

E-COMMERCE WEBSITE REPORT

Thesis submitted by

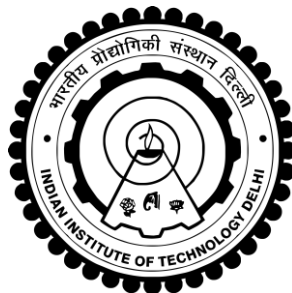
SACHIN
2018CS50418

under the guidance of

Prof.Vireshwar Kumar ,

Indian Institute of Technology Delhi

Master of Technology



Department Of **COMPUTER SCIENCE ENGINEERING**
INDIAN INSTITUTE OF TECHNOLOGY DELHI

APRIL 2024

0.1 React Components

0.1.1 AddToCart.js

This file manages the functionality for adding items to the shopping cart. It likely includes event handlers to capture user interactions such as clicking an "Add to Cart" button and updating the cart state accordingly.

0.1.2 CartAmountToggle.js

Responsible for handling the functionality related to adjusting the quantity of items in the shopping cart. It may include buttons or input fields for increasing or decreasing the quantity of items and updating the cart state accordingly.

0.1.3 CartItem.js

Represents a component that displays individual items in the shopping cart. It likely includes information such as the item name, price, quantity, and options for removing the item from the cart.

0.1.4 FeatureProduct.js

Contains functionality for showcasing featured products on the website. This component may display a curated selection of products that are highlighted for promotional purposes or based on user preferences.

0.1.5 FilterSection.js

This file likely contains components or functionality for filtering products based on certain criteria such as category, price range, or product features. It may include filter options and event handlers to update the displayed products based on user selections.

0.1.6 Footer.js

Represents the footer component for the website. It typically contains links to important pages such as the About Us, Contact, and Terms of Service pages, as well as social media icons, contact details, and copyright information.

0.1.7 GridView.js

This component displays products in a grid view layout. It likely renders individual product items in a grid format, allowing users to view multiple products at once with thumbnail images, product names, and prices.

0.1.8 Header.js

Contains the header component for the website, which typically includes the site logo, navigation menu, search bar, and possibly additional elements such as a shopping cart icon or user account options.

0.1.9 HeroSection.js

This component represents the hero section of the website, which is often located at the top of the page and showcases important content or images. It may include a large banner image, headline text, and call-to-action buttons.

0.1.10 ListView.js

Displays products in a list view layout, allowing users to view product details in a linear format. It may include product names, prices, descriptions, and options for viewing additional product details or adding products to the cart.

0.1.11 MyImage.js

This file likely contains functionality related to handling images, such as displaying images, resizing images, or implementing image carousels or sliders.

0.1.12 Nav.js

Contains the navigation component for the website, providing links to different sections or pages. It may include the main navigation menu, dropdown menus for navigating subcategories, and possibly a mobile-friendly navigation menu for smaller screens.

0.1.13 PageNavigation.js

Includes a component for displaying page navigation elements such as breadcrumbs or links to different pages within the website. It helps users navigate between different sections or pages of the website easily.

0.1.14 Product.js

Represents a component for displaying individual product items. It may include product images, names, prices, descriptions, and options for adding products to the cart or viewing additional product details.

0.1.15 ProductList.js

Contains the main component for displaying a list of products. It likely integrates features such as filtering, sorting, and pagination to help users navigate through a large catalog of products efficiently.

0.1.16 Services.js

This file contains components or functionality related to displaying services offered by the website or company. It may include descriptions of different services, icons or images representing each service, and possibly links to learn more about each service.

0.1.17 Sort.js

This file includes functionality for sorting products based on certain criteria such as price, popularity, or alphabetical order. It may provide dropdown menus or other UI elements for users to select their preferred sorting option.

0.1.18 Star.js

Contains components or functionality related to displaying star ratings for products or services. It may render star icons based on a numerical rating and display the average rating along with the number of reviews.

0.1.19 Trusted.js

This file likely contains components or functionality for displaying logos of trusted companies or partners. It may include a carousel or grid layout to showcase logos of various partners or clients that the website has worked with or is affiliated with.

Context Files

0.2 React Context Files

0.2.1 `cart_context.js`

Manages the state and functionality related to the shopping cart. Uses `createContext`, `useReducer`, and `useContext` hooks from React. Defines initial state for the cart, including items, total item count, total amount, and shipping fee. Provides a `CartProvider` component to wrap the application with the cart context. Exports a custom hook `useCartContext` to access the cart context and its state values within other components.

0.2.2 `filter_context.js`

Manages the state and functionality related to filtering products. Uses `createContext`, `useReducer`, and `useContext` hooks from React. Defines initial state for filtering, including filter products, all products, grid/list view, sorting value, and filter parameters. Provides a `FilterContextProvider` component to wrap the application with the filter context. Exports a custom hook `useFilterContext` to access the filter context and its state values within other components.

0.2.3 `productcontext.js`

Manages the state and functionality related to product data. Uses `createContext`, `useReducer`, `useEffect`, and `useContext` hooks from React. Utilizes `Axios` for making HTTP requests to fetch product data. Defines initial state for product-related data, including loading states, products, featured products, and single product details. Provides an `AppProvider` component to wrap the application with the product context. Exports a custom hook `useProductContext` to access the product context and its state values within other components.

0.3 `FormatPrice.js`

The `FormatPrice` component takes a price value in cents and returns a formatted currency string in Indian Rupees using the `Intl.NumberFormat` API.

Reducers

0.4 Reducers

0.4.1 `cartReducer.js`

Manages the state related to the shopping cart. Handles actions such as adding items to the cart and removing items from the cart. When adding items to the cart, it creates a new cart item object and adds it to the existing cart array. When removing items from the cart, it filters out the item with the specified ID from the cart array. If the action type does not match any of the defined cases, it returns the current state unchanged.

0.4.2 `filterReducer.js`

Manages the state related to product filtering and sorting. Handles actions such as loading filtered products, setting the view (grid or list), sorting products, updating filter values, and clearing filters. When loading filtered products, it sets the `filter_products` array with the payload data and updates filter-related properties such as `maxPrice` based on the loaded products. When sorting products, it sorts the `filter_products` array based on the selected sorting value. When updating filter values, it updates the corresponding property in the `filters` object with the provided value. If the action type does not match any of the defined cases, it returns the current state unchanged.

0.4.3 `productReducer.js`

Manages the state related to product data and loading status. Handles actions such as setting loading status, setting API data (products and featured products), setting loading status for a single product, setting single product data, and handling errors. When setting API data, it extracts featured products from the payload and updates the `products` and `featureProducts` arrays in the state. When setting single product data, it updates the `singleProduct` property with the payload data. If the action type does not match any of the defined cases, it returns the current state unchanged.

About.js

0.5.1 Import Statements:

Imports the HeroSection component from the `./components/HeroSection` file. Imports the `useProductContext` hook from the `./context/productcontext` file.

0.6 App.js

0.5.2 About Component:

Defines a functional component named `About`. Inside the component, it utilizes the `useProductContext` hook to access the `myName` value from the product context. Creates a data object with a `name` property set to `"E-commerce"`.

0.5.3 Return Statement:

Returns a fragment `<>` containing:

- The `myName` value obtained from the product context.
- The `HeroSection` component, passing the `myData` prop with the data object.

0.5.4 Export Statement:

Exports the `About` component as the default export of the file.

0.6 App.js

0.6.1 Import Statements:

Imports necessary components and dependencies from various files: React components like `About`, `Home`, `Products`, `Contact`, `Cart`, `SingleProduct`, `ErrorPage`, `Header`, and `Footer`. Required utilities like `ThemeProvider` from `styled-components` for theme management.

Routing components like `BrowserRouter`, `Routes`, and `Route` from `react-router-dom`. Global styles defined in `GlobalStyle`.

Theme Definition:

Defines a theme object containing various color and media properties used for styling throughout the application.

0.6.3 App Component:

Defines a functional component named App. Inside the component, it wraps the entire application with the ThemeProvider, providing the theme object defined earlier.

0.6.4 Router Setup:

Uses `BrowserRouter` to set up routing for the application. Includes `Routes` component to define the route configuration. Sets up individual routes using the `Route` component, each with a specific path and corresponding component to render:

- `"/` for the Home page (`<Home />`).
- `"/about"` for the About page (`<About />`).
- `"/products"` for the Products page (`<Products />`).
- `"/contact"` for the Contact page (`<Contact />`).
- `"/singleproduct/:id"` for displaying a single product (`<SingleProduct />`).
- `"/cart"` for the Cart page (`<Cart />`).
- `"/**"` for all other paths, which renders the `ErrorPage` component (`<ErrorPage />`).

0.6.5 Global Styles:

Applies global styles using the `GlobalStyle` component.

0.6.6 Header and Footer:

Includes the `Header` and `Footer` components, ensuring they are displayed on every page.

0.6.7 Export Statement:

Exports the `App` component as the default export of the file.

0.7 File Descriptions

0.7.1 Cart.js

This file contains a React component responsible for rendering the shopping cart page. It utilizes styled-components for styling and the useCartContext hook to access cart-related data from the context. It maps over the items in the cart and renders CartItem components for each item.

0.7.2 Contact.js

This file defines a React component for the contact page. It includes a contact form and a Google Maps iframe for location visualization. The form uses Formspree for form submission and styled-components for styling.

0.7.3 ErrorPage.js

This file contains a React component for displaying a 404 error page. It provides a message indicating that the requested page does not exist and includes a button to navigate back to the homepage. The page utilizes styled-components for styling.

0.7.4 GlobalStyle.js

This file defines global styles using styled-components. It sets up default styling for various HTML elements, including font sizes, colors, and scrollbar styles. It also includes media queries for responsive design.

0.7.5 Home.js

This file contains a React component for the home page. It includes sections such as HeroSection, FeatureProduct, Services, and Trusted. Each section may contain different content, such as images, text, or icons.

0.7.6 index.js

This file is the entry point of the application. It renders the root component (App) inside the ReactDOM.createRoot function and wraps it with context providers (AppProvider, FilterContextProvider, CartProvider). It also imports and renders the GlobalStyle component and calls reportWebVitals for performance measurement.

0.7.7 Products.js

This file defines a React component for the products page. It includes sections for filtering products, sorting products, and displaying product lists. It uses styled-components for styling and the useFilterContext hook to access filter-related data from the context.

0.7.8 reportWebVitals.js

This file defines a function to report web vital metrics such as CLS, FID, FCP, LCP, and TTFB. It imports web-vitals and uses its functions to measure and report these metrics.

0.7.9 setupTests.js

This file configures the testing environment for Jest. It imports '@testing-library/jest-dom' to extend Jest's expect function with DOM testing utilities.

0.7.10 SingleProduct.js

This file contains a React component for displaying detailed information about a single product. It fetches product data based on the product ID from the API and renders the product's name, image, description, price, availability, and additional details. It also includes an "Add to Cart" button if the product is in stock.

GITHUB LINK: <https://github.com/sachinsinghRathoreji/cod891project>

