E-Commerce Webshop Prototype UX Design Portfolio Report

Frontend Systems – SS 25

May 29, 2025

Studenten: Kristian Popov   kristian.popov@study.thws.de   5123029

Enrico Ebert   enrico.ebert@study.thws.de   5123098

Orik Mazreku   orik.mazreku@study.thws.de   5123144

Glison Doci   glison.doci@study.thws.de   5123136

Dozent: Prof. Dr. Peter Braun

Contents

1   Summary of Requirements

Our e-commerce webshop delivers a *simple, modern, and fully responsive* shopping experience. Essential features—product search, category filtering, and a shopping cart—are complemented by smart extras such as a light/dark -mode toggle.

Target Users

- **Regular Shoppers** browsing on laptops or smartphones.
- **Store Administrators** managing catalogue and user data.

Application Goals

- Clean, intuitive UI and navigation.
- Fast product search and category filtering.
- Secure account creation and sign-in.
- Complete cart and checkout flow.
- Admin panel for catalogue and order management.
- Light/dark-mode toggle.
- Fully responsive.

2   User Interface Design
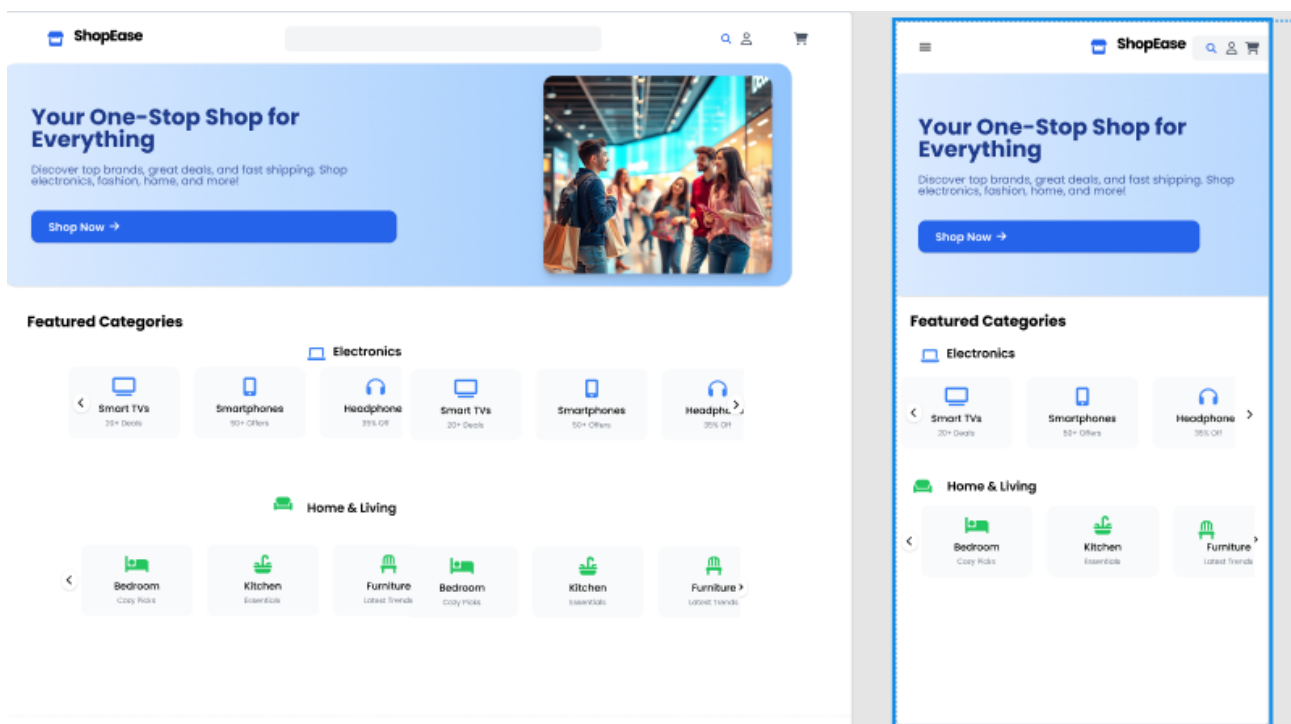
2.1   Home Screen

Figure 1: Home screen in light mode.

Explanation The home page follows a classic information funnel: brand section → value proposition → featured category. A single call-to-action **("Shop Now")** avoids decision fatigue on first contact. All interactive controls (search, cart) are reachable within one tap.

Table 1: Home screen – elements and rationale

Design element	Purpose & rationale
Persistent top-bar	Immediate access to search & cart.
Hero banner	Communicates value proposition in one glance; accent colour draws the eye.
Category carousel	Promotes bestselling category; horizontal swipe invites mobile interaction.

2.2   Category Drawer (Hamburger / Desktop "Categories")
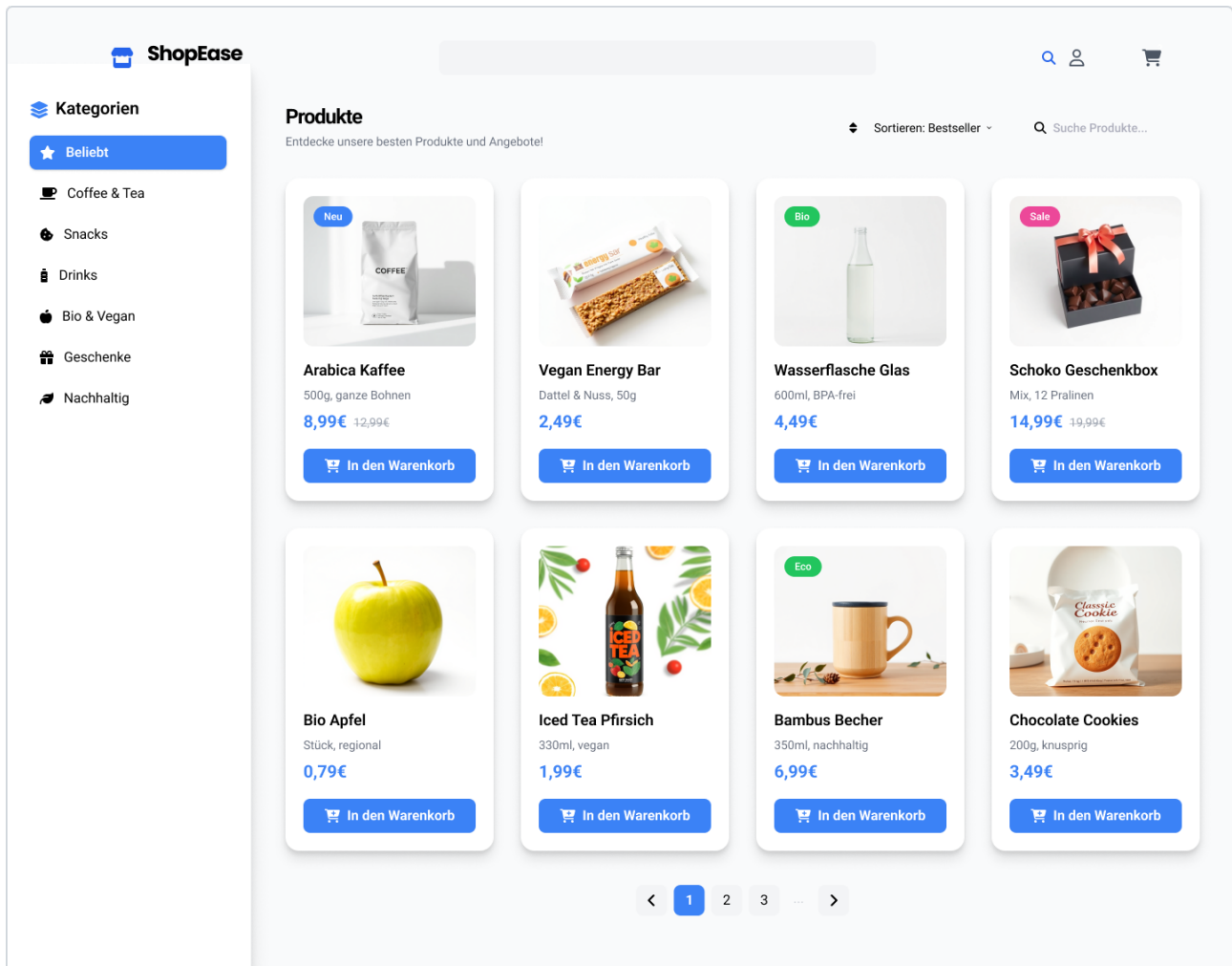

Figure 2: Off-canvas category drawer; mobile and desktop share the same component.

Explanation The drawer offers an identical filtering experience on both breakpoints: a hamburger icon triggers it on mobile, while a "Categories" pill does so on desktop. The underlying product grid is dimmed but remains in place, giving immediate visual feedback when a category is selected.

Table 2: Category drawer – elements and rationale

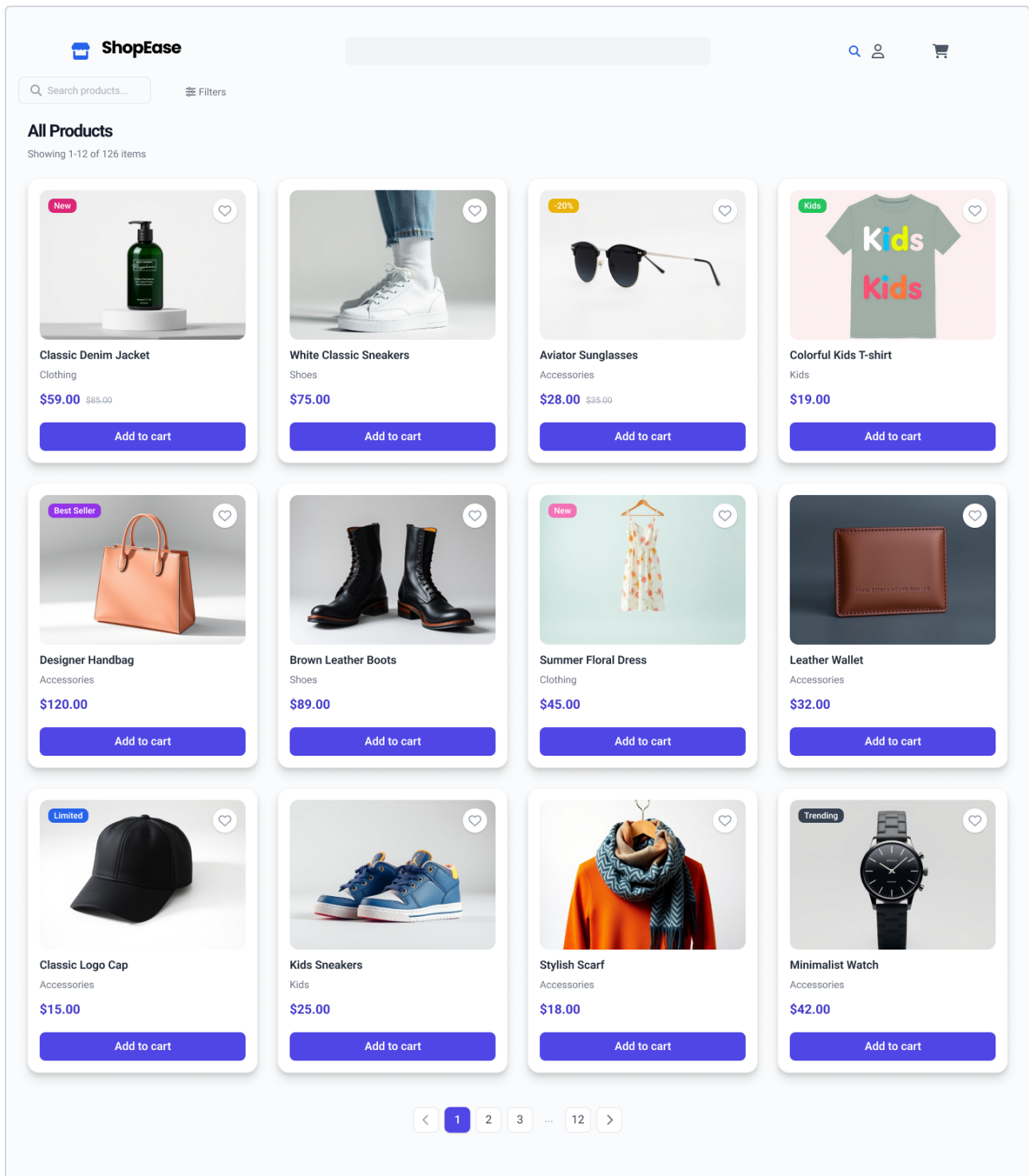| Design element	Purpose & rationale
Hamburger icon (mobile)	Saves horizontal space; familiar pattern.
Categories pill (desktop)	reveals drawer on click.
Accordion list	Supports deep hierarchies without scrolling fatigue.

2.3 Product List Screen

Figure 3: Product grid with search bar and category filter.

Explanation Users can search *and/or* filter without leaving the page. The responsive grid keeps card proportions intact focusable cards maximize tap targets on touch devices.

Table 3: Product list – elements and rationale

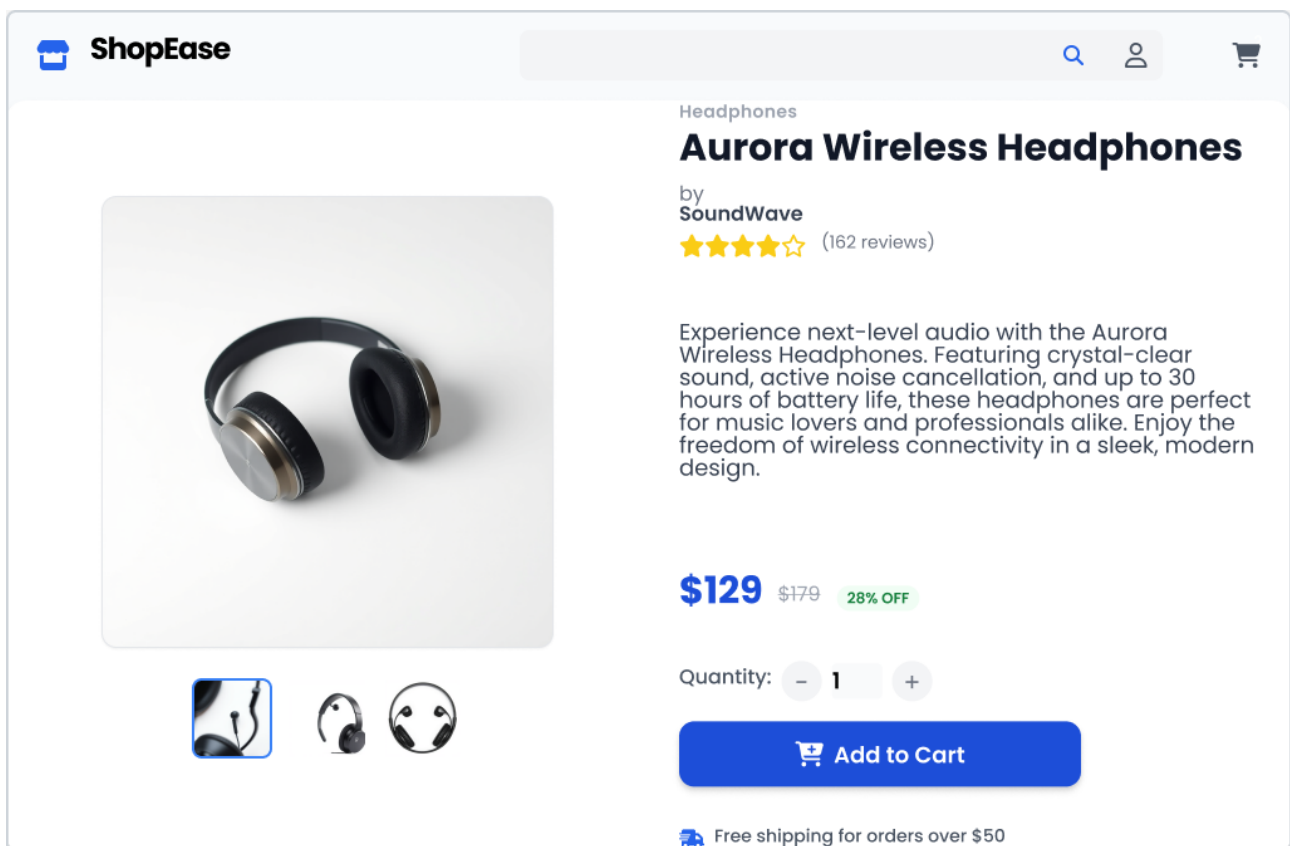| Design element	Purpose & rationale
Secondary navigation	Lets users pivot between catalogue views .
Search field	Supports goal-oriented discovery; full-width on desktop, icon on mobile.
Category dropdown	Progressive narrowing while preserving context; default "Show all" reveals filter state.

2.4 Product Description

Figure 4: Product description.

Explanation The product detail page provides a focused and visually rich view of an individual item, allowing users to assess it before making a purchase. A high-resolution product image is accompanied by supporting thumbnails. There you can see the **"Add to Cart"** button if user likes it, he clicks it, and the product is added to the cart. The cart icon in the top-right corner includes a numeric badge indicating the number of items, reinforcing feedback after adding a product.

Table 4: Shopping cart – elements and rationale

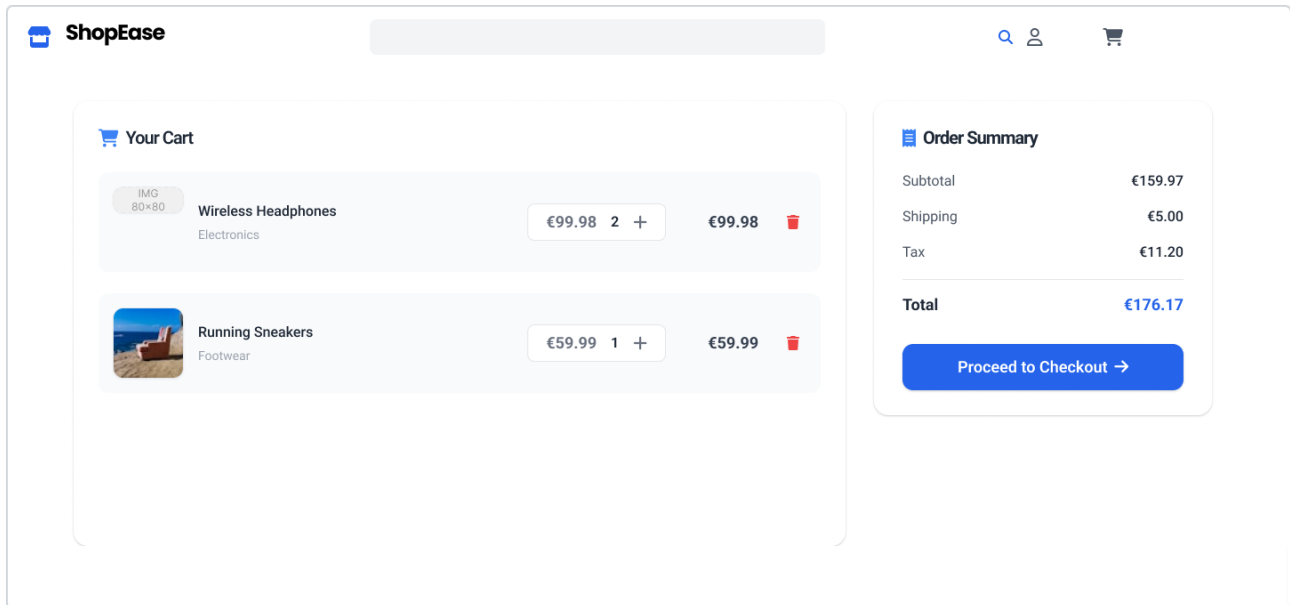| Design element	Purpose & rationale
Product Description	Provides a clear breakdown of details (e.g., price, shipping)
Proceed to Checkout	High-contrast button positioned last in the visual flow if the user want to buy the product.

2.5 Shopping Cart

Figure 5: Shopping cart page with order summary and checkout.

Explanation The shopping cart page is designed for quick decision-making with a clear hierarchy: **product list → order summary → checkout action**. It minimizes distractions by focusing on removal options and prominent **Proceed to Checkout** button. The layout ensures users can review costs and adjust items without leaving the page.

Table 5: Shopping cart – elements and rationale

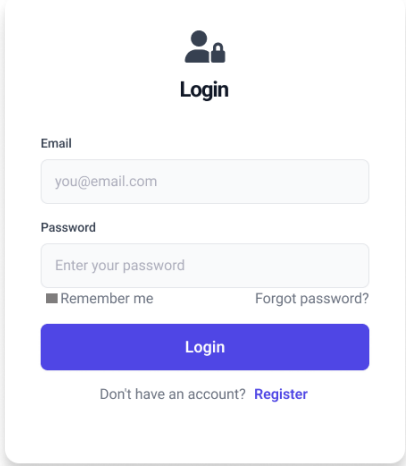| Design element	Purpose & rationale
Product rows	Displays item names, images, and prices for verification. **"Add (Plus) Button"** and **"Remove (Minus) Button"** options allow instant edits.
Order summary	Provides a clear breakdown of costs (e.g., subtotal, shipping) to reduce checkout abandonment.
Proceed to Checkout	High-contrast button positioned last in the visual flow to guide users toward conversion.
Login/Register prompt	Encourages account creation after cart engagement to avoid early friction.

2.6   Login & Registration

Figure 6: Login screen with email/password fields and option for registration.

Explanation   The login page prioritizes simplicity with a minimal form (email/password). Register guides new users to account creation.

Table 6: Login screen – elements and rationale

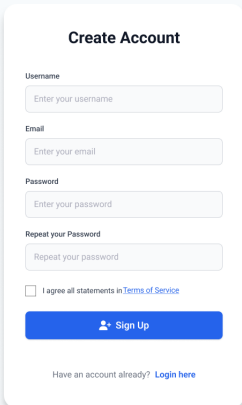| Design element	Purpose & rationale
Email/Password fields	Standardized input format for familiarity and quick completion.
Login button	Primary action styled for prominence; triggers authentication.
Register option	Registration of new users.
Minimal layout	Focuses attention on form completion.

2.7   Account Registration

Figure 7: Account registration form with validation fields and terms agreement.

Explanation The registration form balances thorough validation with user-friendly design. Required fields (username, email, password confirmation) ensure data quality, while the terms checkbox and clear CTA (**"Sign Up"**) streamline legal compliance and conversion. The secondary login prompt avoids duplicate account creation.

Table 7: Registration form – elements and rationale

Design element	Purpose & rationale
Required register fields	Ensures valid data collection (e.g., password confirmation for security).
Terms checkbox	Explicit user consent for legal compliance; prevents unchecked submissions.
Sign Up Button	High-contrast button finalizes conversion with clear action.
Login option	Redirects existing users to avoid frustration or duplicate accounts.
Minimalist layout	Groups related fields (e.g., passwords) to reduce completion time.

3 Admin Design

3.1 Admin Architecture

The admin dashboard provides a comprehensive overview of key business metrics. It features six distinct pages, accessible via the left-hand navigation bar:

- **Overview** - This is the primary landing page, offering a high-level summary of performance.

- **Products** - This page would likely allow administrators to view, add, edit, or delete products.

- **Customers** - This page would provide tools for managing customer

- **Account** - This page contains settings related to the administrator's account, including profile information, profile settings, password management, notification preferences, social account management, and the option to delete the account.

- **Settings** - This page contains global settings for the platform, such as language and timezone preferences, date and time formats, accessibility options, and other general configurations.
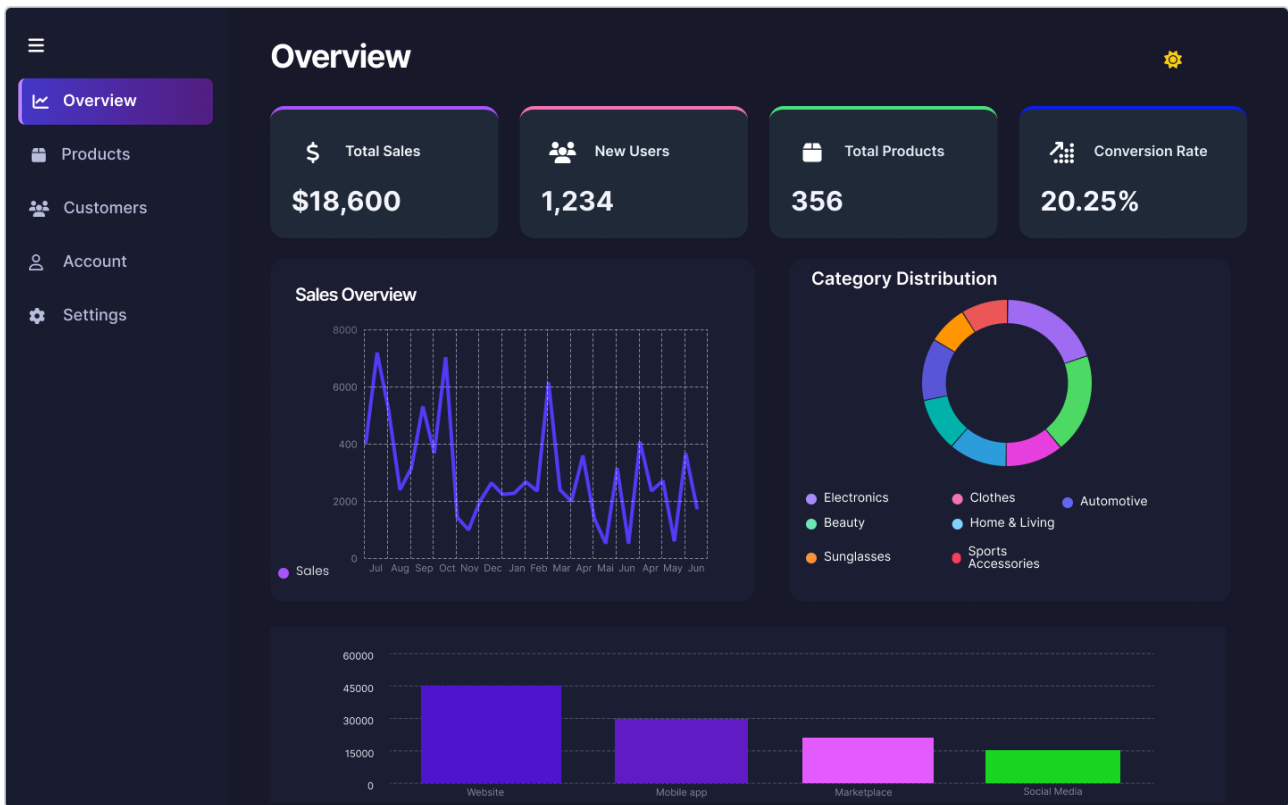
3.2 Overview Page

Figure 8: Overview page in a dark mode.

The Overview Page serves as an analytics dashboard where administrators can track the platform's performance in real time.

At the top, four distinct cards display key performance indicators (KPIs):

- **Total Sales** – Displays the total revenue generated during the current month.

- **New Users** – Shows the number of new user accounts created this month.

- **Total Products** – Indicates the total number of products available in the webshop.

- **Conversion Rate** – Represents the percentage of users who completed a purchase out of the total visitors.

Below the KPI cards, three graphical components offer deeper insights:

- **Sales Overview (Line Graph)** - Visualizes monthly revenue trends across different months.

- **Category Distribution (Pie Chart)** - Shows the proportion of sales by product category, highlighting which categories perform best.

- **Sales by Channel (Bar Chart)** - Breaks down sales by purchase channel—Website, Mobile App, Marketplace, and Social Media—revealing which channels drive the most revenue.
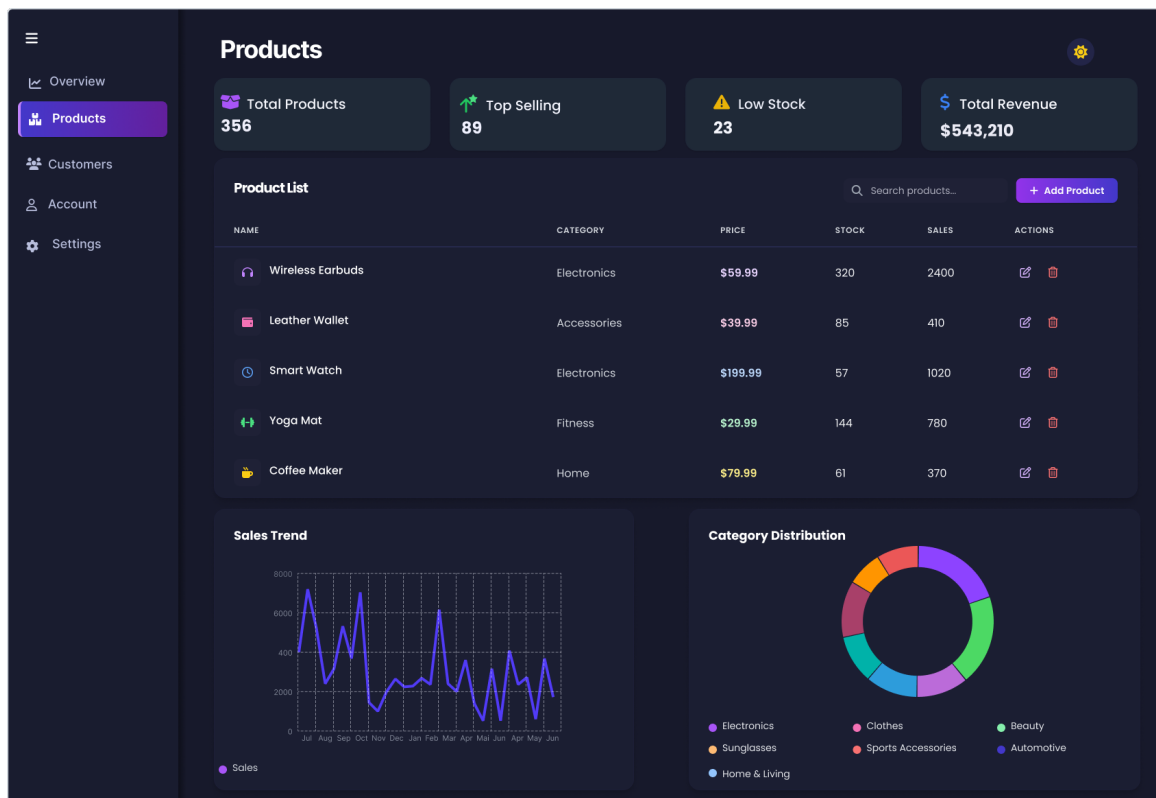
3.3   Product Page

Figure 9: Products page

This page allows the administrator to manage products efficiently while monitoring key performance metrics.

KPI Cards
At the top, four distinct cards display key performance indicators:

- **Total Products** – Shows the total number of products currently in the webshop.

- **Top Selling** – Highlights the product with the highest number of sales.

- **Low Stock** – Indicates the number of products with low inventory.

- **Total Revenue** – Displays the total revenue generated for the current day.

Product List Section Beneath the KPI cards is a prominent Product List presented in a tabular format. This section provides a detailed overview of all products.

- **Search Bar** – Located on the right, it allows real-time filtering of the products as the admin types.

- **Add Product Button** – Positioned next to the search bar, this rectangular button enables the admin to add a new product. Upon clicking, a form/modal appears for entering the product's details.

The table contains the following headers:

- **NAME** – Product name.

- **CATEGORY** – The category the product belongs to.

- **PRICE** – Product price.

- **STOCK** – Current inventory count.

- **SALES** – Number of units sold.

- **ACTIONS** – Contains two buttons:
    - **Edit** – Opens a form to modify product details.
    - **Delete** – Removes the product from the list.

At the bottom of the page, two main charts provide insights into product performance:

- **Sales Trend (Line Graph)** - Displays sales progression over time, helping track revenue trends.

- **Category Distribution (Pie Chart)** - Visualizes how sales are distributed across product categories.
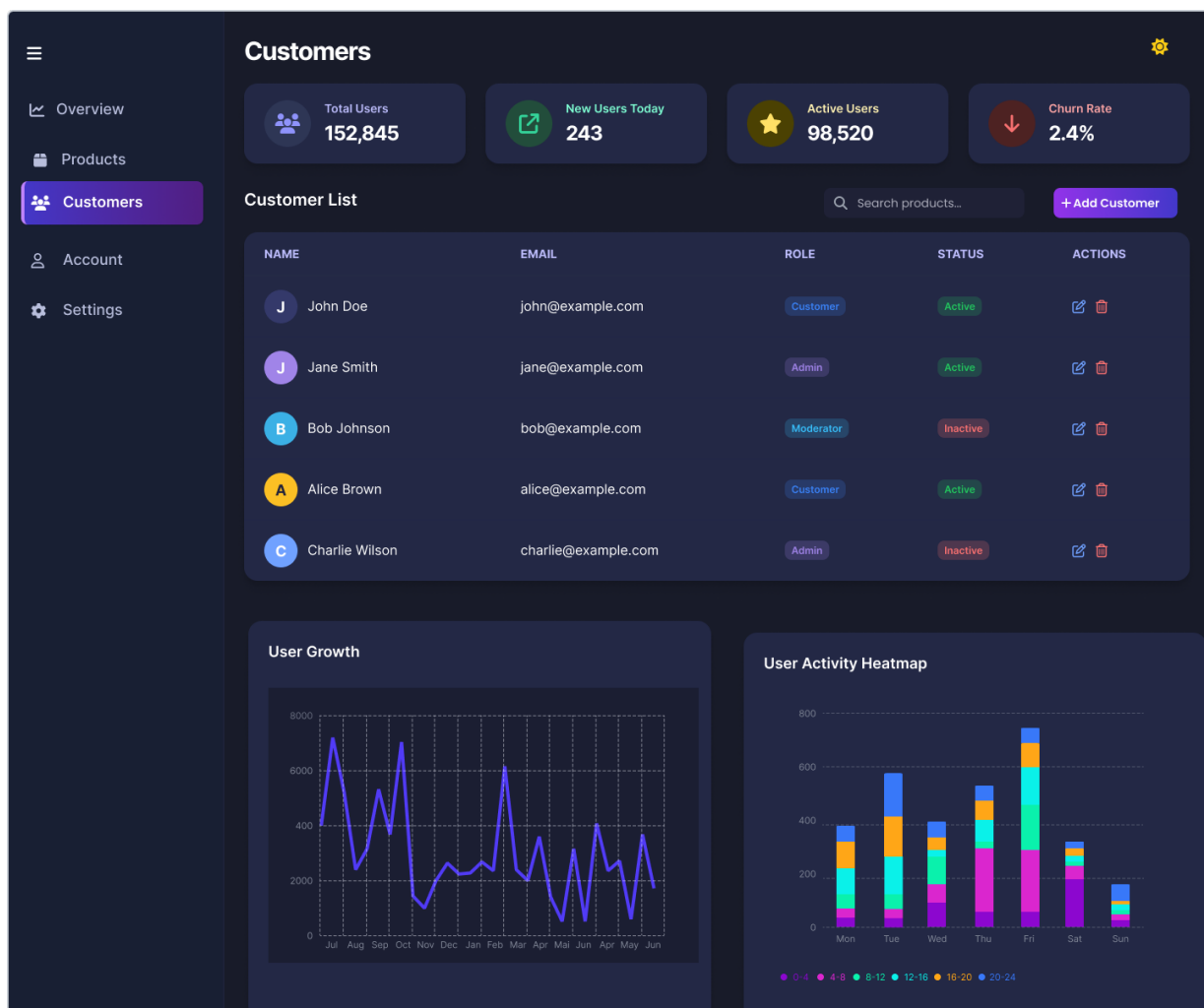
3.4   Customers Page

Figure 10: Customers page

This page allows the administrator to manage customers/users efficiently.

At the top, four distinct cards display key performance indicators:

- **Total Users** - Shows the total number of registered customers/users.

- **New Users Today** - Displays the number of users who registered today.

- **Active Users** - Indicates the current number of active users.

- **Churn Rate** - Shows the percentage of users who have stopped engaging with the platform.

Customer List Section Beneath the KPI cards is a prominent Customer List presented in a tabular format, providing a detailed overview of all registered users.

- **Search Bar** – Located on the right, it allows real-time filtering of the products as the admin types.

- **Add Customer Button** – Positioned next to the search bar, this rectangular button enables the admin to add a new customer/user. Upon clicking, a form/modal appears for entering the product's details.

The table includes the following columns:

- **NAME** – Full name of the customer.

- **EMAIL** – Email address of the customer.

- **ROLE** – Assigned role (e.g., User, Admin).

- **STATUS** – Account status (e.g., Active, Inactive).

- **ACTIONS** – Contains two buttons:

  - **Edit** – Opens a form to modify customer details.

  - **Delete** – Removes the customer from the list.

At the bottom of the page, two visualizations provide additional insights:

- **User Growth (Line Graph)** - Displays the growth in user registrations over time.

- **User Activity Heatmap (Bar Chart)** - Shows the distribution of user activity across different age groups or time periods.
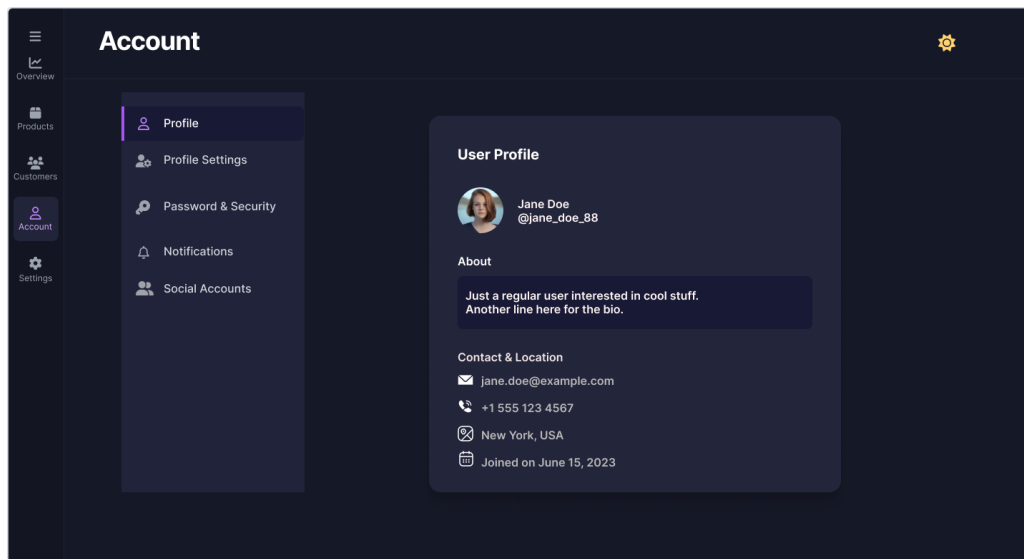
3.5   Account Page

3.5.1   Profile

Figure 11: Profile page

This page displays the admin's personal information, including name, email address, phone number, country, and the date the account was created.

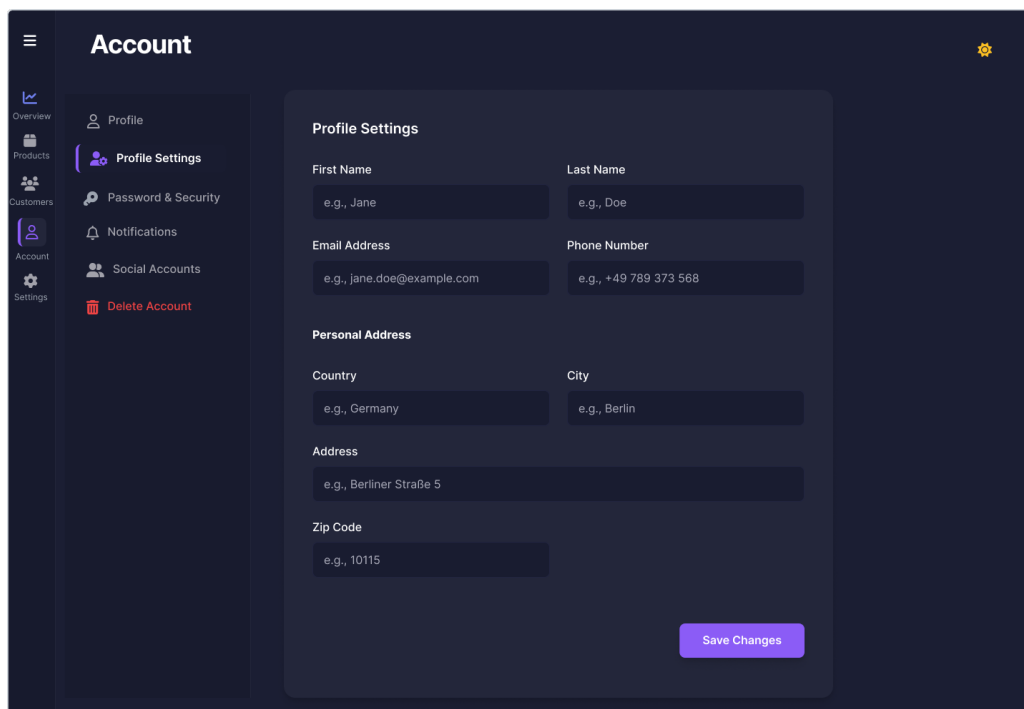### 3.5.2   Profile Settings

Figure 12: Profile settings page

This page allows the administrator to view and update their personal information. It is organized into two main sections:

Personal Information
The admin can update the following fields: Name, Email Address, Phone Number

Address Information
This section enables the admin to manage their address details:Country, City, Street Address, ZIP Code

A **"Save Changes"** button is available at the bottom of the page to apply updates.

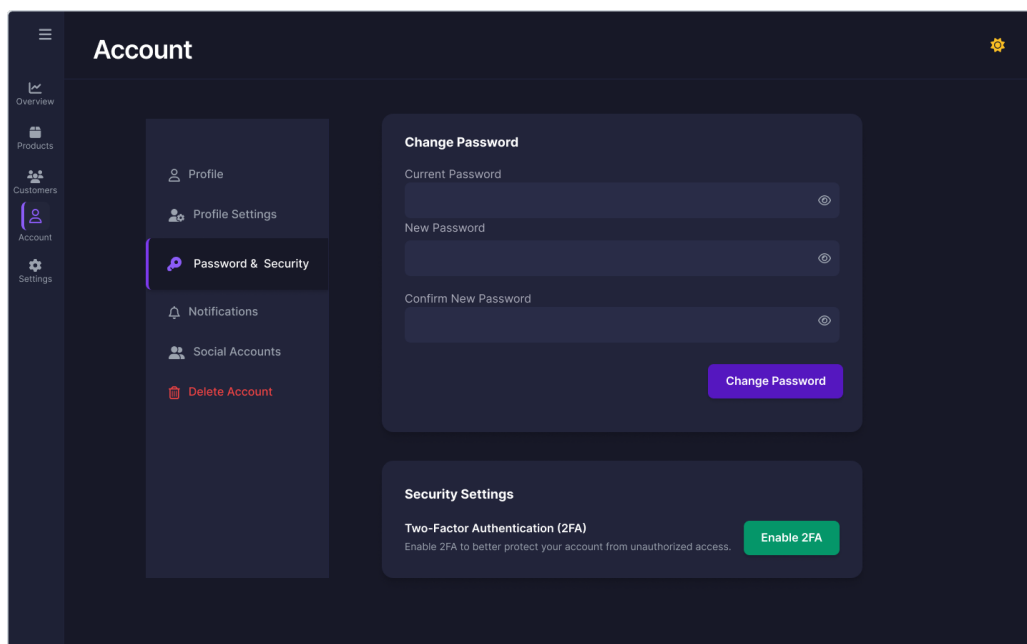### 3.5.3   Password & Security

Figure 13: Password and Security page.

This page allows the administrator to change their **password** and manage **two-factor authentication (2FA)**. It is organized into two main sections:

Change Password
The admin can update their login password by entering:

- The current password

- The new password

- Confirm new password

A **"Change Password"** button is provided at the bottom of this section to apply the update.

Two-Factor Authentication (2FA)
This section enables the administrator to enhance account security with 2FA. It includes: A toggle or switch to enable or disable 2FA
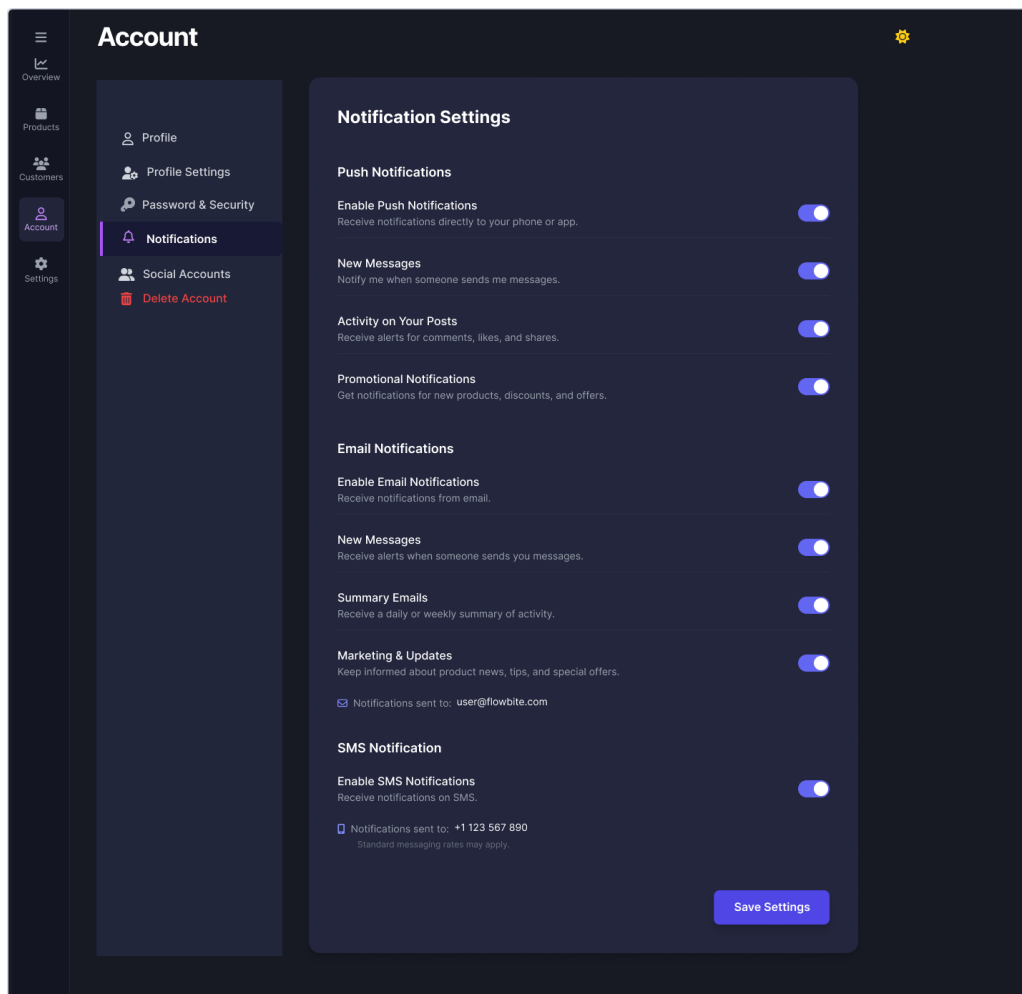
3.5.4   Notifications

Figure 14: Notifications page

This page displays notification settings. It includes sections for **Push Notifications, Email Notifications, and SMS Notifications.** Each section has toggles to enable or disable different types of notifications, such as new messages, activity on posts, promotional updates, summary emails, and marketing updates. It also shows the email address and phone number where notifications are sent, and a **"Save Settings"** button at the bottom to apply the changes.
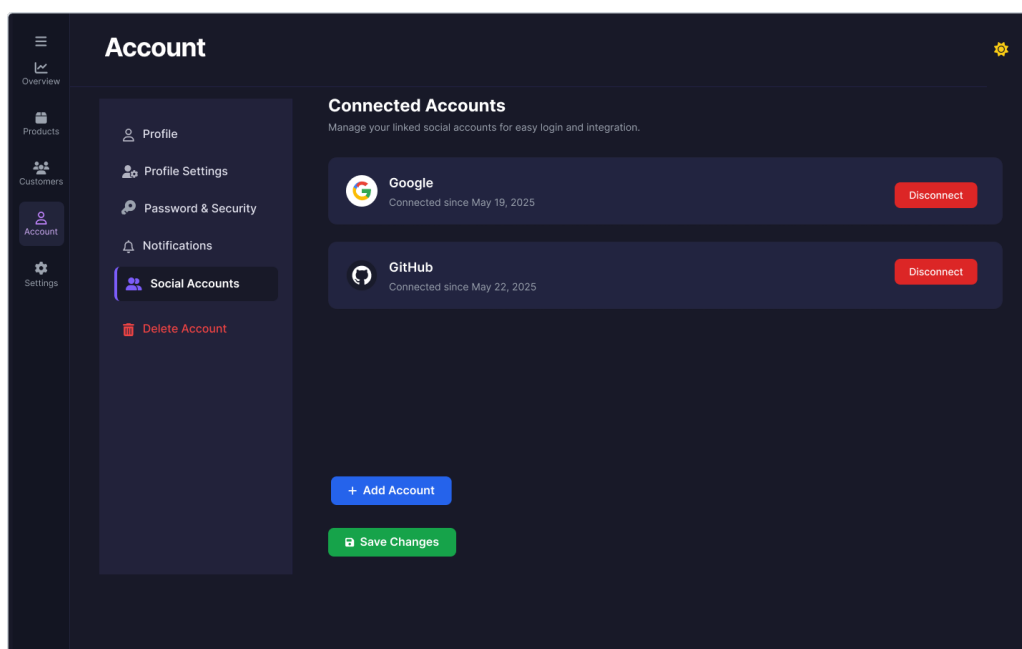
3.5.5 Social Accounts

Figure 15: Social Account page.

This page provides the administrator with the ability to manage connections to various external social accounts such as Google, GitHub, and others. It displays a list of all currently connected accounts, including:

- **Account Provider** (e.g., Google, GitHub)

- **Date of Connection**

- **Status** (Connected/Disconnected)

Key Features:

- **Connect New Account:** A button or option allows the admin to link a new social account by authenticating with the selected provider.

- **Disconnect Account:** For each connected account, there is an option to disconnect or revoke access.

- **Connection History:** Displays the date and time when each account was connected.

The main purpose of this page is to give administrators full control over their linked external accounts, ensuring a secure and customizable login experience.
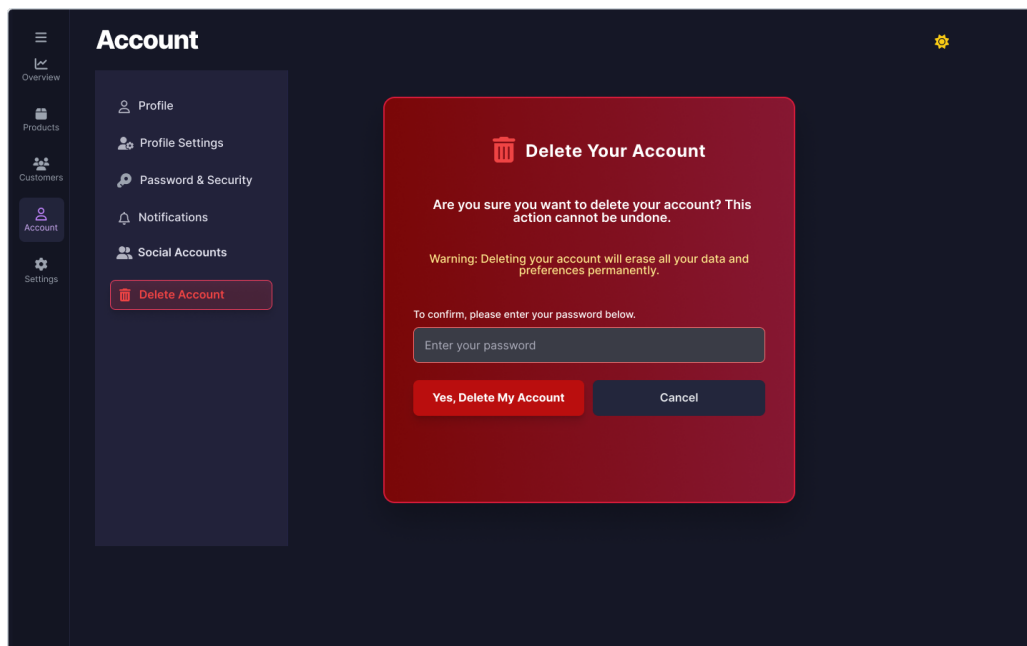
3.5.6 Delete Account

Figure 16: Delete Account page

This page allows the administrator to delete their personal account. To proceed, the administrator must enter their current password and then click the **"Yes, Delete My Account"** button or cancel the action.

3.6 Settings

This area consists of several distinct cards or sections, each focused on a specific category of settings:

- **Profile Section** - Contains a button labeled "Update, " which redirects the admin to the profile settings on the account page.

- **Language Section** - A dropdown menu for selecting the preferred language of the platform interface.

- **Timezone Section** - A dropdown menu for adjusting the system's timezone according to the admin's location.

- **Date/Time Format Section** - Offers radio buttons to switch between different date/time display formats (e.g., DD/MM/YYYY or MM/DD/YYYY).

- **Accessibility Section** - A dropdown menu to change UI display size or enable accessibility features (e.g., larger text, high-contrast mode).

- **Data Management Section** - Provides an option to clear cache to free up storage and refresh data.

- **Balance Section** - A dropdown menu to set the auto-save option (e.g., every 5 minutes).

- **Default Files Location Section:** Allows the admin to set the default folder for downloads or exported files.
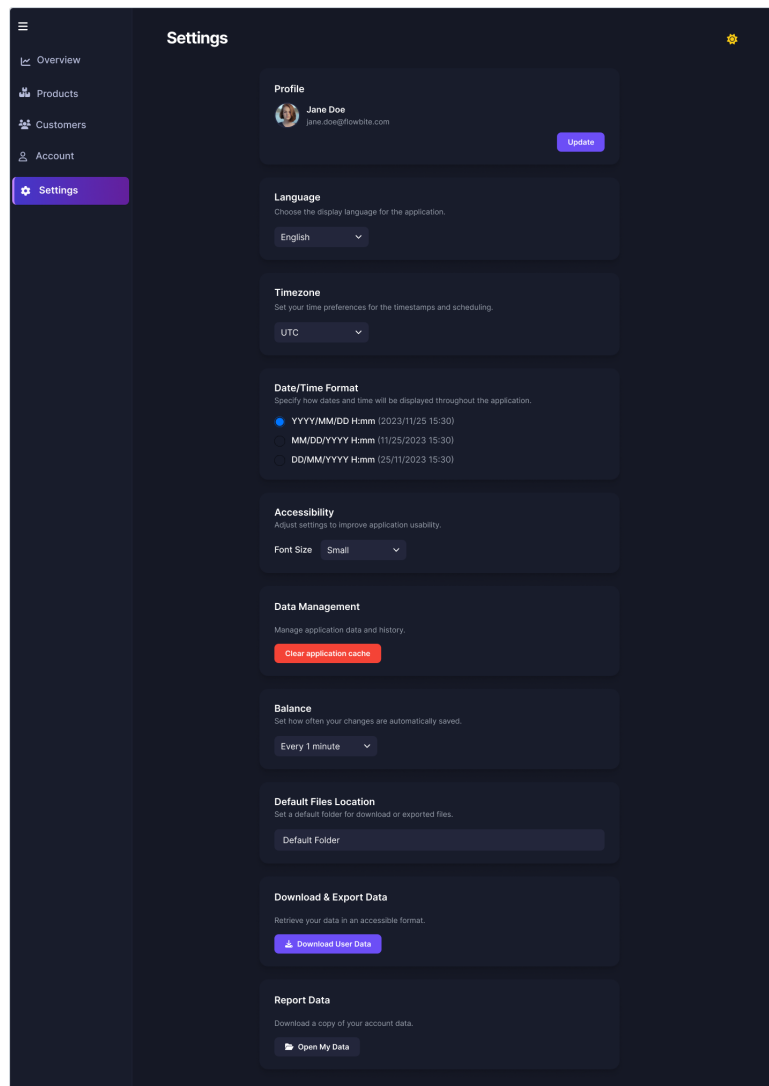
Figure 17: Settings page

- **Report Data Section:** Includes an "Export Data" button for downloading a complete copy of account-related data.
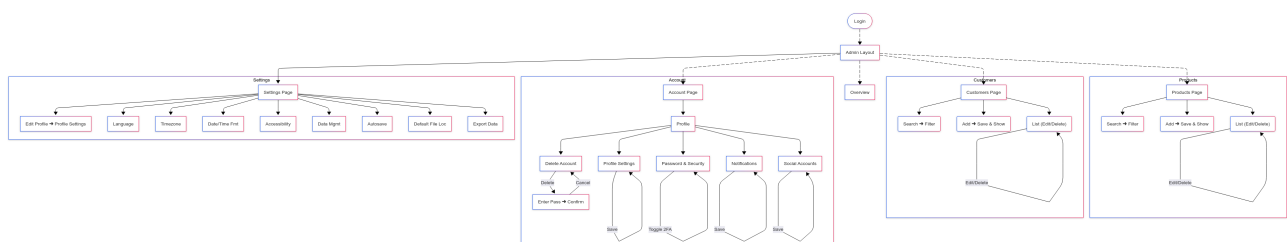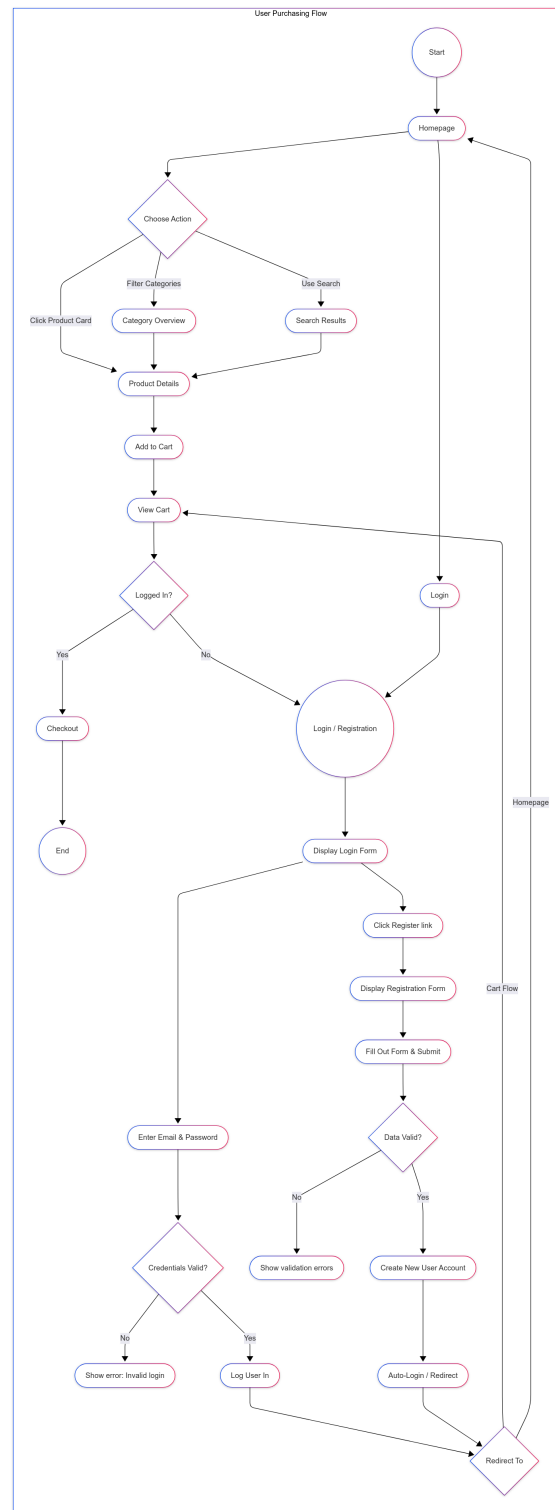
4 FlowCharts

4.1 Admin Layout

Figure 18: Overview of the Admin Layout

4.2   Main Layout

5 Figma Links

Link: **Figma Mockup**

6 Design Decisions & Rationale

In this section, we walk through the main design choices we made, explaining how each one supports the needs of our two primary users: **Regular Shoppers** and **Store Administrators**. Our goal was always to make the experience intuitive and efficient for everyone.

6.1 Layout

- **Home Screen Flow**: We start with a clear welcome message, then introduce what we offer, and finally highlight a few featured categories in a carousel. This step-by-step approach helps new visitors discover and explore without feeling lost. **(Regular Shoppers)**

- **Flexible Product Grid**: No matter the screen size, our product cards keep the same proportions, so items are easy to compare. Shoppers appreciate the consistency, and admins get a reliable preview of the catalog. **(Regular Shoppers & Administrators)**

- **Two-Column Detail Views**: For checkout and admin pages, we split the screen: one side shows details like your cart, and the other gives the summary. It's easier on the eyes and speeds up decision-making. **(Regular Shoppers)**

6.2 Interaction Patterns

- **Always-Visible Top Bar**: Search, cart, and account buttons remain on screen at all times, allowing shoppers to switch effortlessly between browsing, their cart, and checkout with a single click. **(Regular Shoppers)**

- **Slide-Out Filters**: On mobile, shoppers tap the hamburger icon; on desktop, a pill-shaped button reveals filters. The page stays clean, and everyone can narrow down lists without losing context. **(Regular Shoppers & Administrators)**

- **Quick-Edit Modals**: In admin pages, small pop-ups let you edit products or users right where you are, without loading a new page. It cuts down on clicks and keeps your workflow smooth. **(Administrators)**

6.3 Colors

- **Bold Accent for Actions**: We chose a bright color for key buttons like **"Shop Now"** and **"Save Changes."** It instantly grabs attention and guides users to the next step. **(Regular Shoppers & Administrators)**

- **Calm, High-Contrast Backgrounds**: A palette of soft grays and crisp whites lets product images stand out, while maintaining high contrast for accessible, easy-to-read text. **(Accessibility)**

- **Light and Dark Modes**: Whether you like a bright look during the day or a darker one at night, our interface adjusts to match. It's easier on the eyes and fits any setting. **(Regular Shoppers & Administrators)**

6.4   Typography

- **Simple Sans-Serif Font**: We picked a modern font that's straightforward to read at any size. Headings and body text use different weights so you can scan titles and details at a glance. **(Regular Shoppers & Administrators)**

- **Readable Sizes and Spacing**: Body text is set to a comfy 16pt with generous line spacing. Larger headings help break up content and make busy pages feel more organized. **(Accessibility)**

6.5   Accessibility

- **Screen-Reader Support**: We added ARIA labels and roles to menus, dialogs, and forms so that assistive tech can read out exactly what's happening. **(Accessibility)**

7   Acknowledgment of AI Technologies

This document was initially drafted with GPT-4o and Figma's Pilot UX AI. The final content was reviewed and refined by the authors.