



REGREENSHOP

By Irena Ivanova

Internship [19.03.2025 – 30.06.2025]

AMDARIS
An knight company



IRENA IVANOVA

- Background
 - Structural Engineer
- Transition to Programming
 - 1.5 years ago out of curiosity
 - quickly became a daily passion
- Personal interest
 - Mountain hiking
 - Folklore dancing
 - Logical puzzles and coding challenges

PROJECT CONCEPT & PROBLEM SOLVED

- Online grocery store with an eco-friendly twist
- Combined features from apps like eBag and Kolichka
- Allows returning bottles and cups during delivery
- Users earn points for returns, redeemable for discounts
- Makes shopping convenient and encourages proper recycling

PLANNING & DEVELOPMENT APPROACH

- Used waterfall approach
- Planned mostly by hand — “hand Figma” sketches and diagrams



Shop Smart. Live Green.



BACKEND

- ASP.NET Core 8.0
- Entity Framework Core 8.0
- SQL Server
- HangFire
- SendGrid
- Polly
- QuestPDF
- Google Authentication
- Google Maps API
- Stripe
- SignalR
- Serilog

FRONTEND

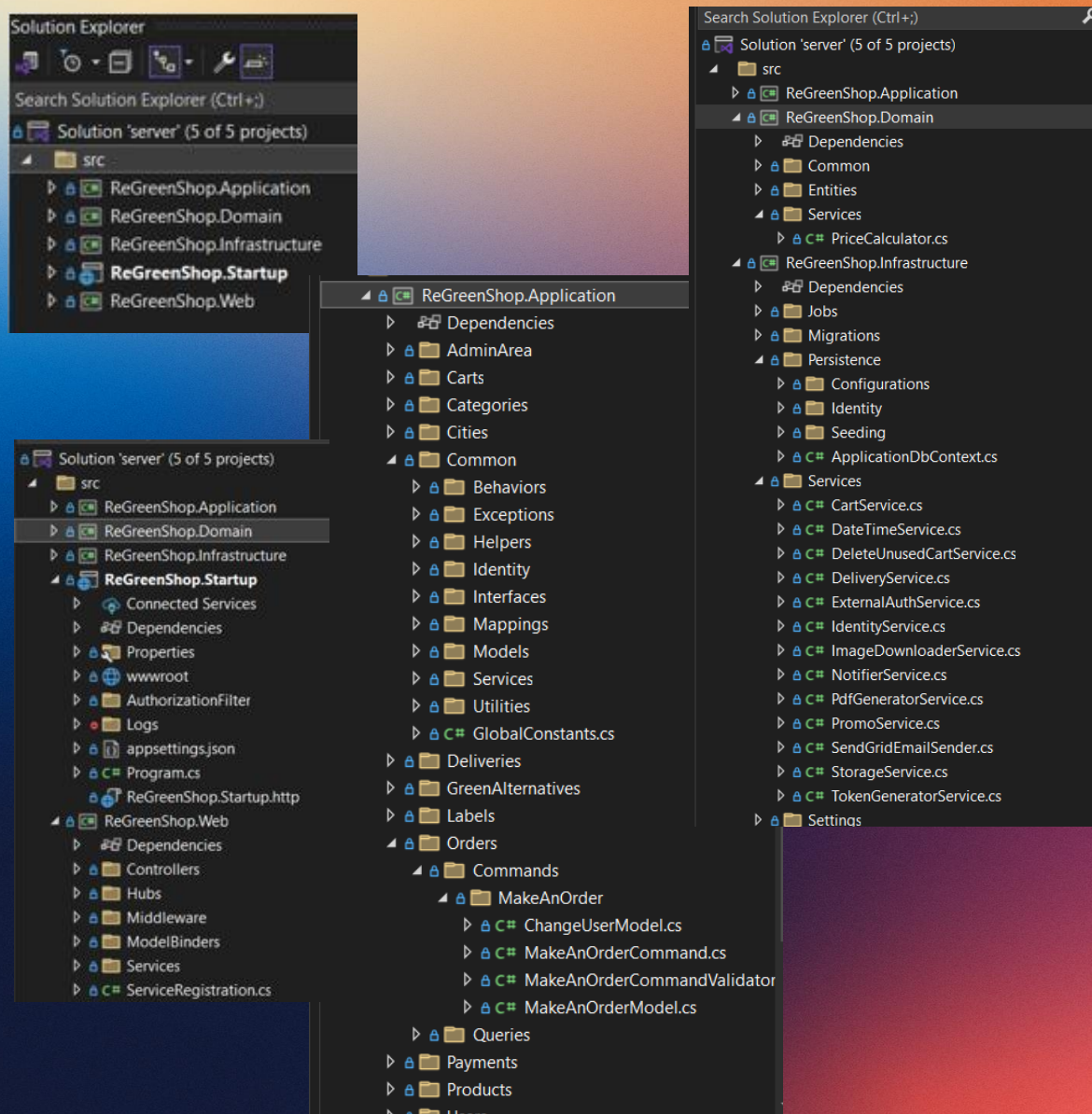
- React + TypeScript
- React Bootstrap
- Swagger(Swashbuckle)

OTHER TOOLS

- Playwright (for web scarping)
- QR code generator

CLOUD & DEPLOYMENT

- Microsoft Azure
 - Web app services (backend and frontend)
 - Azure SQL Database



APPLICATION ARCHITECTURE

HIGH-LEVEL

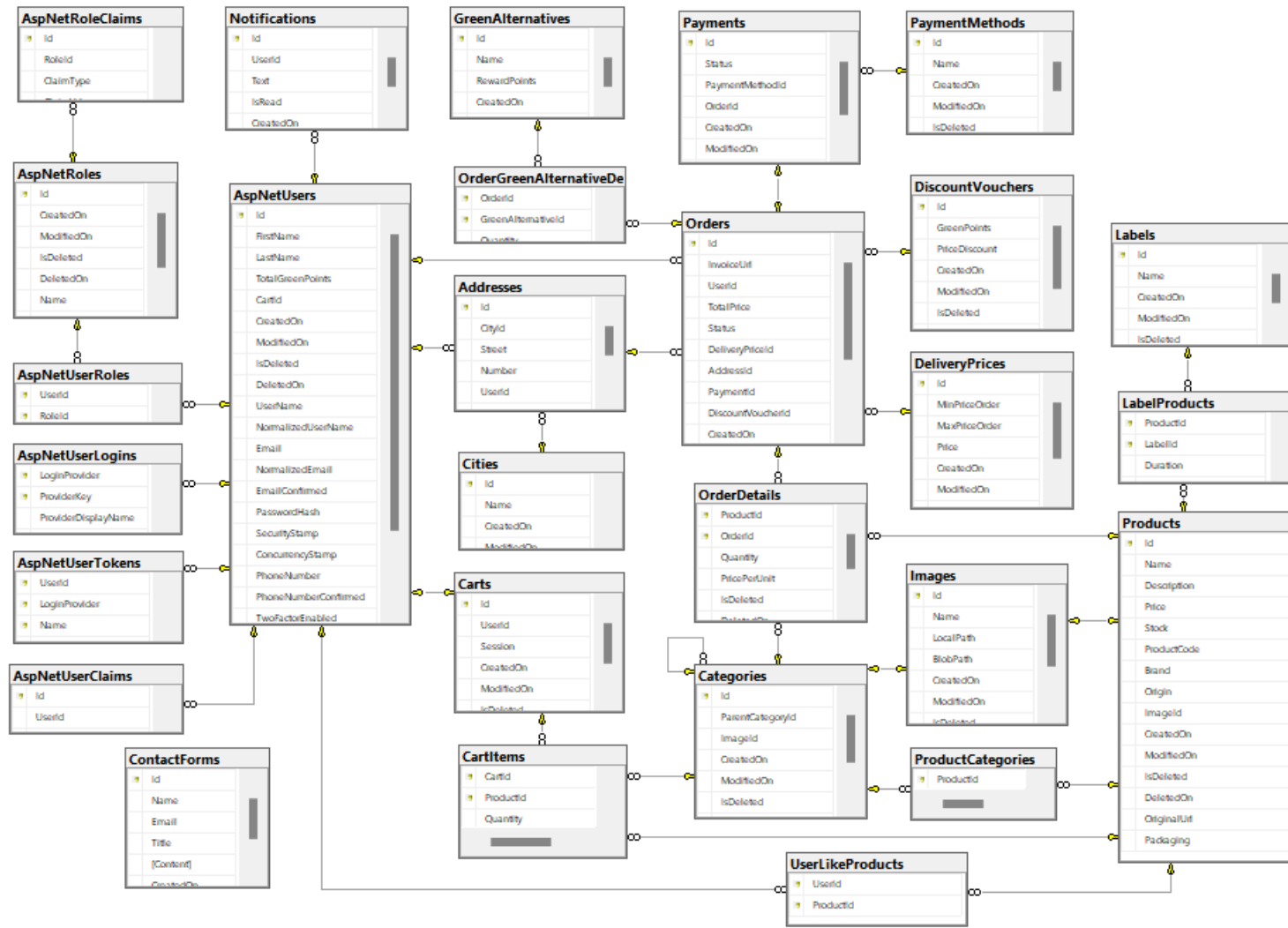
- Clean architecture
- CQRS (Command Query Responsibility Segregation)
- Mediator

KEY FEATURES & TECHNIQUES

- MediatR + Pipeline Behaviors (Validation, Logging)
- Automatic service registration via reflection
- Custom Error Middleware
- Custom decimal binder
- AutoMapper (with reflection-based config)

QUALITY OF CODE

- Clean up with custom StyleCop config
- Prettier



DATA INTEGRITY

- Unit of Work
- Soft Deletes + GDPR strategy

AUTHENTICATION, AUTHORIZATION & ROLES

- ASP.NET Core Identity
- JWT tokens
- Google OAuth 2.0
- Two roles
 - User
 - Admin



DEMO

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FUTURE IMPROVEMENTS

- Integrate ElasticSearch
- Refactor frontend components
- Add section for smart delivery coordination
- Implement analytics dashboards in the admin panel

Q & A

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THANK YOU

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