Autoparts Shop EELP

Introduction

Welcome to Autoparts Shop EELP, a comprehensive autoparts e-commerce platform developed using Spring, Gradle, and Swagger. This documentation serves as a guide to understanding the structure and design of our application.

Purpose

The Autoparts Shop EELP project is organized into several key packages, each serving a specific purpose in the overall architecture. The following sections provide an overview of our package structure, detailing the main components, services, repositories, models, and other essential elements.

Package Diagram

com.sofiaexport

The `com.sofiaexport` package serves as the root namespace for our application. It encapsulates the primary components responsible for handling various aspects of the autoparts shop.

- controller

The `controller` package contains classes responsible for handling incoming HTTP requests and managing the flow of control within the application. Key controllers include `AuthenticationController`, `AutoPartController`, `CarController`, `OrderController`, and `UserController`.

- service

The `service` package houses service classes that implement business logic, including autopart services, car services, JWT services, order services, and user services.

- repository

In the `repository` package, we define repositories responsible for interacting with the database. Repositories include `AutoPartRepository`, `CarRepository`, `OrderRepository`, `TokenRepository`, and `UserRepository`.

- model

The `model` package comprises the core data models used throughout the application. Essential entities such as `AutoPart`, `Car`, `UserOrder`, and others are defined here.

- config

Configuration-related classes are grouped in the `config` package. Notable configurations include `ApplicationConfig`, `JwtAuthenticationFilter`, `SecurityConfiguration`, and `WebConfig`.

- exception

The `exception` package handles custom exceptions thrown by the application, such as `AutoPartNotFoundException`, `InsufficientQuantityException`, and others.

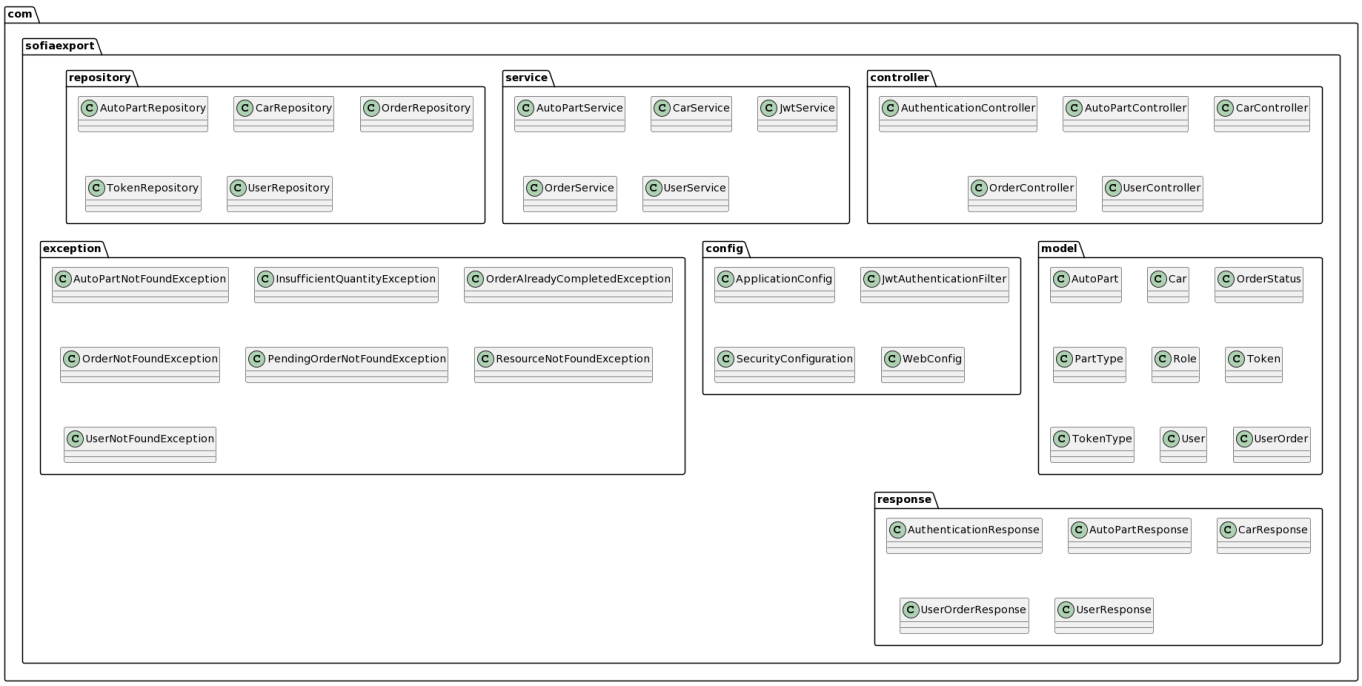
- response

The `response` package contains classes representing responses from the application, such as `AuthenticationResponse`, `AutoPartResponse`, `UserOrderResponse`, and more.

- ui

UI-related components, including styles and JavaScript files for different pages, are organized in the `ui` package. Subpackages like `cart`, `details`, `header`, `home`, `login`, `profile`, and `signup` contain resources for specific UI functionalities.

UML Diagram



Technologies Used

- **Spring**: The application leverages the Spring framework for building robust and scalable Java applications.
- **Gradle**: We use Gradle as our build automation tool, simplifying project configuration and dependency management.
- **Swagger**: Swagger is integrated into our project to facilitate API documentation and testing.

System Deployment

Installation:

- Clone the repository:

```
git clone https://github.com/your-username/autoparts-shop.git
```

- Navigate to the project directory:

```
cd autoparts-shop
```

- Build the project using Gradle wrapper:

```
./gradlew build
```

Configuration

Configure the application properties:

- Open `src/main/resources/application.properties`.
- Set database connection properties, third-party API keys, or any other configuration needed.

Running the Application:

- Run the application using Gradle:

```
./gradlew bootRun
```

- The application will be accessible at `http://localhost:8080`

Software and/or System Testing

Test Strategy:

- **Unit Tests:** Ensure individual components work correctly.
- **Integration Tests:** Check interactions between different parts of the system.
- **End-to-End Tests:** Validate the entire application workflow.

Testing Scenarios:

User Registration:

- Verify successful user registration.
- Ensure proper handling of duplicate email registration.

AutoPart Management:

- Test adding new auto parts.
- Validate the update and deletion of auto parts.

Order Processing:

- Check the addition and removal of items in the user's order.
- Test the order checkout process.

Test Data:

Utilize mock data or create test cases with predefined data for various scenarios.

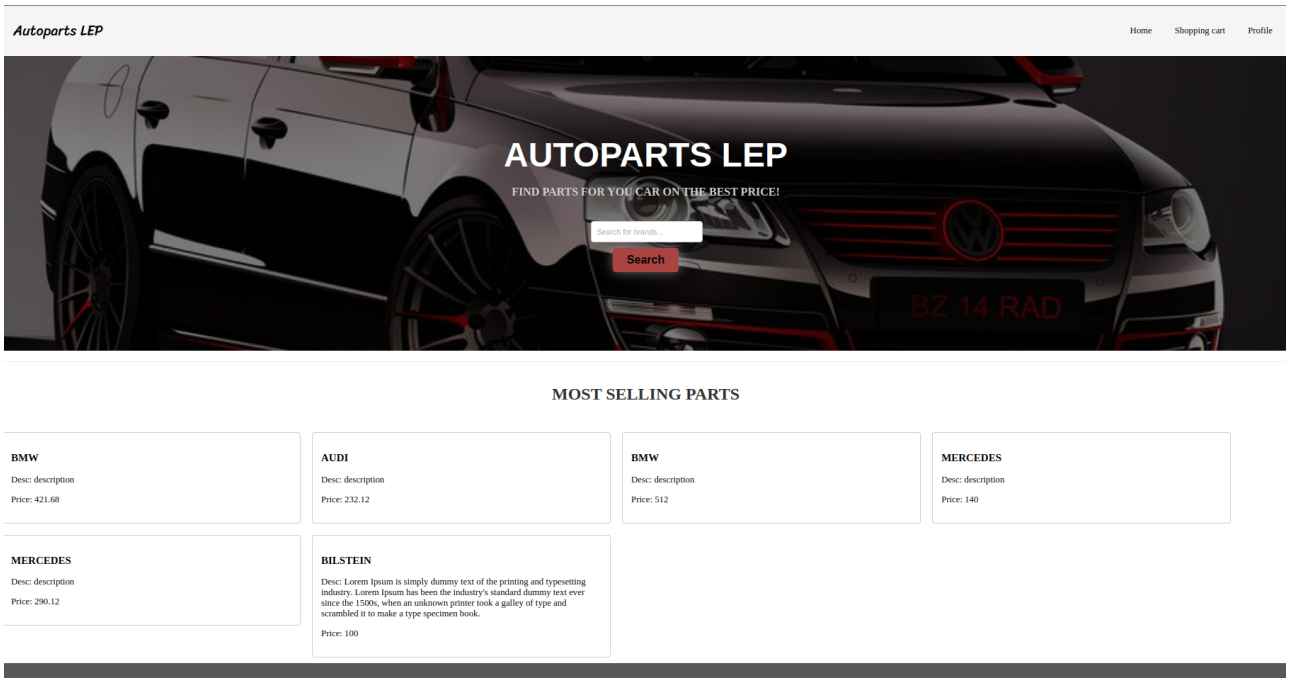
Test Results and Analysis:

- Review test reports generated after running test suites.
- Analyze any test failures and address issues promptly.

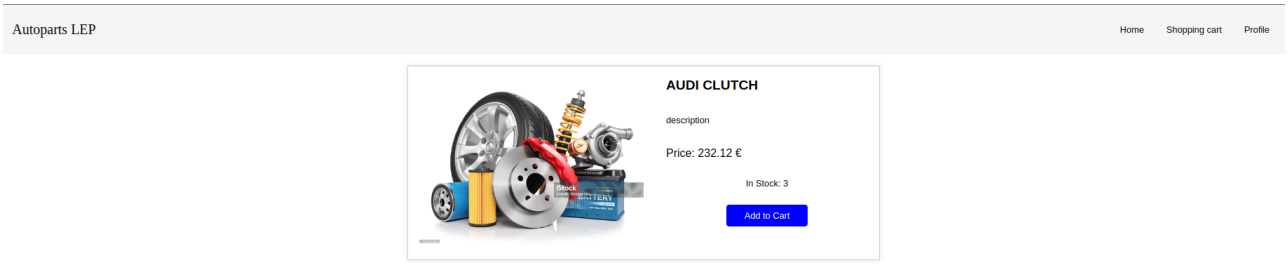
Application Walkthrough:

Client-Side:

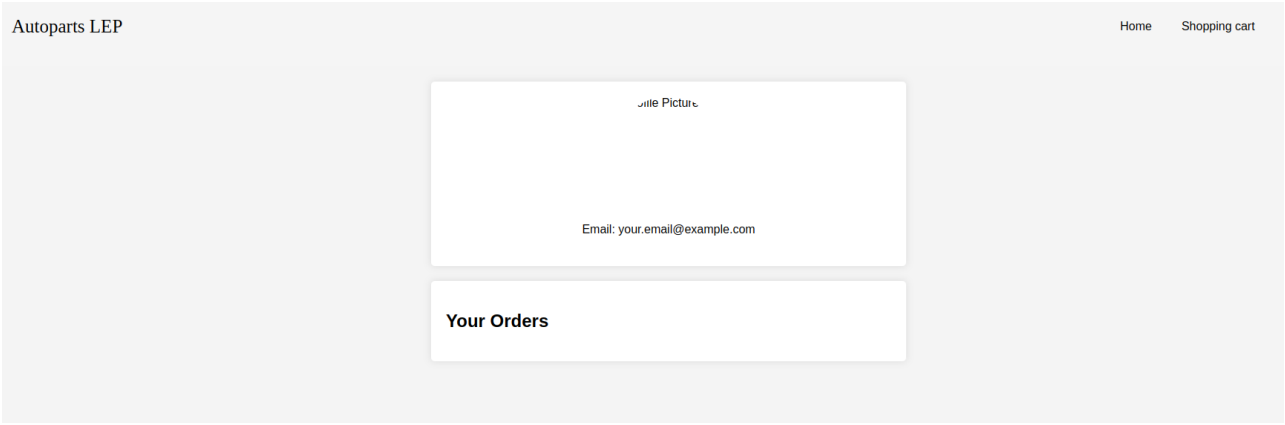
- **Home Page:**



- **Product Details:**



- **User Profile:**



Server-Side:

- **Logging:** View logs for application events, errors, and warnings.
- **Database Interaction:** Access the database to verify data integrity.
- **API Endpoints:** Explore and test API endpoints using Swagger documentation.