

Web Application Project

11. E-shop

Project authors:

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Domain of application:

Our firm made an e-shop that specializes in tech accessories tailored for remote workers, students, and everyday users who value comfort while using their devices. The website provides an intuitive and easy shopping experience, offering a well-curated selection of high-quality gadgets designed to enhance productivity, convenience, and a healthy environment in digital workspaces. For now, we are a small company that is starting from scratch, with few people involved. Because of that, some functionalities are not working in a full range yet, because of our smaller-than-desired budget. Of course, our goal is to grow and, with that, expand our e-shop website in near future.

Motivation:

The COVID-19 pandemic changed our world rapidly and drastically. With the rise of restrictions, a new era began - for many months, we were forced into home offices. The expansion in working from home or online learning has drastically increased the demand for reliable tech accessories. From ergonomic laptop stands and comfortable and healthier mousepads to high-quality wireless accessories, users sought products that could optimize their home setups to make the new norm easier. Even after the official end of the epidemic, many companies - not only those operating in the IT industry - opened up to remote or hybrid work. With that, the demand for tech accessories has not decreased, making our E-shop a platform with a great future behind it on the online market. Our shop aims to provide an online platform that is easy to navigate and ensures a seamless shopping experience.

Goals of the Website:

The main goal of our firms' Web page is to develop a functional e-shop that offers a well-presented range of tech accessories that are selected into categories with easy browsing for clients. We'd like to give our customers the possibility to create their accounts. We will also cover a shopping suggestion system for our customers so they can easily find products that fit their current order and suit them to enhance their shopping experience. The shopping cart feature will be designed in a way that allows easy product selection, enabling users to adjust quantities and securely proceed to checkout.

Descriptions of user roles:

Business Roles:

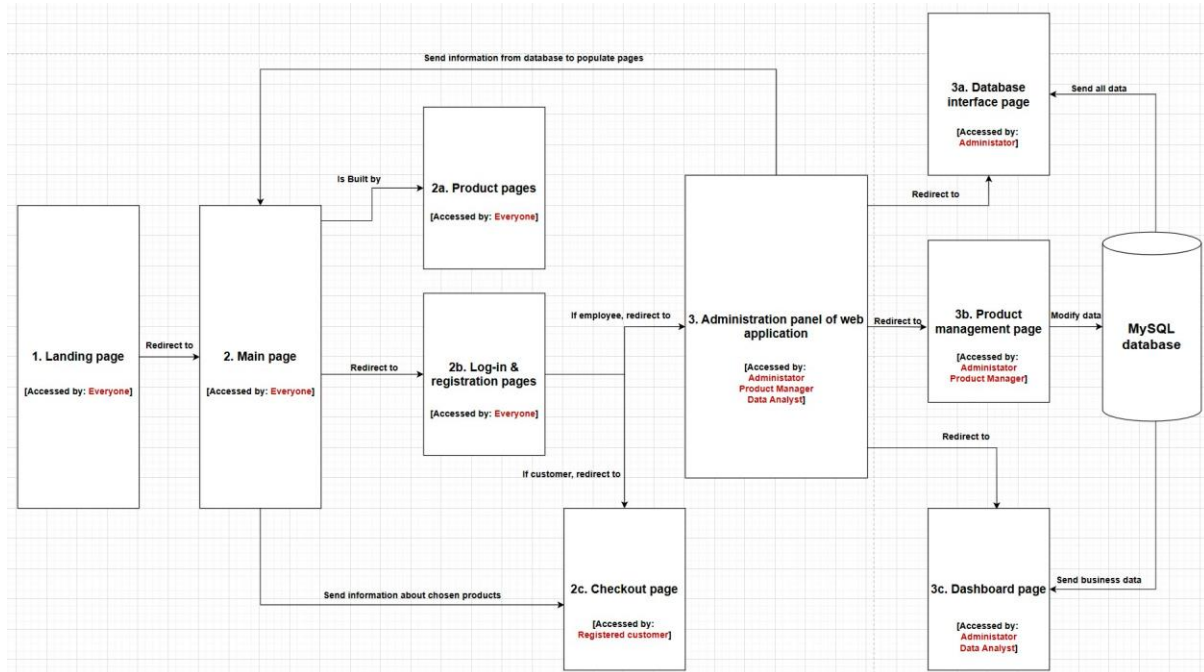
- **Customer:** Customers are primary users of our website. They will be responsible for browsing, purchasing, and logging or registering into their accounts. They will be able to browse products by choosing their desired category and picking what they want to buy. Clients can add items to their shopping cart, choose how many quantities of this product they will buy, or delete items from their cart. Customers will have access to a simple payment method where they will choose if they want to buy picked items. They will also receive shopping recommendations adjusted to what they are buying at the moment or what the shop owner is suggesting they should buy.
- **Administrator (Shop owner/ Manager):** The administrator oversees what is happening in the e-shop. Ensuring that everything works how it is supposed to. They manage the product listings by adding, updating, or removing items. Admins also check client orders- in our shop, after the payment the bought items are immediately sent to the customer via an external shipping company, so the order tracking process is on their side. In the future, we are planning to make it more integrated into our page. Admins can access sales analytics to track how the E-Shop is performing.
- **Product Manager:** They are responsible for managing RemoTech products. They edit product listings by adding and updating photos and descriptions and deleting products.
- **Data Analyst:** Their responsibility is the analysis of our shops' data. They have access to information about daily sales and how the E-shop is performing. With that, they can draw conclusions and give feedback on bettering our firms income.

Technical Roles:

- **Front-end Web Developer:** This role is responsible for developing and maintaining the user interface. Their tasks include creating the shopping cart, product categories, and dynamic elements such as interactive buttons, etc. They also implement the login and registration system for customers, Additionally, they integrate the shopping suggestion system
- **Back-end Web Developer:** This role is responsible for developing and maintaining server functionality. They develop and maintain the database that stores products, customer accounts, and orders.

Functionalities of the project:

General overview of web application:



- **Landing page:**

- **Purpose:** Introduce RemoTech and its mission.
- **UI elements:** Html & css page with images, description of our company.
- **Access Control:** Everyone with access to the internet.

- **E-shop main page:**

- **Purpose:** Product discovery and entry to shopping journey.
- **UI elements:**
 - Navigation bar with login, cart, and categories.
 - Product tiles (with name, image, price).
 - Filter/sort panel.
- **Control:** Everyone with access to the internet.

2a. Product pages:

- **Purpose:** Show detailed product information.
- **UI Elements:**
 - High-resolution images, specifications table.
 - Add-to-cart button.
 - Related items carousel.
- **Control:** Everyone with access to the internet.

2b. Log-in:

- **Purpose:** Authenticate users.
- website in order to buy chosen products.
- **UI elements:** Html forms, links to register or log-in, confirmation button which sends populated data to application logic.
- **Access Control:** Everyone with access to the internet.

2c. Checkout page:

- **Purpose:** Finalize and confirm purchases.
 - **UI elements:**
 - Cart summary.
 - Customer info and shipping form.
 - Secure confirmation button.
 - **Access Control:** Only registered customers (users with account).
- **Administration panel of web application:**
 - **Purpose:** Manage content and monitor shop operations.
 - **UI elements:** Simple navigation panel which redirects to appropriate section of web application, employee account details
 - **Access Control:** All employees of e-shop responsible for maintenance of the website (Administrator, Product managers, Data analysts).

3a. Database interface page:

- **Purpose:** To read all data without the need of using DBMS for security measures.
- **UI elements:** Link to go back, navbar with links to each table of database, html table with populated information from database.
- **Access Control:** Only Administrators.

3b. Product management page:

- **Purpose:** Management of all products on page - creating, editing, updating or deleting products.
- **UI elements:** Link to go back, checkbox to select one of CRUD option, html forms to fill data about product
- **Access Control:** Administrators, Product managers.

3c. Dashboard page:

- **Purpose:** Present shop analytics..
- **UI elements:**
 - Revenue graphs
 - Order history
 - Traffic stats.
- **Access Control:** Administrators, Data analysts.