# Front End Engineering-II

Project Report

Semester-IV (Batch-2022)

MO CART (REACT)



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G-12

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#### **Abstract**

This abstract elucidates the conceptualization and development of "Mo cart," a cutting-edge shopping website crafted with React, a robust JavaScript library renowned for its flexibility and performance. Mo cart is meticulously engineered to redefine the online retail experience, amalgamating intuitive design with advanced functionalities to cater to modern consumers' needs.

Key features of Mo cart include a dynamic product showcase, personalized user profiles, and a seamless checkout process. Leveraging React component-based architecture, Mo cart delivers a fluid and responsive user interface, ensuring optimal performance across various devices and screen sizes. The incorporation of Redux facilitates efficient state management, enhancing scalability and maintainability.

Mo cart integrates with RESTful APIs to enable real-time updates on product availability and pricing, fostering a dynamic shopping environment. Stringent security measures, including HTTPS encryption and secure authentication protocols, fortify user data protection and instil trust in the platform.

Furthermore, Mo cart prioritizes user engagement through personalized recommendations and interactive features, fostering a sense of community and loyalty among shoppers. The implementation of analytics tools enables continuous monitoring of user behaviour, empowering administrators to refine the platform and optimize the shopping journey.

In conclusion, Mo cart exemplifies the fusion of innovative technology and user-centric design principles, poised to revolutionize the e-commerce landscape. This abstract encapsulates Mo cart's vision, highlighting its potential to deliver unparalleled convenience and satisfaction to online shoppers worldwide.

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#### 1. Introduction

### **Background**

The genesis of Mo cart stems from a collective aspiration to reimagine the online shopping experience in an era marked by rapid technological advancements and evolving consumer expectations. Recognizing the pervasive influence of e-commerce in modern society, the founders of Mo cart embarked on a mission to create a platform that transcends conventional paradigms, offering unparalleled convenience, personalization, and security to users.

The inspiration for Mo cart arose from a profound understanding of the inherent challenges and opportunities within the e-commerce landscape. The team observed a growing demand for seamless, user-centric shopping platforms that adapt to individual preferences and foster meaningful interactions. Armed with this insight, they set out to harness the power of React, a versatile and agile framework, to architect a revolutionary solution: Mo cart.

Drawing upon years of collective expertise in software development, design, and e-commerce strategy, the team meticulously crafted Mo cart from the ground up. They envisioned a platform that seamlessly integrates cutting-edge technology with elegant design, prioritizing both functionality and aesthetics. The name "Mo cart" embodies this ethos, evoking a sense of sophistication, harmony, and mastery in the realm of online shopping.

From its inception, Mo cart was conceived as more than just a transactional platform; it was envisioned as a dynamic marketplace where users could discover, connect, and engage with their favourite brands and products. Through relentless innovation and a steadfast commitment to user satisfaction, Mo cart aims to redefine the e-commerce landscape, empowering both consumers and merchants alike to thrive in the digital age.

In summary, the background of Mo cart reflects a convergence of visionary ambition, technological prowess, and a deep-seated commitment to revolutionize online shopping. Grounded in a profound understanding of market dynamics and user needs, Mo cart emerges as a beacon of innovation, poised to shape the future of e-commerce.

### **Objectives**

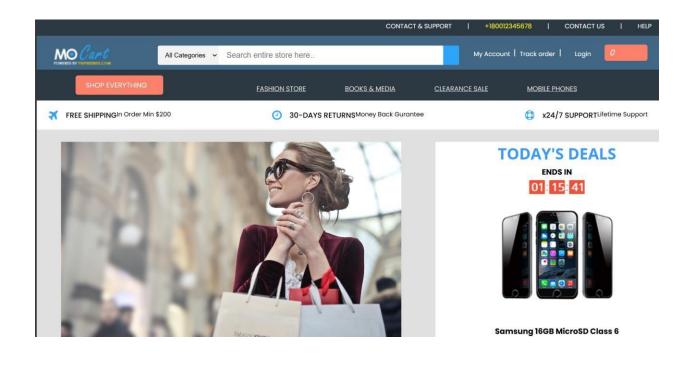
The primary objective of Mo cart is to establish itself as a premier destination for online shopping, distinguished by its innovative use of React technology and its unwavering focus on delivering an exceptional user experience. Through Mo cart, we aim to achieve the following key objectives:

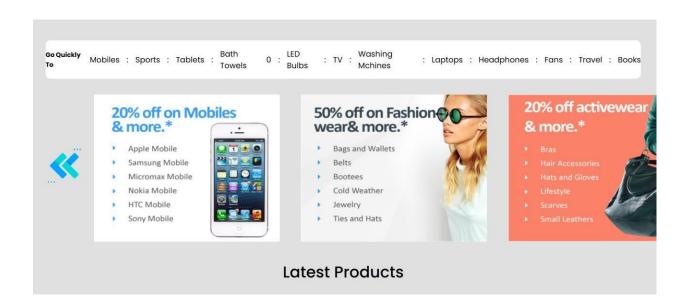
- 1. Enhanced User Experience: Mo cart endeavours to provide users with a seamless and intuitive shopping journey, characterized by fast loading times, responsive design, and personalized recommendations. By leveraging React capabilities, we seek to optimize every aspect of the user interface, ensuring effortless navigation and maximum engagement.
- 2. Personalization and Customization: Mo cart aims to cater to the unique preferences and interests of each user through advanced personalization algorithms. By analyzing user behaviour and purchase history, we aspire to deliver tailored product recommendations and curated shopping experiences that resonate with individual tastes.
- 3. Security and Trust: Mo cart prioritizes the security and privacy of user data, implementing robust encryption protocols, secure authentication mechanisms, and stringent compliance measures. Our objective is to instil confidence and trust in users, assuring them that their sensitive information is safeguarded at all times.
- 4. Scalability and Performance: Mo cart is designed to accommodate growth and scale seamlessly, capable of handling increasing traffic volumes and expanding product catalogs without compromising performance. By harnessing the scalability of React and implementing efficient backend architecture, our objective is to ensure that Mo cart remains responsive and reliable under any circumstances.
- 5. Community Engagement: Mo cart seeks to foster a vibrant and interactive community of shoppers, brands, and merchants, facilitating meaningful connections and social interactions. Our objective is to create a dynamic marketplace where users can discover new products, share insights and recommendations, and engage in discussions with like-minded individuals.

### **Significance**

Mo cart holds profound significance in the realm of e-commerce, representing a paradigm shift in how online shopping is conceptualized, experienced, and perceived. The significance of Mo cart is multifaceted and extends across various dimensions:

- 1. Innovative Technology: By harnessing the power of React, Mo cart introduces a new standard of sophistication and responsiveness to the online shopping experience. Its utilization of cutting-edge technology not only enhances user engagement but also sets a precedent for the integration of advanced frameworks in e-commerce platforms.
- 2. User-Centric Design: Mo cart prioritizes the needs and preferences of users, striving to deliver a personalized and intuitive shopping journey. Its emphasis on user-centric design principles not only enhances usability but also fosters a sense of connection and empowerment among shoppers, ultimately driving customer loyalty and retention.
- 3. Security and Trust: In an era marked by increasing concerns over data privacy and cybersecurity, Mo cart stands out for its unwavering commitment to safeguarding user information. Its implementation of robust security measures not only instil confidence in users but also sets a benchmark for trust and reliability in the e-commerce ecosystem.
- 4.Global Accessibility: Mo cart transcends geographical boundaries, offering users around the world access to a diverse array of products and brands. Its global accessibility not only expands market reach for merchants but also enriches the shopping experience for consumers, fostering cultural exchange and discovery on a global scale.





### 2. Problem Definition and Requirements

#### **Problem Statement**

The problem addressed by Mo cart is the lack of a comprehensive, user-centric online shopping platform that seamlessly integrates advanced technology with personalized experiences while prioritizing security and trust. Current e-commerce platforms often suffer from usability issues, limited personalization, and concerns over data privacy, leading to suboptimal user experiences and eroding consumer trust.

Mo cart seeks to address these challenges by offering a solution that combines innovative technology, intuitive design, and stringent security measures to deliver a superior online shopping experience. By understanding and addressing these pain points, Mo cart aims to revolutionize the way people shop online, fostering greater convenience, engagement, and trust among users.

### **Software Requirements**

#### 1. User Interface and Experience:

- Intuitive Navigation: The platform should feature a user-friendly interface with intuitive navigation to enhance the browsing and shopping experience.
- Responsive Design: Mo cart must be accessible across various devices, including desktops, tablets, and mobile phones, ensuring a seamless experience regardless of screen size.
- Personalized Recommendations: Implement algorithms to provide personalized product recommendations based on user preferences, browsing history, and purchase behaviour.

#### 2. Security and Trust:

- Secure Authentication: Implement secure authentication mechanisms, such as multi-factor authentication, to protect user accounts from unauthorized access.
- Data Encryption: Utilize encryption protocols (e.g., HTTPS) to safeguard user data during transmission, ensuring confidentiality and integrity.

- Compliance with Regulations: Adhere to relevant data privacy regulations (e.g., GDPR, CCPA) to ensure compliance and build trust with users regarding data handling practices.

#### 3. Functionality:

- Product Catalog: Develop a dynamic product catalog with advanced search and filtering capabilities, enabling users to easily find and explore products of interest.
- Shopping Cart and Checkout: Implement a seamless shopping cart and checkout process, allowing users to add/remove items, apply discounts, and complete transactions securely.
- Order Management: Provide features for order tracking, cancellation, and returns to enhance post-purchase satisfaction and convenience.

#### 4. Performance and Scalability:

- Optimized Performance: Ensure fast loading times and smooth performance by optimizing code, leveraging caching mechanisms, and employing content delivery networks (CDNs).
- Scalability: Design the platform to handle increasing traffic and product catalog sizes without compromising performance, utilizing scalable infrastructure and architecture.

#### 5. Community Engagement:

- Social Integration: Integrate social media features to enable users to share products, reviews, and recommendations with their social networks, fostering community engagement.
- User Feedback Mechanisms: Provide avenues for users to submit feedback, suggestions, and reviews, facilitating continuous improvement.

### **Hardware Requirements**

The hardware requirements for running the project are relatively minimal and include the following:

**Processor:** A multi-core processor, such as an Intel Core i5 or AMD Ryzen equivalent, is recommended for optimal performance during development and testing.

**Memory (RAM):** A minimum of 4 GB of RAM is recommended for running development tools, code editors, web browsers, and other software concurrently.

**Storage:** Sufficient storage space is needed to store project files, code, assets, and dependencies. A solid-state drive (SSD) is preferred for faster read/write speeds and improved performance.

**Input Devices:** A keyboard and mouse (or trackpad) are essential for interacting with the computer and navigating the development environment.

**Internet Connection:** An internet connection is required for accessing documentation, downloading dependencies, and running the website in a web browser environment.

### 1. Proposed Design/Methodology

### **Design Concept**

**Requirement Analysis:** The methodology begins with a comprehensive analysis of user requirements, preferences, and expectations for the Sushi Delights restaurant website. This involves gathering feedback from potential customers, studying competitor websites, and identifying key features essential for the success of the website. User surveys, interviews, and market research are conducted to gain insights into user needs and industry trends in the culinary landscape.

**Frontend Development:** The frontend development phase focuses on implementing the user interface design using React. Responsive layouts are created to ensure compatibility across various devices and screen sizes. Styling interface elements is done using frameworks like Bootstrap or custom CSS, adhering to the design principles established during the prototyping phase. Interactive features such as menus, reservation forms, and gallery sliders are implemented using JavaScript libraries to enhance user engagement.

**Testing and Quality Assurance:** Throughout the development process, rigorous testing and quality assurance measures are employed to identify and address any issues or bugs. Functional testing is conducted to ensure that all features work as intended, including forms submission, menu navigation, and image galleries. Compatibility testing is performed to verify cross-browser and cross-device compatibility, ensuring a consistent user experience across different platforms. Performance testing is carried out to optimize page load times and responsiveness, enhancing overall website performance.

### Methodology

**Requirement Analysis:** The methodology initiates with an in-depth analysis of user needs, preferences, and expectations for the Sushi Delights restaurant website. Through surveys, interviews, and market research, we gather insights into customer behaviours, competitor benchmarks, and industry trends. This phase aims to identify essential features and functionalities crucial for creating an effective online presence for the restaurant.

**Frontend Development:** With approved prototypes in hand, the frontend development phase begins. Using React we translate the design concepts into interactive web pages. Special attention is given to responsive design principles to ensure compatibility across various devices and screen sizes. The user interface elements are styled to reflect the restaurant's branding and ambiance, creating a cohesive visual identity.

By adhering to this methodology, the Sushi Delights website project aims to deliver an engaging, user-friendly online platform that effectively showcases the restaurant's offerings, enhances customer engagement, and reinforces its brand presence in the competitive culinary landscape.

### > File Structure

> images > node\_modules > public ∨ src > assets ✓ Components 🥸 Eightpage.jsx ⇔ Fifthpage.jsx Firstpage.jsx ☆ Fourthpage.jsx Secondpage.jsx ⇔ Seventhpage.jsx Sixthpage.jsx 🤁 Thirdpage.jsx # App.css App.jsx # index.css 🤁 main.jsx eslintrc.cjs .gitignore index.html {} package-lock.json {} package.json README.md JS vite.config.js

### **Results**

#### **HTML**

### Main. jsk

# App. jsk

#### > PAGES

#### First Page. jsx

```
import React from "react";
const First =() =>{
   return(
  <header>
   <div className="navbar1">
     CONTACT & SUPPORT
     +180012345678 

     CONTACT US

     HELP 
   </div>
   <div className="navbar2">
     <div className="logo">
       <img src="images/logo.jpg" alt="" className="logo-img" />
     <div className="nav-search">
       <select className="search-select">
         <option>All Categories</option>
       <input</pre>
         placeholder="Search entire store here.."
         className="search-input"
       <div className="search-icon">
         <i className="fa-solid fa-magnifying-glass" />
       </div>
     </div>
     <div className="allicons">
       <div className="icon">
         <i className="fa-solid fa-user" />
         My Account
       </div>
       <div className="divider">|</div>
       <div className="icon">
         <i className="fa-solid fa-location-dot" />
         Track order
```

```
</div>
   <div className="divider">|</div>
   <div className="icon">
     <i className="fa-solid fa-lock" />
     Login
   </div>
   <div className="cart">
     <i className="fa-solid fa-cart-shopping"> 0</i>
     <i className="fa-solid fa-angle-down arrow" />
   </div>
 </div>
</div>
<div className="navbar3">
 <div className="shop-logo">
   <span>
     SHOP EVERYTHING <i className="fa-solid fa-angle-down arrow" />
 </div>
 <a href="#Fas">FASHION STORE</a>
   <a href="#Bo">BOOKS & mp; MEDIA</a>
   <a href="#B00">CLEARANCE SALE</a>
   <a href="#BO">MOBILE PHONES</a>
 <div className="hamburger">
   <i className="fa-solid fa-bars ham" />
 </div>
</div>
<div className="navbar4">
 <div className="nav-1">
   <div className="three">
     <img src="images/aeroplane_logo.jpeg" alt="" />
     <div className="three-div">
       <h3>FREE SHIPPING</h3>
       In Order Min $200
     </div>
   </div>
   <div className="three">
     <img src="images/clock_logo.jpeg" alt="" />
     <div className="three-div">
       <h3>30-DAYS RETURNS</h3>
       Money Back Gurantee
     </div>
   </div>
   <div className="three">
```

### secondpage.jsx

#### ThirdPage.jsx

```
import React from "react";
const Third =() =>{
   return(
      <div className="go-sec">
    <h3>Go Quickly To</h3>
      Mobiles
    <div>:</div>
    <
      Sports
    <div>:</div>
    <
      Tablets
    <div>:</div>
    <1i>>
      Bath Towels
    0<div>:</div>
    <
      LED Bulbs
    <div>:</div>
    <
```

```
TV
   <div>:</div>
   <
     Washing Mchines
   <div>:</div>
   <
     Laptops
   <div>:</div>
   <
     Headphones
   <div>:</div>
   <1i>>
     Fans
   <div>:</div>
   <
     Travel
   <div>:</div>
   <
     Books
   </div>
export default Third
```

#### Fourth Page. jsx

#### Fifth Page. jsx

```
import React from "react";
const Fifth =() =>{
   return(
       <div className="latest" id="Bo">
    <h1>Latest Products</h1>
    <img src="images/arrow_reverse.png" alt="" className="liarrow1" />
    <l
       <img src="images/box image1.jpeg" alt="" />
         <br/>
<br/>
d>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
      <
       <img src="images/box_image2.jpeg" alt="" />
        <br/>
<b>Samsung 16GB MicroSD</b>
```

```
Class 6
 <img src="images/star.png" alt="" />
   <s>Rs 499</s>[30% OFF]
 <h2>Rs 350</h2>
<
 <img src="images/box_image3.jpeg" alt="" />
   <br/>
Samsung 16GB MicroSD</b>
 Class 6
 <img src="images/star.png" alt="" />
   <s>Rs 499</s>[30% OFF]
 <h2>Rs 350</h2>
<
 <img src="images/box_image4.jpeg" alt="" />
   <br/>
<br/>
b>Samsung 16GB MicroSD</b>
 Class 6
 <img src="images/star.png" alt="" />
   <s>Rs 499</s>[30% OFF]
 <h2>Rs 350</h2>
<img src="images/box_image5.png" alt="" />
   <br/>
<br/>
d>Samsung 16GB MicroSD</b>
 Class 6
 <img src="images/star.png" alt="" />
   <s>Rs 499</s>[30% OFF]
```

#### Sixth Page. Jsx

```
import React from "react";
const Sixth =() =>{
   return(
       <div className="latest" id="B00">
   <h1>Clearance Sale</h1>
   <img src="images/arrow_reverse.png" alt="" className="liarrow1" />
   <l
     <
       <img src="images/box_image1.jpeg" alt="" />
         <br/>
<br/>
d>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
     <
       <img src="images/box_image2.jpeg" alt="" />
         <br/>
<br/>
Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
```

```
<s>Rs 499</s>[30% OFF]
   <h2>Rs 350</h2>
 <
   <img src="images/box_image3.jpeg" alt="" />
     <br/>
<br/>
b>Samsung 16GB MicroSD</b>
   Class 6
   <img src="images/star.png" alt="" />
     <s>Rs 499</s>[30% OFF]
   <h2>Rs 350</h2>
 <
   <img src="images/box_image4.jpeg" alt="" />
     <br/>
<br/>
b>Samsung 16GB MicroSD</b>
   Class 6
   <img src="images/star.png" alt="" />
     <s>Rs 499</s>[30% OFF]
   <h2>Rs 350</h2>
 <img src="images/box_image5.png" alt="" />
     <br/>
<br/>
d>Samsung 16GB MicroSD</b>
   Class 6
   <img src="images/star.png" alt="" />
     <s>Rs 499</s>[30% OFF]
   <h2>Rs 350</h2>
 <img src="images/arrow.png" alt="" className="liarrow2" />
```

#### Seventh Page. Jsx

```
import React from "react";
const Seventh =() =>{
   return(
       <div className="latest" id="BO">
   <h1>Recently Viewed Items</h1>
   <img src="images/arrow_reverse.png" alt="" className="liarrow1" />
   <l
     <1i>>
       <img src="images/box_image1.jpeg" alt="" />
         <br/>
<br/>
b>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
     <
       <img src="images/box_image2.jpeg" alt="" />
         <br/>
<br/>
d>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
```

```
<img src="images/box_image3.jpeg" alt="" />
         <br/>
<br/>
b>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
     <img src="images/box_image4.jpeg" alt="" />
         <br/>
<br/>
b>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
     <img src="images/box_image5.png" alt="" />
         <br/>
<br/>
d>Samsung 16GB MicroSD</b>
       Class 6
       <img src="images/star.png" alt="" />
         <s>Rs 499</s>[30% OFF]
       <h2>Rs 350</h2>
     <img src="images/arrow.png" alt="" className="liarrow2" />
  </div>
   )
export default Seventh
```

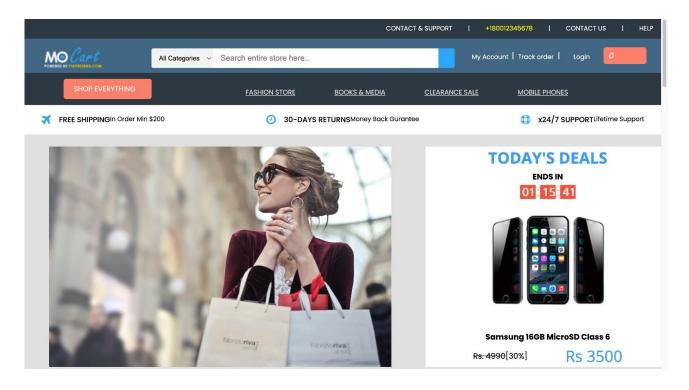
#### Eight page. Jsk

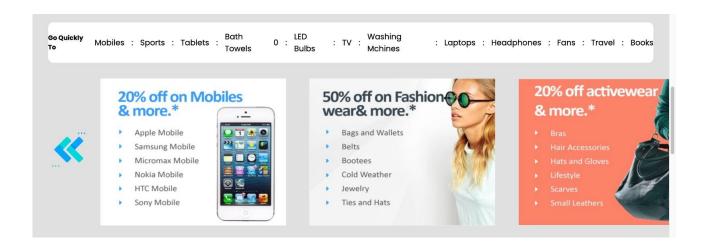
```
import React from "react";
const Eight =() =>{
   return(
        <footer>
   <div className="navbar4-footer">
     <div className="nav-1">
       <div className="three">
         <img src="images/wplane.png" alt="" />
         <div className="three-div">
           <h3>FREE SHIPPING</h3>
           In Order Min $200
         </div>
       </div>
        <div className="three">
         <img src="images/wtime.png" alt="" />
         <div className="three-div">
           <h3>30-DAYS RETURNS</h3>
           Money Back Gurantee
         </div>
       </div>
       <div className="three">
         <img src="images/wfootball.png" alt="" />
         <div className="three-div">
           <h3>x24/7 SUPPORT</h3>
           Lifetime Support
         </div>
       </div>
     </div>
    </div>
    <div className="foot-panel2">
     <l
       HELP
       <a>Customer Care Service</a>
       <a>ScoreCard</a>
       <a>Product Availability</a>
       <a>Recalls</a>
       <a>Return Policy</a>
       <a>Shipping Rates</a>
     <l
        COMPANY
```

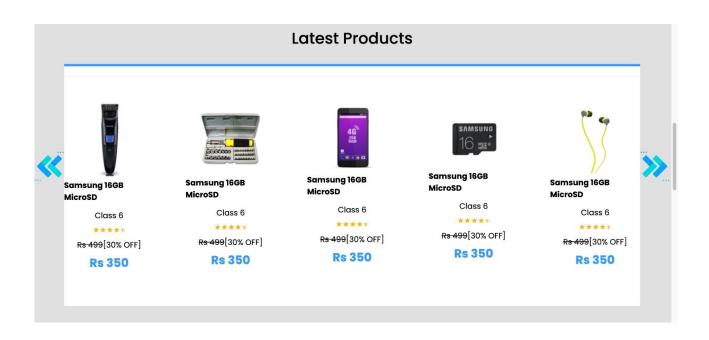
```
<a>About Us </a>
 <a>Affiliate Program</a>
 <a>Careers</a>
 <a>> Gift Shop</a>>
 <a>Group Sales</a>
 <a>Contact Us</a>
<l
 MY ACCOUNT
 <a>Your Account</a>
 <a>Information</a>
 <a>Addresses</a>
 <a>Order history</a>
 <a>Delivery Information</a>
 <a>Search Terms</a>
<l
 INFORMATIONS
 <a>Terms and Conditions</a>
 <a>About Us</a>
 <a>Sitemap</a>
 <a>Contact</a>
 <a>Return policy</a>
 <a>Supplies</a>
Sale News
 Lorem ipsum, dolor sit amet consectetur adipisicing elit. Saepe,
   labore.
 <div className="footer-search">
     placeholder="Sign up for our newsletter!"
     className="search-input"
   <div className="envelope-icon">
     <i className="fa-solid fa-envelope" />
   </div>
 </div>
 Follow us
 <div className="footer-icons">
   <i className="ri-facebook-fill" />
   <i className="ri-youtube-fill" />
   <i className="ri-twitter-fill" />
```

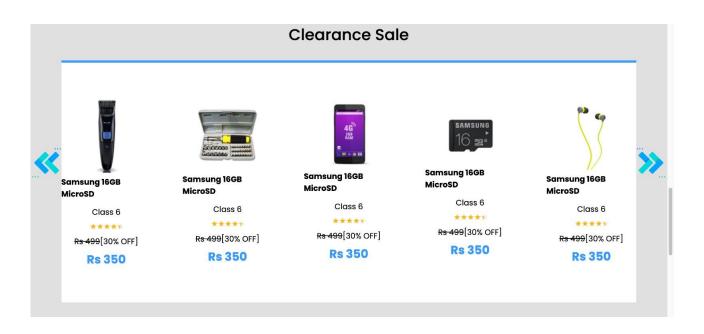
```
<i className="ri-linkedin-box-fill" />
        </div>
      </div>
    <div className="foot-panel3">
      <div className="logo" />
    </div>
    <div className="foot-panel4">
      <div className="pages">
       <a>Conditions Of Use</a>
        <a>Privacy Notice</a>
        <a>Your Ads Privacy Choices</a>
      </div>
      <div className="copyright">
       © copyright by Tansiha | all rights reserved
      </div>
    </div>
  </footer>
export default Eight
```

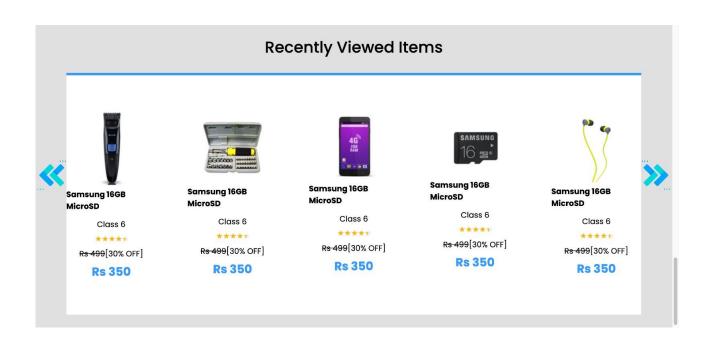
# **Project Screenshot For all Scenarios**

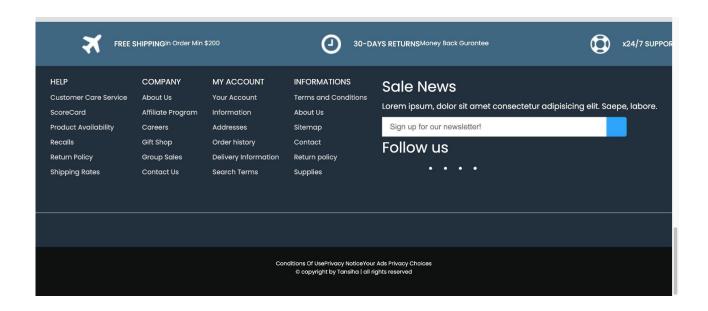












## References

React Docs: <a href="https://react.dev/">https://react.dev/</a>

Git hub-https://github.com/Ayushparikh-code

React overview -https://react.dev/reference/react