

text

```
InnoShop/
└── InnoShop.AppHost/
    ├── InnoShop.AppHost.csproj
    ├── Program.cs # Добавьте здесь builder.AddProject<InnoShop_ProductMa...
    ├── Properties/
    │   └── launchSettings.json
    ├── appsettings.Development.json
    └── appsettings.json
└── InnoShop.ServiceDefaults/
    ├── InnoShop.ServiceDefaults.csproj
    └── ServiceDefaults.cs # Общие расширения для сервисов (JWT, telemetr...
└── InnoShop.ProductManagement.Api/ # Новый проект для API продукта
    ├── Controllers/
    │   ├── ApiController.cs # Базовый с [Authorize]
    │   └── ProductsController.cs # Endpoints для CRUD, search, hide-by-u...
    ├── GlobalUsings.cs
    ├── InnoShop.ProductManagement.Api.csproj
    ├── Program.cs # UseAspire, AddServiceDefaults, JWT auth
    ├── Properties/
    │   └── launchSettings.json
    ├── appsettings.Development.json
    └── appsettings.json # Connection strings, JWT settings
└── InnoShop.ProductManagement.Application/
    ├── Common/
    │   ├── Behaviours/
    │   │   ├── AuthorizationBehaviour.cs # Для проверки owner продукта
    │   │   └── ValidationBehaviour.cs # FluentValidation
    │   └── Interfaces/
    │       ├── ICurrentUserProvider.cs # Для получения userId из JWT
    │       └── IProductsRepository.cs
    ├── DependencyInjection.cs # MediatR, FluentValidation, behaviours
    ├── GlobalUsings.cs
    ├── InnoShop.ProductManagement.Application.csproj
    ├── Products/
    │   ├── Commands/
    │   │   ├── CreateProduct/
    │   │   │   ├── CreateProductCommand.cs
    │   │   │   ├── CreateProductCommandHandler.cs
    │   │   │   └── CreateProductCommandValidator.cs
    │   └── DeleteProduct/
```

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|   |   |   |   |   |   |   |   DeleteProductCommand.cs  
|   |   |   |   |   |   |   |   DeleteProductCommandHandler.cs  
|   |   |   |   |   |   |   |   HideProductsByUser/ # Для soft-delete при деактивации по  
|   |   |   |   |   |   |   |   |   HideProductsByUserCommand.cs  
|   |   |   |   |   |   |   |   |   HideProductsByUserCommandHandler.cs # Обновляет IsA  
|   |   |   |   |   |   |   |   RestoreProductsByUser/ # Для активации  
|   |   |   |   |   |   |   |   |   RestoreProductsByUserCommand.cs  
|   |   |   |   |   |   |   |   |   RestoreProductsByUserCommandHandler.cs  
|   |   |   |   |   |   |   UpdateProduct/  
|   |   |   |   |   |   |   |   |   UpdateProductCommand.cs  
|   |   |   |   |   |   |   |   |   UpdateProductCommandHandler.cs  
|   |   |   |   |   |   |   |   |   UpdateProductCommandValidator.cs  
|   |   |   |   |   |   Queries/  
|   |   |   |   |   |   |   |   GetProduct/  
|   |   |   |   |   |   |   |   |   |   GetProductQuery.cs  
|   |   |   |   |   |   |   |   |   |   GetProductQueryHandler.cs  
|   |   |   |   |   |   |   SearchProducts/  
|   |   |   |   |   |   |   |   |   |   SearchProductsQuery.cs # Фильтры: price, availability  
|   |   |   |   |   |   |   |   |   |   |   SearchProductsQueryHandler.cs  
|   InnoShop.ProductManagement.Contracts/  
|   |   GlobalUsings.cs  
|   |   InnoShop.ProductManagement.Contracts.csproj  
|   |   Products/  
|   |   |   CreateProductRequest.cs  
|   |   |   ProductResponse.cs  
|   |   |   SearchProductsRequest.cs  
|   |   |   UpdateProductRequest.cs  
|   InnoShop.ProductManagement.Domain/  
|   |   Common/  
|   |   |   AggregateRoot.cs  
|   |   |   Entity.cs  
|   |   |   IDomainEvent.cs  
|   |   |   ValueObject.cs  
|   |   |   Errors/  
|   |   |   |   ValidationErrors.cs # Общие ошибки  
|   |   |   GlobalUsings.cs  
|   |   InnoShop.ProductManagement.Domain.csproj  
|   |   ProductAggregate/  
|   |   |   Product.cs # Атрибуты: Id, Name, Description, Price, Availability  
|   |   |   |   ProductErrors.cs  
|   InnoShop.ProductManagement.Infrastructure/  
|   |   Clients/
```

```
|   |   └── UserManagementClient.cs # HttpClient для вызовов к UserManage
|   ├── DependencyInjection.cs
|   ├── InnoShop.ProductManagement.Infrastructure.csproj
|   ├── Middleware/
|   |   ├── EventualConsistencyMiddleware.cs # Если eventual consistency
|   |   └── GlobalExceptionMiddleware.cs # ProblemDetails
|   └── Persistance/
|       ├── Configurations/
|       |   └── ProductConfiguration.cs # EF config
|       ├── Migrations/ # EF migrations
|       |   ├── [Timestamp]_InitialCreate.cs
|       |   └── ...
|       ├── Repositories/
|       |   └── ProductsRepository.cs
|       └── ProductManagementDbContext.cs # EF DbContext
|   └── InnoShop.UserManagement.Api/ # Уже есть, но добавьте в DeactivateUserH
|       # ... (как в вашей структуре)
|   └── # ... остальные папки UserManagement как есть
└── tests/
    ├── InnoShop.ProductManagement.Application.SubcutaneousTests/ # Новый
    |   ├── InnoShop.ProductManagement.Application.SubcutaneousTests.csproj
    |   └── UnitTest1.cs # Интеграционные тесты
    ├── InnoShop.ProductManagement.Application.UnitTests/
    |   ├── Common/
    |   |   └── Behaviours/
    |   |       ├── AuthorizationBehaviorTests.cs
    |   |       └── ValidationBehaviorTests.cs
    |   ├── GlobalUsings.cs
    |   └── InnoShop.ProductManagement.Application.UnitTests.csproj
    ├── InnoShop.ProductManagement.Domain.UnitTests/
    |   ├── GlobalUsings.cs
    |   └── InnoShop.ProductManagement.Domain.UnitTests.csproj
    └── ProductAggregate/
        └── ProductTest.cs
└── TestCommon/ # Общий для тестов, добавьте для Product
    ├── ProductAggregate/
    |   ├── ProductCommandFactory.cs
    |   └── ProductFactory.cs
    ├── TestCommon.csproj
    ├── TestConstans/
    |   └── Constans.Product.cs
    └── # ... другие
```

```
|   └── TestUtils/
|       └── Services/
|           └── TestDateTimeProvider.cs
└── InnoShop.sln # Добавьте новые проекты в solution
```

Адаптация под .NET Aspire

Поскольку вы используете .NET Aspire, структура идеально вписывается:

- **AppHost** : В Program.cs добавьте сервис :

```
C#  
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var builder = DistributedApplication.CreateBuilder(args);  
// ... существующие ресурсы  
var productDb = builder.AddPostgres("productdb").AddDatabase("products");  
var productApi = builder.AddProject<Projects.InnoShop_ProductManagement_A  
    .WithReference(productDb); // Для connection string  
// ... builder.Build().Run();
```

- **ServiceDefaults** : Используйте для общих настроек (health checks, telemetry).
В ProductManagement.Api вызовите builder.AddServiceDefaults(); .

- **Коммуникация REST**: В `UserManagement.Infrastructure` добавьте

`ProductManagementClient.cs` :

C#

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```
public class ProductManagementClient
{
    private readonly HttpClient _client;
    public ProductManagementClient(IHttpClientFactory factory)
    {
        _client = factory.CreateClient("productmanagement"); // Aspire p
    }
    public async Task HideProductsAsync(Guid userId)
    {
        await _client.PostAsync($""/products/hide/{userId}"", null);
    }
    // Аналогично для restore
}
```

В `DeactivateUserCommandHandler` : вызовите `client.HideProductsAsync (userId)`.

- **DB**: Code First EF в `Infrastructure` , миграции применяйте через `dotnet ef`.
- **Auth**: JWT из `UserManagement` , в `Product` : проверяйте claims для owner (`userId == product.CreatorUserId`).
- **Валидация /Ошибки** : `FluentValidation` в `validators` , `ProblemDetails` в `middleware` .
- **Docker** : Aspire генерирует `docker-compose` автоматически при `run`.
- **Тесты** : Unit для `domain/application` , `subcutaneous` для `e2e`.

Если нужно код примеров или доработки , уточните !

 12 sources

↳ [Code examples for ProductController](#)

↳ [OrderManagement microservice](#)

↳ [More concise tree structure](#)