# Full Stack Development with MERN

# **Frontend Development Report**

Date	14/7/2024
Team ID	SWTID1719933594
Project Name	ShopEZ: E-commerce Application
Maximum Marks	

**Project Title:** ShopEZ: E-commerce Application

Date: 14/7/2024

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# **Objective**

The objective of this report is to document the frontend development progress and key aspects of the user interface implementation for the ShopEZ: E-commerce Application project.

## **Technologies Used**

Frontend Framework: React.js
State Management: Context API
UI Framework/Libraries: Bootstrap

• **API Libraries:** Axios

# **Project Structure**

```
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SHOPEZ
 client
 > public
 ∨ src
  > components
  > context
  > hooks
  > pages
  > styles
 # App.css
 JS App.js
 JS App.test.js
 # index.css
 JS index.js
 logo.svg
 JS reportWebVitals.js
 JS setupTests.js
.env
.gitignore
{} package-lock.json
{} package.json
README.md
```

Frontend part of the app contains the above elements. The layout of the app is decided by Form, Layout, Routes which comes under components. Hooks are used for getting categories of product while searching and filtering process. Under the page section many landing pages for admin ,user, categories, cart, payment, etc.

# **Key Components**

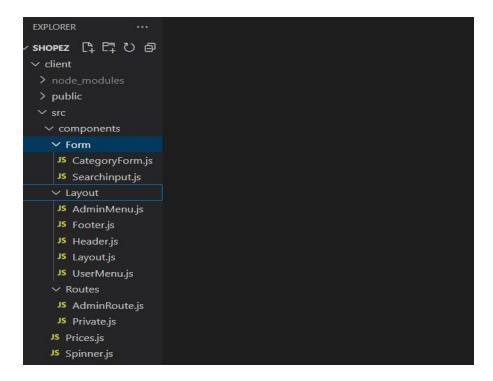
#### 1. **App.js**

 $\circ\quad$  Responsible for routing and main application layout.

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```

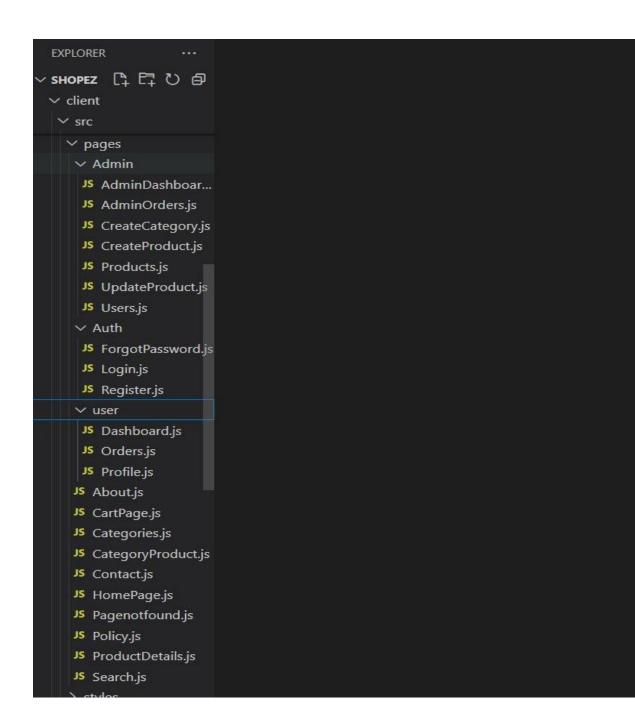
### 2. /components

- o Contains reusable UI components used across the application.
- The layout of the app is decided by Form, Layout, Routes which comes under components



## 3. /pages

- o Includes different pages for Web App.
- o Pages include Admin Pages, UserPages , Authentication Pages



# **Routing**

Routing is managed using React Router. Here are the main routes:

• /home - Landing page of the application.

```
### Clear > pages > 5 HomePage | > 60 HomePage > 100 HomePage > 10
```

• /dashboard - Dashboard displaying user data and statistics.

• /profile - User profile management.

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| Dassword, | Das
```

## **State Management**

State management is achieved using Context API

## **Integration with Backend**

The frontend communicates with the backend APIs hosted on [backend URL]. Key endpoints include:

#### **User/Admin Authentication:**

- POST /api/v1/auth/register To register a new user
- POST /api/v1/auth/login To login into the website
- **POST /api/v1/auth/forgot-password** If the user forgets his/her password they can update it.

#### **User Management:**

- **GET /api/v1/auth/orders** to get the order details done by the user.
- PUT /api/v1/auth/profile To update the users profile
- GET/api/v1/product/braintree/payment take users to payment gateway
- **GET/api/v1/product/product-category/\${parms.slug}** to get product by category
- GET /api/v1/category/get-category To get all categories of products
- GET /api/v1/product/product-list/\${page}- To get product list by loading more in the page
- GET/api/v1/product/product-count To get total count of products
- POST/api/v1/product/product-filters To filter the products
- **GET/api/v1/product/related-product** To get similar product details
- GET/api/v1/product/get-product/\${params.slug} -To get a particular product

#### **Admin Management**

- **GET/api/v1/auth/all-orders** To get all the orders of the users
- **PUT/api/v1/auth/order-status/\${orderId}** to change/ update the status of the order done by the user
- POST/api/v1/category/create-category to create category
- **GET/api/v1/category/update-category/\${selected.\_id}**: to update category based on the id of the category
- DELETE/api/v1/product/delete-category/\${pid} to delete the category based on the id
- POST/api/v1/product/create-product to create product
- **GET/api/v1/product/get-product** to get all products
- **PUT/api/v1/product/update-product** to update product
- DELETE/api/v1/product/delete-product/\${id} to delete product based on the id
- **GET/api/v1/product/search/\${values.keyword}** to search products based on keywords

## User Interface (UI) Design

Key UI design principles include clarity (simplicity and visual hierarchy), consistency (uniform design elements and predictable patterns), feedback (interactive responses and clear error handling), affordance (intuitive elements), accessibility (inclusive and responsive design), efficiency (minimized user effort and fast loading times), aesthetic integrity (attractive design and brand consistency), user control (undo/redo and customizability), discoverability (clear navigation and helpful hints), error prevention and recovery (minimizing and easily correcting errors), and adherence to platform standards. For a MERN e-commerce app, ensure clear product listings, streamlined checkout, responsive design, and simple, secure user account processes to create a user-friendly and efficient platform.

## **Third-Party Integrations**

- Braintree
- Bootstrap