

Coding Challenge

The goal of the challenge is to create a simple user interface of a shop.

Setup

Implementation: The target device of the user interface is a web browser and the programming language should be JS or TypeScript. Use React, Angular or a suitable framework for building the user interface. Provide easy-to-use means to run and test your web UI.

Code versioning: Create a github repository to store your code. While working on the implementation, commit your code at meaningful milestones to the repository.

Simulated REST API

Implement service classes providing the data for the user interface. The services should be implemented such that they simulate asynchronous requests to a REST API.

Authentication

Users have to authenticate with username and password to access the user interface. The user can either have the role Customer or Admin.

Functionality

Depending on their role, users can perform the actions described below. Key properties of entities are listed in parentheses.

Customer

- View products (sku, name, description, price) shown in a tiled layout.
- Add a product to a cart.
- Checkout the cart. The checkout can be implemented as a single simple form collecting basic data (first name, last name, email) from the customer.

Admin

- List products. Products are shown as a list.
- Edit details of a product.
- List carts of customers.
- View the details of a cart.

Unit test

Write a unit test checking the functionality of one of the implemented services.

Describe in words what unit tests you would implement to check the functionality of the authentication service.