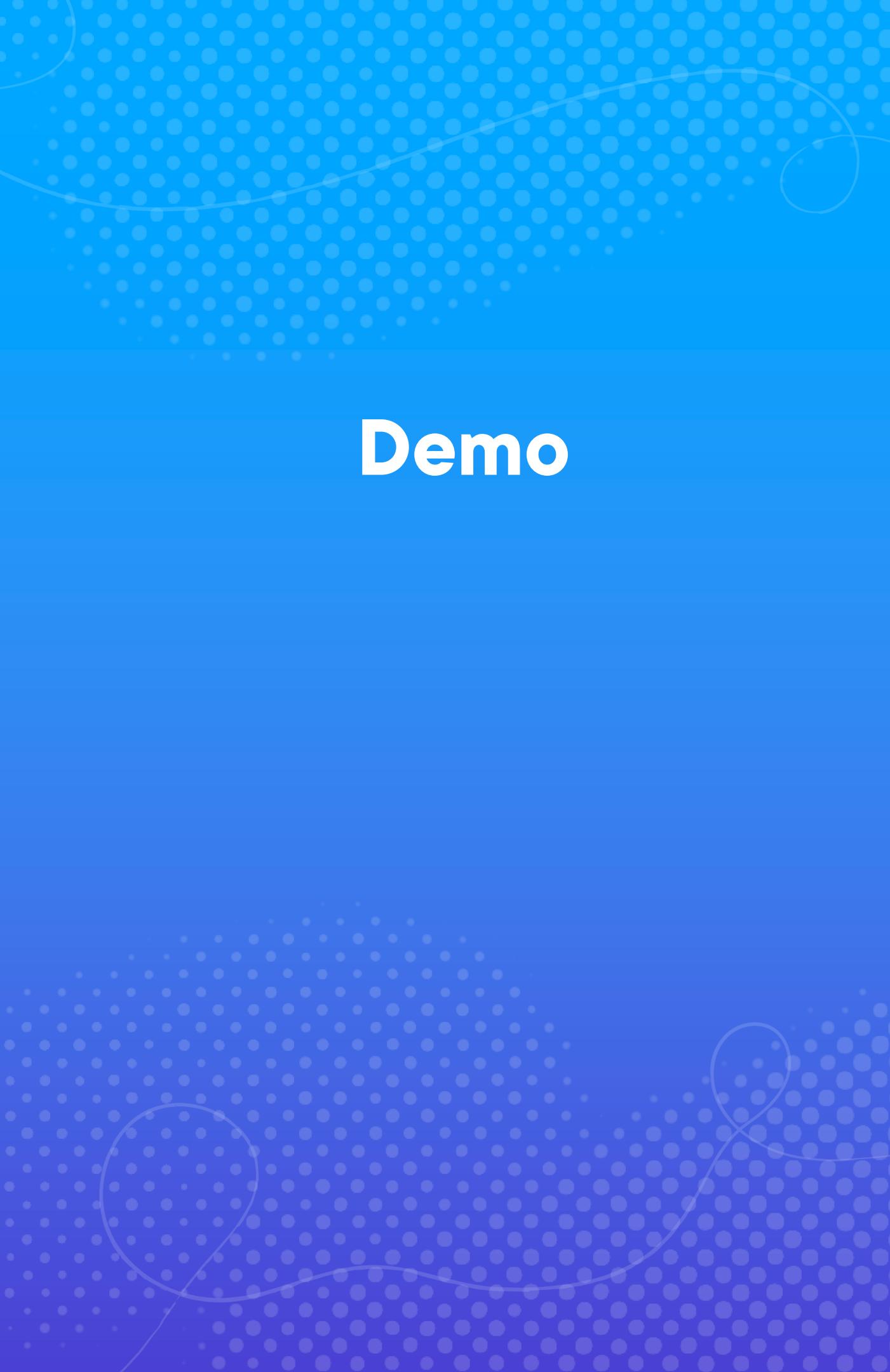


Specific Repositories

```
public class CategoryRepository : BaseRepository<Category>, ICategoryRepository
{
    public CategoryRepository(GloboTicketDbContext dbContext) : base(dbContext)
    { }

    public async Task<List<Category>> GetCategoriesWithEvents ()
    {
        //TODO: include implementation here
    }
}
```





Demo

Adding the Persistence project
Bringing in support for EF Core



Demo

Adding the base repository implementation

Adding specific repositories

Registering services





**“Oh, I forgot to mention this
in the previous meeting...”**

**We’ll need to send a mail
when an event has been created.**

Can this be added?”



Implementing Other Infrastructure Tasks



Sending a Mail Through SendGrid

Infrastructure code to send a mail

NuGet package in Infrastructure

Interface in Core project

Implementation in Infrastructure



Demo

Creating the Infrastructure project

Writing the mail service using SendGrid API

**Using the code from the Application Core
code**

Registering the mail service



Summary

Infrastructure contains all configuration for external services

Split up in 2 projects, based on their target



Up Next:

Creating the API using ASP.NET Core

