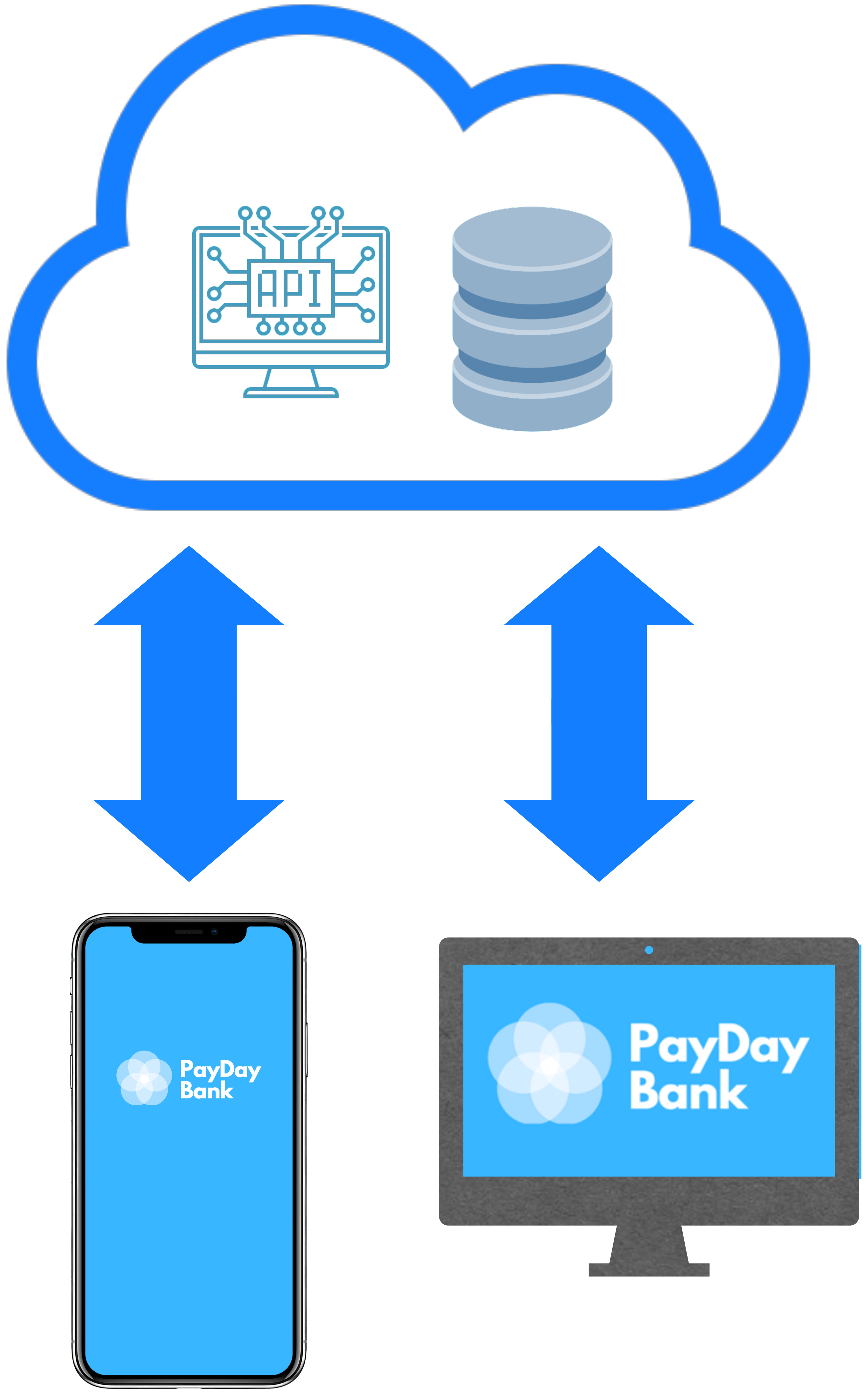
Prototype for product dashboard



Background:

- PayDay Bank has hired you as a Rockstar full-stack developer who will help to build their first prototype version for the new product dashboard. The bank's solution architect already prepared a vision for the dashboard which is provided in a form of requirements. They will have a demo for stakeholders where they would like to showcase basic functionality before committing to it on the long term.
- To do this, you are expected to design and implement a solution based on the provided requirements, data structure and wireframes, that enables the user stories provided below. Demonstrate your solution's maintainability, extensibility and testability. You have 2 days to submit your solution.

Tasks:

- Design and implement a backend solution based on the provided requirements, that will serve as an API and holds the core business logic. Provide documentation for your API design.
- Design and implement a responsive frontend solution based on the provided requirements and wireframes, that will serve as the platform for the prototype, communicating with your API solution.

Notes:

- Implement your solution with maintainability in mind. Pay attention to your git history and README files.
- Feel free to add any additional features and practices to your submission in order to demonstrate your expertise in writing production grade software.
- Recommended tech stack for the project:
  - Java Spring, Gradle / Maven
  - React, Redux, Typescript, Bootstrap, Material Design
  - Webpack / Parcel.js

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User Stories

🟢 High Priority 🟡 Medium Priority 🔵 Low Priority

Overview

Product managers of PayDay Bank are prepared to use this dashboard as an editor for product deals. Titles inside the bank are frequently changing to keep up morale so we have to provide a way for them to keep their information updated. PayDay likes doing A/B testing so we have to prepare for cases when there is going to be a lot of products.

To provide the best experience, right after login to the app (which they can do with their email address and password) they arrive to the products list displaying all products. For each product as a product manager I want to see basic information so I can understand better the overall picture.

After leaving their workstation product managers often sign out to assure that no sensitive data will be leaked.

It is essential to be able to inspect details of products so we can always see the difference between similar products.

SIGN IN FLOW 🟢

As a product manager of PayDay Bank
I want to sign into the Product dashboard
So that I can access products and account information

Acceptance Criteria:

1. Product list and profile settings is not available with invalid JWT tokens
2. Generated user is able to sign in successfully
3. User can sign out

PROFILE EDIT 🔵

As a product manager of PayDay Bank
I want to modify my basic information
So that I can change my name and title

Acceptance Criteria:

1. Full name and title can be modified and saved
2. Email is displayed but cannot be modified (disabled)
3. Save button provides visual feedback for success

PRODUCT LIST 🟢

As a product manager of PayDay Bank
I want to see my products
So that I can choose between products

Acceptance Criteria:

1. List products in a table view with Name, Price and Available properties
2. Product elements are reacting for hover effects and clickable

PRODUCT DETAILS 🟡

As a product manager of PayDay Bank
I want to see details about given product
So that I can update information

Acceptance Criteria:

1. Fields are editable and validated for their data type
2. Save button provides visual feedback for success
3. Refreshing the browser shows the same product's details

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Data structure

User

Full Name: String;

Email Address: String;

Password: String;

Title: String;

Product

ID: Number;

Name: String;

Price: Number;
Available: Boolean;

Description: String;

(Potentially long string)

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Requirements

Backend

- Use any type of storage including in-memory
- On startup the application should generate 1 example user and 3 example products
- Use JWT token for session management
- Design, create and document REST endpoints to fulfil the needs of the frontend application
- Does not have to serve the frontend application (You can assume there is a CDN)
- Application configuration should work with environment variables and default values

Frontend

- Login should work with the generated user’s email and password
- Session management should happen using JWT tokens
- Frontend should be responsive as it will be tested on mobile devices as well
- The application should be stateless
- Production build (e.g. minifying) should be possible with NPM scripts
- Feedback of actions (like pushing a button) should be obvious
- URL of the backend API can be static

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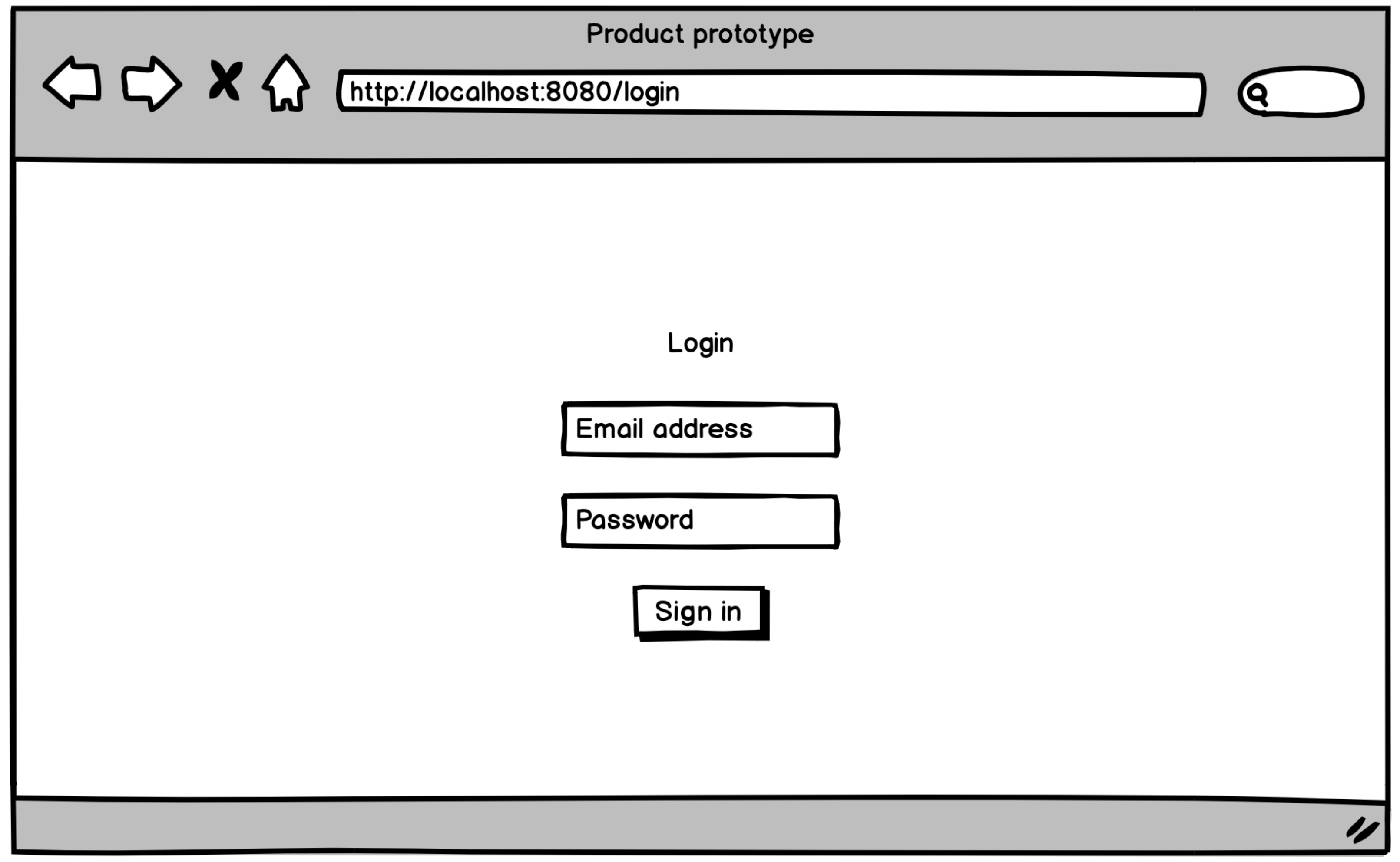
Wireframes

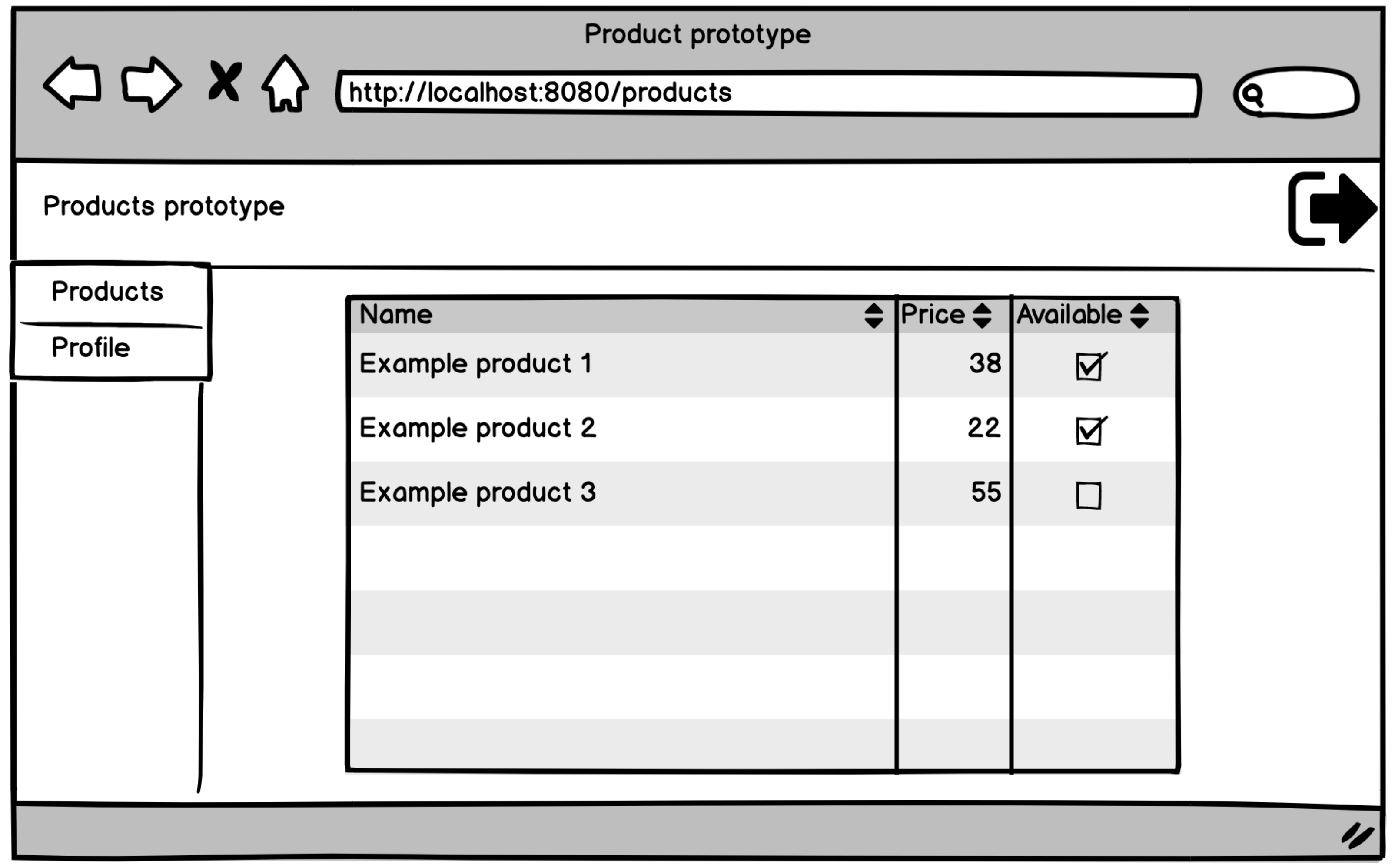
Login



Email address

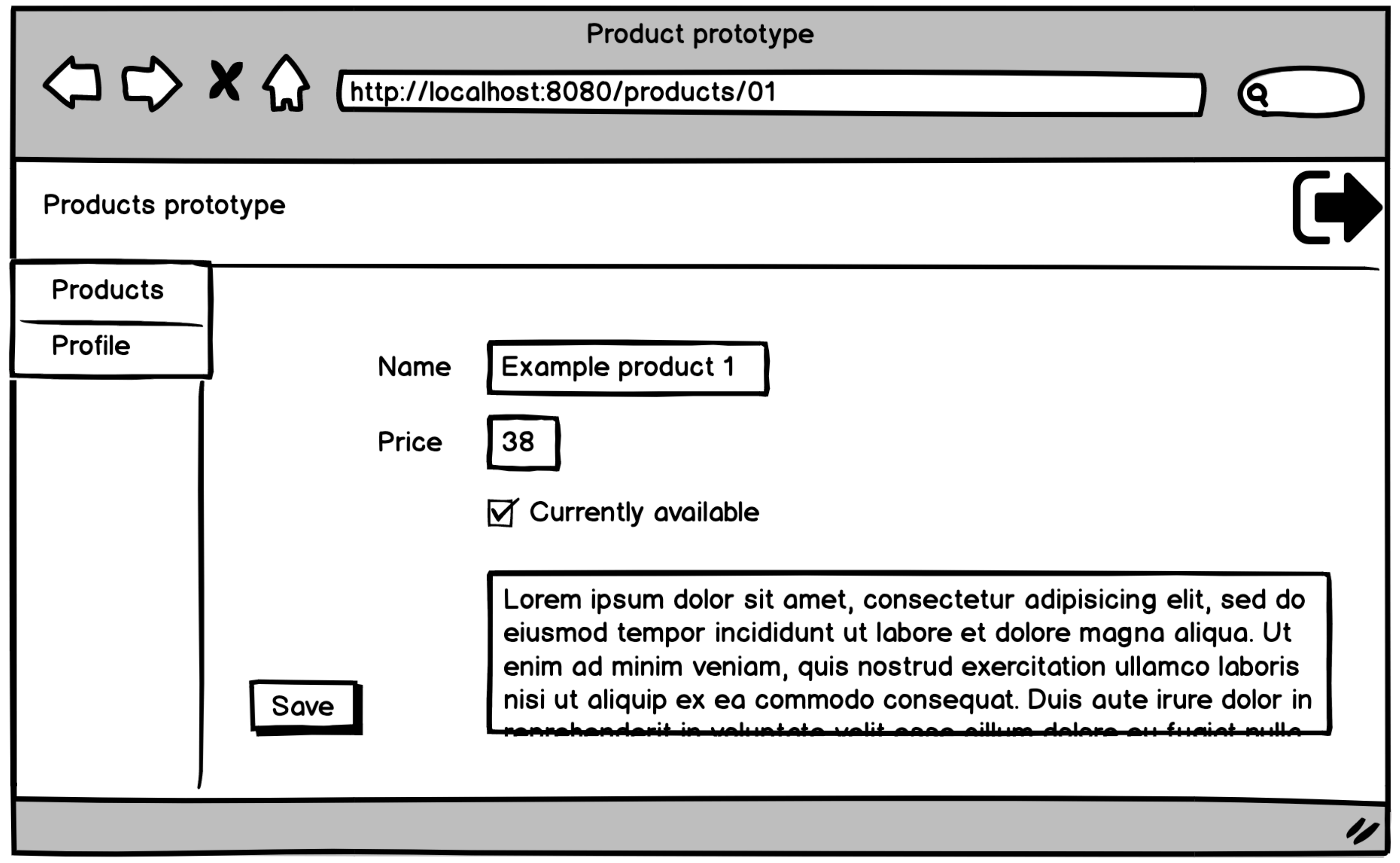
Password

Products



Name	Price	Available
Example product 1	38	☑
Example product 2	22	☑
Example product 3	55	□

Product details



Name: Example product 1

Price: 38

☑ Currently available

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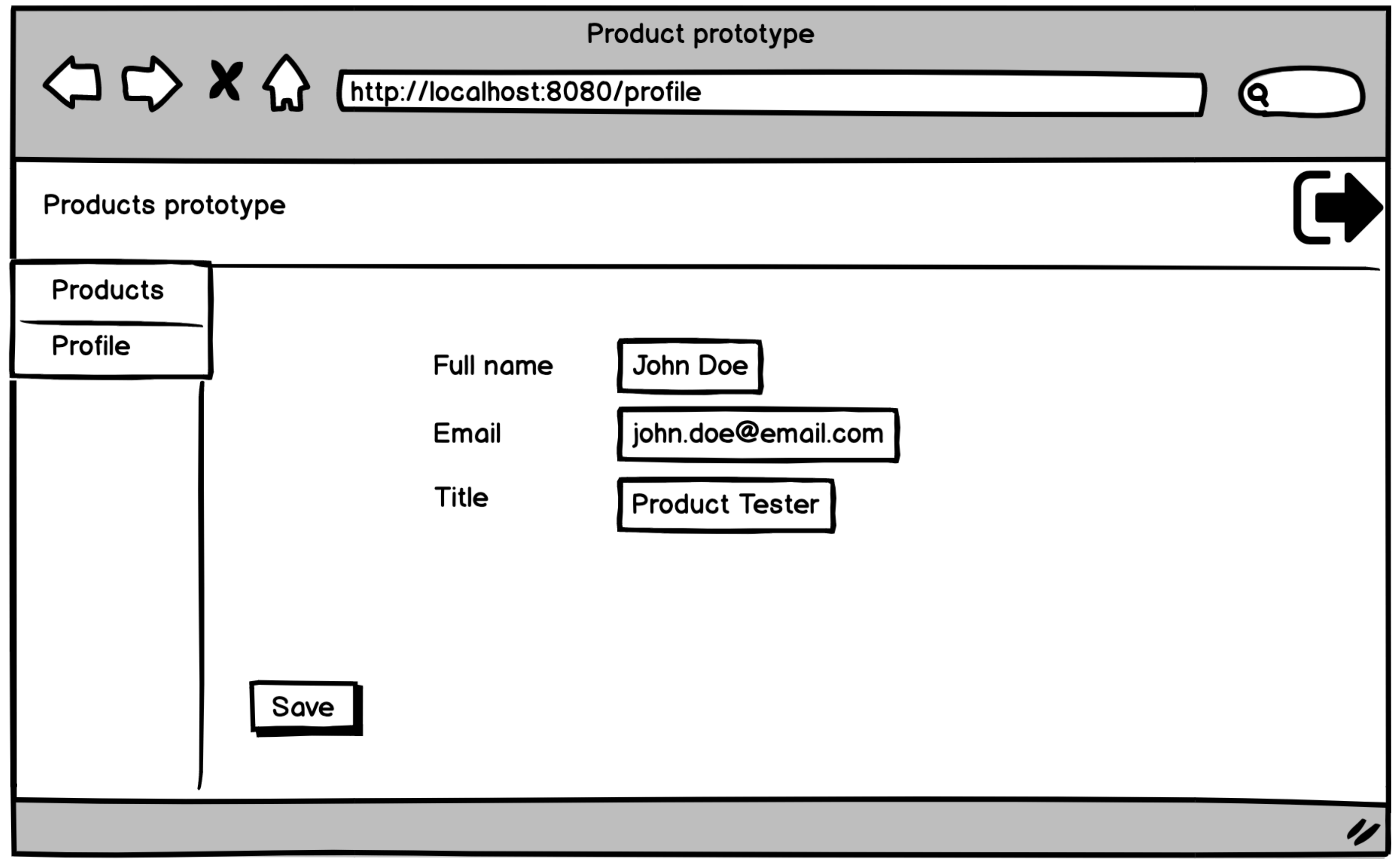
Profile edit



Full name: John Doe

Email: john.doe@email.com

Title: Product Tester

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