Backoffice System Specification for Insurance Company

# 1. General Description

A backoffice system for managing car insurance policies (only for passenger vehicles). The system provides internal functionalities for managing policies, clients, and users. Payments are not handled in the system. The application is fully web-based and containerized.

# 2. Architecture and Technologies

Components:

- Frontend: React + Material UI + REST API integration

- Backend: Java 21 + Spring Boot + Spring Data + REST API

- Database: PostgreSQL

Each component is a separate Docker image. The full system is run via Docker Compose.

# 3. User Roles

Admin:

- Can manage users (create/edit/delete)

- Cannot issue policies

Operator:

- Can issue new policies (OC, AC, NNW)

- Can edit existing policies

- Can list policies for a client

- Can cancel policies

- Cannot manage users

# 4. Functional Modules

4.1 User Management Panel (Admin only):

- Simple form with basic fields: First name, Last name, Email, Password

4.2 Operator Panel:

- Issue policies (form depends on type)

- Edit policy

- List policies by client

- Cancel policy

- Generate PDF after policy confirmation

# 5. Insurance Types and Variants

|  |  |  |
| --- | --- | --- |
| Type | Variant(s) | Notes |
| OC | Optimum | Standard coverage as per law |
| AC | Standard, Maximum | Different Sum Insured (SU) per variant |
| NNW | Optimum | Covers death, permanent damage, medical costs |

# 6. Policy Data Structure

6.1 Common fields:

- Policy number  
- Issue date  
- Coverage period (from - to)  
- Status (active, canceled, expired)  
- Insurance type (OC/AC/NNW)

6.2 Client data:

- Full name  
- PESEL  
- Address  
- Email, phone

6.3 Vehicle data:

- Make, model  
- Year of manufacture  
- Registration number  
- VIN  
- Engine capacity, power  
- First registration date

6.4 Type-specific fields:

OC:  
- Guaranteed sum  
- Coverage area  
- Premium  
- Discounts/surcharges

AC:  
- Variant (Standard/Maximum)  
- Sum Insured  
- Coverage scope  
- Deductible  
- Workshop type  
- Premium  
- Discounts/surcharges

NNW:  
- Sum Insured  
- Covered persons  
- Premium

# 7. Rating Tables

- Stored in a separate database table

- Each insurance type has its own multipliers

Fields:

- Insurance type (OC/AC/NNW)  
- Rating key (e.g. driver age, vehicle age)  
- Multiplier  
- (Optional) Validity period

# 8. PDF Generation

After confirming a policy, the system can generate a PDF containing all policy data: client and vehicle details, coverage, SU, premium, etc.

# 9. Excluded Functions

Payments are not handled in the system – they are processed externally.