

Nicole Nightmare Shopfront

Full-stack MERN App

Overview

The purpose of the app is to provide a bespoke e-commerce environment for a local Brisbane artist.

The application's development philosophy is to create an online shopfront that reflects the artist's own creative work. This application will provide an user experience that differentiates itself from one size fits all traditional e-commerce apps.

Our platform's unique approach would reflect the client's creative identity whilst providing an online shop front with excellent UX design. We believe this purposeful approach will improve the artist's reach and commercial success.

This application is tailor made for a fictional Brisbane based artist called Nicole Nightmare, modeled on the real Brisbane artist Phoebe Paradise.

What makes this App unique?

Seller Features

- Product Management: Allows the seller to add products to their store, including details such as product images, descriptions, and categories.
- Pricing Control: Enables the seller to set and adjust prices for each product.
- Inventory Tracking: Automatically updates inventory levels as products are sold and displays a "Sold Out" status on the shopfront for items that are no longer available. This helps in managing the amount of products available and ensures customers are aware of product availability.

User Features

- Product Browsing: Customers can browse through the artist's wares, with the option to filter or search products by type, making it easier to find specific items.
- Persistent Shopping Cart: A shopping cart feature that retains items between sessions, allowing customers to add products to their cart and complete the purchase at a later time without losing their selections.
- Checkout Process: A streamlined checkout process for customers to review their cart, enter shipping and payment information, and complete their purchase.

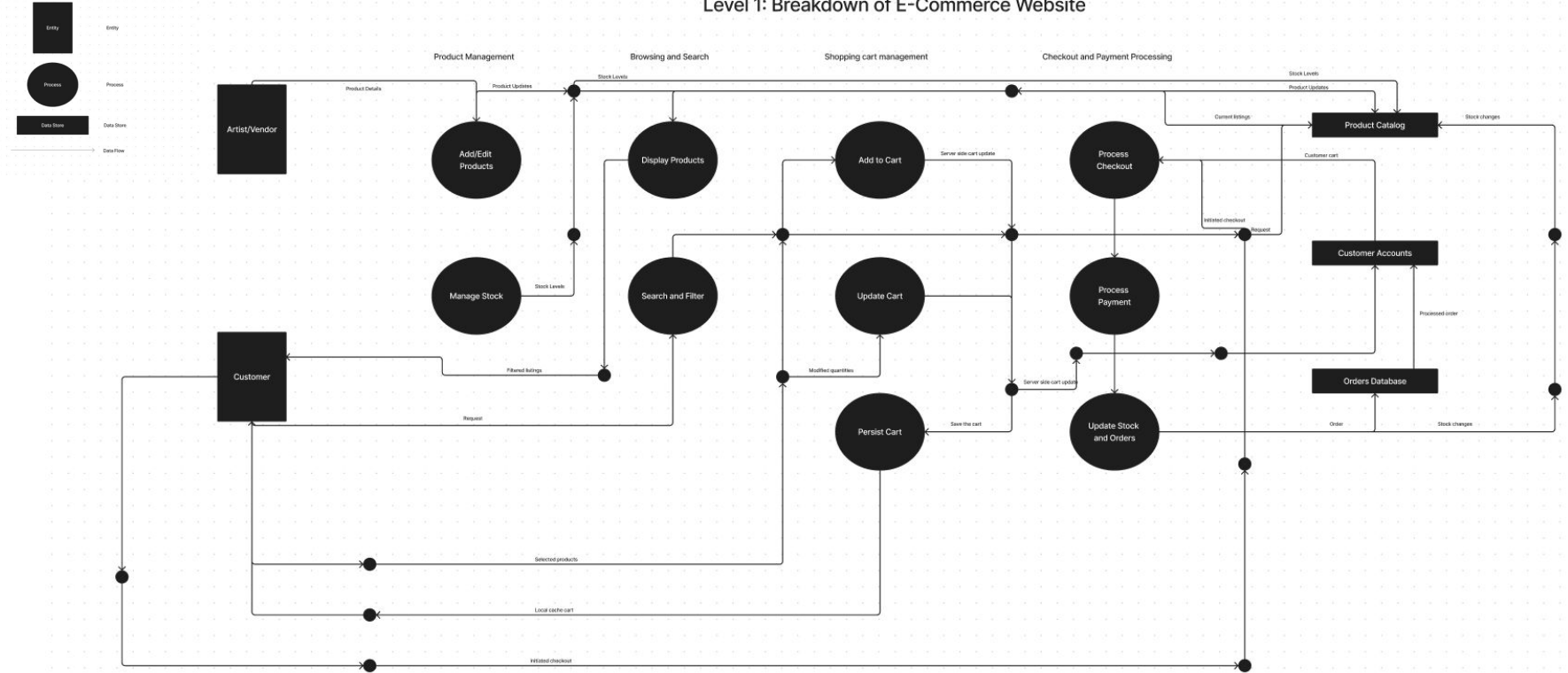
Target Audience

The target audience for the website is a small Brisbane based artist. The website will reflect the artist aesthetics as to appeal in turn to their customer base of eighteen to forty year old individuals drawn towards alternative art. For our website we based our fictitious Brisbane artist on the real Brisbane artist Phoebe Paradise.

Our fictional artist is named Nicole Nightmare. She produces art prints and selects clothing items for a mostly female audience. She is famous for her striking visual style that incorporates a large use of saturated colors and a recurring motif of old Queenslanders.

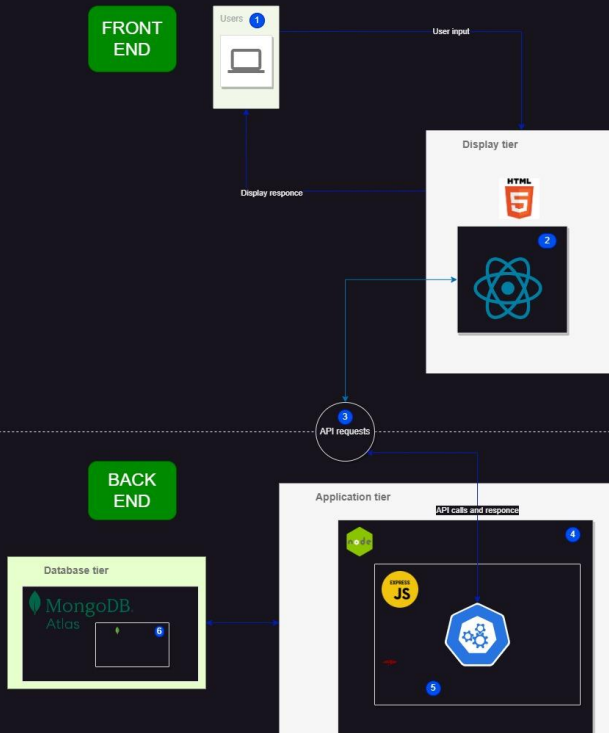
Data Flow

Legend
Yourdon and Coad Notation



Application Architecture

Application Architecture Diagram



1. Users

The user accesses the application via a web browser.

4. Express.js & Node.js

The API has multiple endpoints that direct how requests are processed and responded to. Each endpoint has different associated middleware that is executed in order until a response can be sent back to the client. It's through middleware that authentication and authorisation features are added to the application. This is facilitated by Express.js, a server-side web framework that runs within a Node.js server.

2. React.js

React.js, a JavaScript framework for client-side applications, is used to build the user interface. Components in React render into HTML.

3. API Requests

By interacting with the React user interface users can send XML HTTP requests to the server.

6. MongoDB

MongoDB, hosted by Atlas, provides contiguous storage of the web application's data. MongoDB is a NoSQL database, meaning it stores data in documents within collections. The response it sends back to the server-side application is interpreted by Mongoose.

5. Mongoose

Within Express.js, Mongoose, a JavaScript programming library, is used to manage the MongoDB database connection and the manipulation of the data within that application. Each MongoDB collection is mapped to a schema within the Express application. This schema is used to define the structure of the documents within. These schemas are then passed to a Model object. The database is then queried, new documents created and existing documents updated or deleted via the manipulation of these Models.

KEY

	React.js
	HTML
	RESTful API
	Mongoose
	Node.js
	Express.js
	MongoDB

Mobile Wireframes

HOME

- Home greets users the first time they navigate to the site. It serves as the homebase for Navigation to all other routes on the site.
- The artist's work and a brief intro are provided
- The Navbar contains a hamburger menu with links to Home, Shop, and About. It also has user and cart icons which allow the user to sign in and also save items from the shop to their cart.
- The main logo also links the user to Home.
- All routes are wrapped by an Items, Cart and User provider which easily provides access to their state across all components of the app.



WELCOME

Welcome to the official site of Nicole Nightmare. Dive into the vibrant world where Brisbane meets boundless creativity. Here, you'll discover a collection of artworks that celebrate the beauty of the Sunshine State through Nicole's unique lense.



HOME

SHOP

ABOUT



WELCOME
Welcome to the official site of Nicole Nightmare. Dive into the vibrant world where Brisbane meets boundless creativity. Here, you'll discover a collection of artworks that celebrate the beauty of the Sunshine State through Nicole's unique lense.

Featured

testing uploads

Fab Shirt

\$28

Add to cart

testing uploads

Scented Candle

\$29

Add to cart

testing uploads

Cool T-shirt

\$12

Add to cart

testing uploads

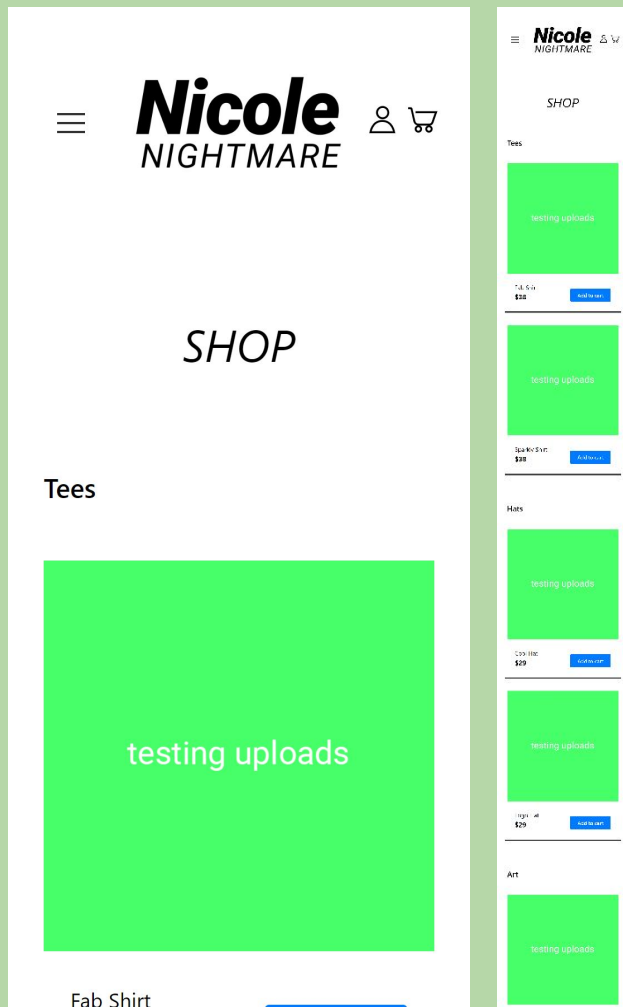
Unique Painting

\$133

Add to cart

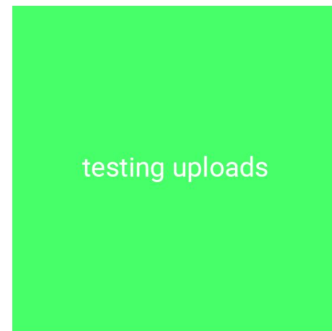
SHOP

- The shop component contains all of the items stored in MongoDB. They're filtered within the component and then displayed by the item's category. (Tees, Hats, Art, Accessories, Other)
- The ShopFrontItem component within the ShopFront is a modular component which is passed item information in the form of props, from the parent ShopFront. This reduces code and makes the Item's easy to maintain and update if there are changes to layout or Database information.
- "Add Item" is a custom component which accepts the item as a prop. The item is then added via the useCartContext.



ITEM

- Utilizes React's useContext hook to access and display item details from the global ItemsContext, ensuring dynamic and up-to-date content is provided based on the application's current state.
- Employs useParams from React Router to extract the unique item 'id' from the URL, allowing the component to fetch and render the specific details of the item selected by the user.
- Presents a detailed view of the item including an image, name, price, description, and size.
- Incorporates an AddToCartButton component, enabling users to add items directly to their shopping cart from the item details page.



Fab Shirt

\$38

Fab Shirt for fab times.

Size

M

Add to cart

ABOUT

- Dedicated to showcasing the profile and artistic narrative of Nicole Nightmare, the component delivers an engaging overview of the artist's background and the theme of her work, emphasising her connection to Brisbane.
- Features a minimalist design approach with focused text sections for storytelling, complemented by aesthetic elements like color blocks, contributing to a narrative about the artist's journey and style.



The Artistic Journey of Nicole Nightmare

Nicole Nightmare is an emerging artist from Brisbane, making waves with her distinctive creations. Her artwork serves as a mirror to her experiences growing up in Queensland's vibrant Sunshine State. Unmistakably Brisbane, Nicole's work delves into the exploration of form and function within the city's evolving landscape.

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LOGIN

- Implements a user authentication process utilizing React's `useState` and `useEffect` hooks, allowing for automatic login checks via an `autoLogin` API call and updating user context upon successful authentication.
- Provides a login interface with state-controlled input fields for email and password, employing real-time validation to enable the submission button only when both fields contain input.
- Captures and displays error messages to inform the user of incorrect login attempts, enhancing user feedback and interaction within the authentication process.
- Includes a direct link to the registration page for new users, facilitating easy navigation between login and registration components within the application's user interface.



Log In

[Make new account](#)

REGISTER




- Provides a registration interface enabling new users to create an account by inputting their email, first name, last name, and password, with state hooks managing each input field.
- Implements form validation logic to enable the submission button only when all fields are filled, ensuring that users provide all necessary information before proceeding, thereby improving data integrity and user experience.
- Upon successful registration, utilises the application's context management to update user state and automatically navigate the user to the home page, integrating the registration process into the user's navigation flow



Make account

LOGGED IN / SETTINGS

- Utilizes React's context and useState hooks to manage user authentication states, including active user status and admin privileges, and controls visibility of UI elements based on these states.
- Implements a logout functionality that sends a GET request to a specified endpoint, clears user-specific states upon successful response, and navigates the user to the home page.
- Organizes user interaction elements within a flexible container, providing a straightforward interface for logging out, accessing account settings, and navigating to additional user-specific areas like an artist dashboard.

**Nicole**
NIGHTMARE

You're logged in

Log out?




Account Settings

Change password

Submit

Delete Account

Your Dashboard

**Nicole**
NIGHTMARE

You're logged in




Log out?

Account Settings

Your Dashboard

ARTIST PORTAL

- Once the admin has been verified and logged in, they will have access to the artist portal.
- The artist portal was built with the intention to allow the user to create, update and delete items that are available for purchase. All items are provided via global items context.
- There are a series of textareas and inputs which take text and number entry.
- Checks are made on the input to ensure it doesn't exceed a set amount of characters.
- Creating a new item saves to the items collection in the DB. All images will be saved to separate storage in Firebase and then the URL is saved as a string in MongoDB.
- Updating an item will take pre-existing data for the item and populate each field. Every field must be present for the items to be saved.
- Deletion of an item selects an item via drop-down.

**Nicole**
NIGHTMARE

Hi, Nicole.

Create Item

Item Category

Item Size

Featured

Price

Upload Image

Add

Update Item

Select Item

Item Category

Item Size

Featured

Price




Upload Image

Update

Delete Item

Select Item

Delete

**Nicole**
NIGHTMARE

Hi, Nicole.

Create Item

Item Category

Item Size

Featured

Price

Upload Image

Add

CART

- The user cart context is global across the app. This allows a persistent state for the cart an any location in the site.
- Each cart item is assigned a unique key generated by concatenating the item's id with its index in the array. This helps React identify which items have changed, are added, or are removed.
- Items are displayed with the item image, name and price. A subtotal for all of the items is displayed at the bottom of the page next to the checkout button.
- Checkout button will navigate to the checkout for purchases



Cart



Subtotal: **\$105.00**



Check Out


CHECKOUT

- Utilizes Stripe.js and Stripe Elements to handle secure payment processes, enabling the collection and submission of card details directly within the user interface.
- Leverages React context for accessing cart subtotal and React Router for navigation, facilitating seamless transitions and data access across different components of the application.
- Implements a form submission process that includes validation checks for Stripe service readiness, extracts card information, creates a payment method, and communicates with the server to process payments.
- Provides error handling mechanisms throughout the payment process, including logging errors for debugging purposes and offering feedback to the user based on the payment outcome.

☰

Nicole
NIGHTMARE

 Card number

Autofill [link](#)


Last Name


Address


Phone

Pay Now

Cart

 Sparkly Shirt
\$38.00



 Sparkly Shirt
\$38.00


 Cool Hat
\$29.00

Subtotal: \$105.00

☰

Nicole
NIGHTMARE

 Card number

Autofill [link](#)


Last Name


Address

Phone

Pay Now

Cart

 Sparkly Shirt
\$38.00

 Sparkly Shirt
\$38.00

Tablet Wireframes

HOME



Nicole
NIGHTMARE



WELCOME

Welcome to the official site of Nicole Nightmare. Dive into the vibrant world where Brisbane meets boundless creativity. Here, you'll discover a collection of artworks that celebrate the beauty of the Sunshine State through Nicole's unique lense.

Featured

SHOP

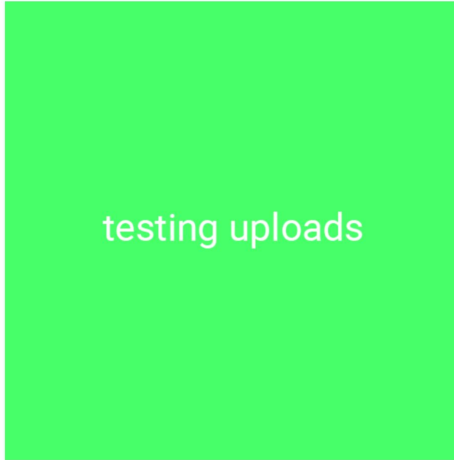


Nicole
NIGHTMARE



SHOP

Tees



testing uploads

Fab Shirt
\$38

Add to cart

ITEM



Nicole
NIGHTMARE



testing uploads

Fab Shirt
\$38

Fab Shirt for fab times.

Size



Add to cart

ABOUT



Nicole
NIGHTMARE



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LOGIN



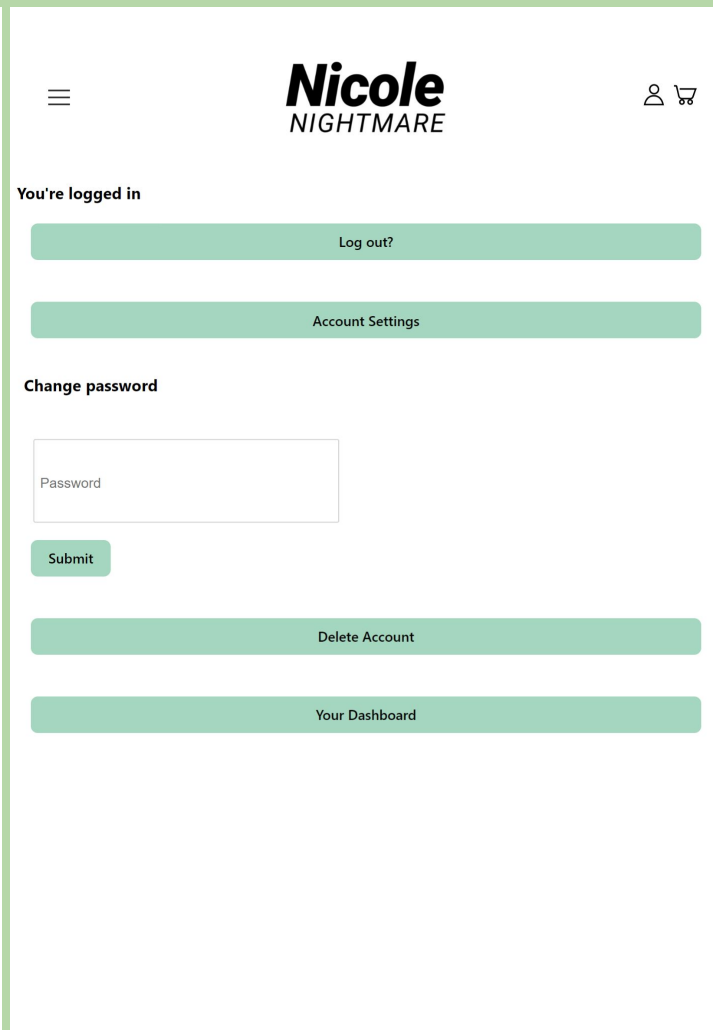
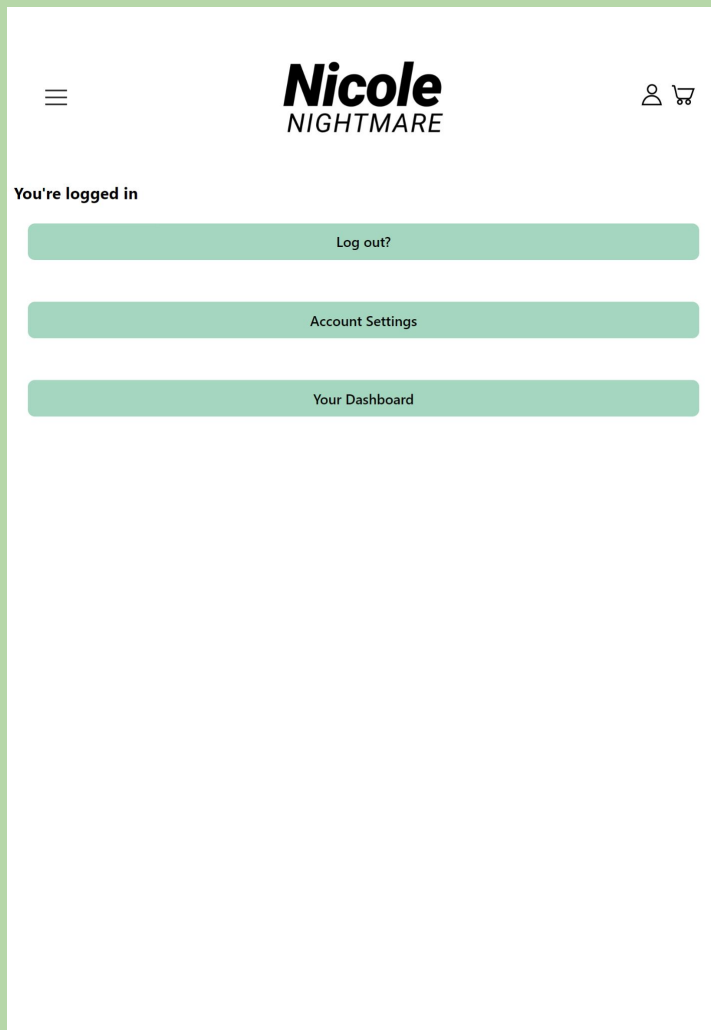
Nicole
NIGHTMARE



Log In

[Make new account](#)

LOGGED IN / SETTINGS



REGISTER







Nicole
NIGHTMARE



Make account

ARTIST PORTAL



Hi, Nicole.

Create Item

Item Category

▼

Item Size

▼

Featured

▼

Upload Image

Add

Update Item

Select Item

▼

CART



Nicole
NIGHTMARE



Cart



Fab Shirt
\$38.00



Fab Shirt
\$38.00






Fab Shirt
\$38.00



Subtotal: **\$114.00**

[Check Out](#)

CHECKOUT



Card number

Autofill link




Last Name

Address

Phone

Pay Now

Cart

	Fab Shirt \$38.00	×
	Fab Shirt \$38.00	×
	Fab Shirt \$38.00	×
Subtotal:		\$114.00

Desktop Wireframes

HOME

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



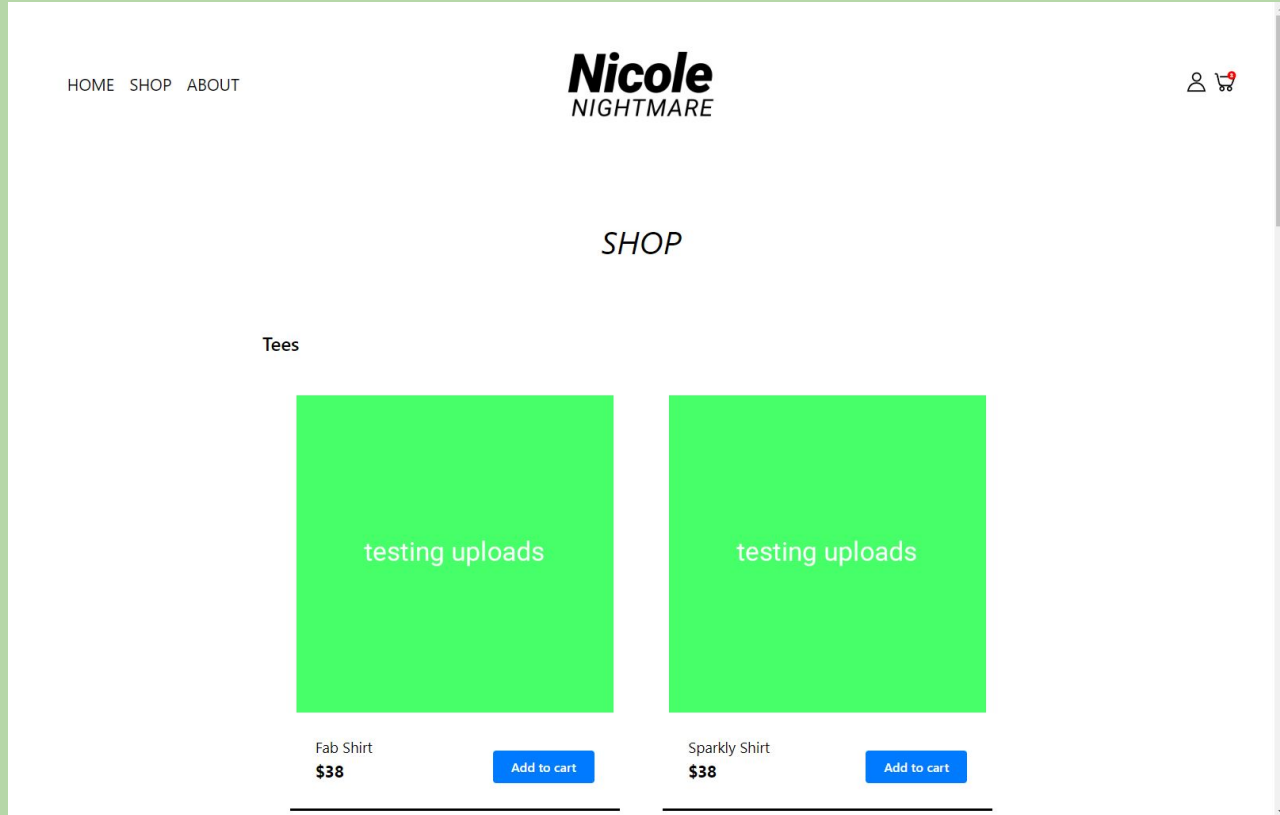
WELCOME

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Featured



SHOP



ITEM

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



testing uploads

Fab Shirt

\$38

Fab Shirt for fab times.

Size

M

Add to cart

ABOUT

[HOME](#) [SHOP](#) [ABOUT](#)

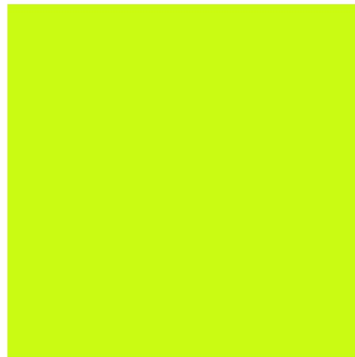
Nicole
NIGHTMARE



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REGISTER

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



Make account

LOG IN

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



Log In

[Make new account](#)

LOGGED IN

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



You're logged in

[Log out?](#)

[Account Settings](#)

Change password

Password

[Submit](#)

[Delete Account](#)

[Your Dashboard](#)

ARTIST PORTAL

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



Hi, Nicole.

Create Item

Update Item

CART

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



Cart



Fab Shirt
\$38.00



Fab Shirt
\$38.00



Fab Shirt
\$38.00



Subtotal: **\$114.00**

[Check Out](#)

CHECKOUT

[HOME](#) [SHOP](#) [ABOUT](#)

Nicole
NIGHTMARE



Card number

[Autofill](#) [link](#)

Last Name

Address

Phone

Pay Now

Cart



Fab Shirt
\$38.00



Fab Shirt
\$38.00



Fab Shirt
\$38.00



Subtotal:

\$114.00