**A PRELIMINARY MINI PROJECT REPORT ON “E-Commerce Website”**

**SUBMITTED TOWARDS THE PARTIAL FULFILLMENT OF THEREQUIREMENTS OF**

**BACHELOR OF ENGINEERING (T.Y. B. Tech.)**

**Academic Year: 2022-23**

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**Under The Guidance of**

**Mrs. Tanuja Patankar**

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**DEPARTMENT OF INFORMATION TECHNOLOGY,**

**PIMPRI CHINCHWAD COLLEGE OF ENGINEERING,**

**SECTOR 26, NIGDI, PRADHIKARAN**

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**PIMPRI CHINCHWAD COLLEGE OF ENGINEERING**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**CERTIFICATE**

This is to certify that, the project entitled

**“E-Commerce Website**” is successfully carried out as a

**Skill Development Laboratory I** mini project and successfully submitted by following students of “PCETs Pimpri Chinchwad College Of Engineering, Nigdi, Pune-44”.

**Under the guidance of Mrs. Tanuja Patankar**

In the partial fulfillment of the requirements for the T.Y. B. Tech. (INFORMATION TECHNOLOGY)

**By: Akash Bhan & Suraj Jha**

**Mrs. Tanuja Patankar**

**TITLE**: **E-Commerce Website**

**AIM**:

• Analyzing website traffic: The aim of this report would be to analyze the traffic to the e commerce website, including the number of visitors, the pages they visit, the time spent on the site, and other metrics. The goal would be to identify areas where the website can be improved to increase traffic and improve user engagement.

• Evaluating sales performance: This report would aim to evaluate the sales performance of the e commerce website, including the number of transactions, revenue generated, and average order value. The aim would be to identify areas where the website can be optimized to increase sales and revenue.

• Assessing customer behavior: The aim of this report would be to assess customer behavior on the e-commerce website, including the products they are viewing, the items they are adding to their cart, and the checkout process. The goal would be to identify any obstacles that may be preventing customers from making purchases and to suggest solutions to improve the user experience.

• Identifying marketing opportunities: This report would aim to identify opportunities for marketing the e-commerce website, including search engine optimization, social media marketing, email marketing, and other channels. The goal would be to recommend strategies that can be implemented to increase brand awareness and drive traffic to the website.

**OBJECTIVE**:

• Analyzing website traffic: The aim of this report would be to analyze the traffic to the e-commerce website, including the number of visitors, the pages they visit, the time spent on the site, and other metrics. The goal would be to identify areas where the website can be improved to increase traffic and improve user engagement.

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• Identifying marketing opportunities: This report would aim to identify opportunities for marketing the e-commerce website, including search engine optimization, social media marketing, email marketing, and other channels. The goal would be to recommend strategies that can be implemented to increase brand awareness and drive traffic to the website.

• Overall, the aim of the report for an e-commerce website is to provide actionable insights that can help the business improve its online presence, increase sales, and enhance the user experience for its customers.

**OUTCOME**:

• Improved website traffic: The report can provide recommendations for optimizing the website, leading to increased traffic and engagement.

• Increased sales and revenue: The report can identify opportunities for increasing sales and revenue by improving the user experience and optimizing the website for conversions.

• Better customer experience: The report can provide insights into customer behavior and preferences, leading to changes that enhance the customer journey and improve customer satisfaction.

• More effective marketing strategies: The report can identify areas where current marketing strategies can be improved and provide recommendations for new strategies that can increase brand awareness and drive traffic to the website.

• Competitive advantage: The report can benchmark the website's performance against competitors, providing insights that can inform strategies for gaining a competitive advantage.

• Improved decision-making: The report can provide stakeholders with a comprehensive understanding of the e-commerce website's performance, leading to better decision-making and more informed investments in website optimization and marketing.

**1. INTRODUCTION**

**1.1 PROBLEM STATEMENT**

• The e-commerce website is experiencing a high rate of shopping cart abandonment, resulting in lost sales and revenue.

• The website's search engine rankings are low, making it difficult for potential customers to find the site and resulting in low traffic and sales.

• The website's checkout process is confusing or cumbersome, leading to a high rate of drop offs and lost sales.

• The website's product pages are not optimized for conversions, leading to low add-to-cart rates and low sales.

• The website's load times are slow, resulting in a poor user experience and low engagement. • The website's mobile optimization is poor, resulting in low mobile traffic and sales.

1.2 Project Idea:

• Product Catalog: The website will have a visually appealing and user-friendly product catalog, showcasing a wide range of clothing items, footwear, and accessories from various brands that follow ethical and sustainable practices.

• Each product will have detailed descriptions, images, and pricing information. • Brand Profiles: The website will provide dedicated brand profiles that highlight the sustainability practices, certifications, and values of each brand to help customers make informed purchasing decisions based on their ethical preferences.

• Search and Filter Options: The website will offer search and filter options based on various criteria such as product type, brand, material, production method (e.g., organic, fair trade, upcycled), and more, to enable customers to find products that align with their ethical and sustainable preferences.

• User Accounts and Wishlist: The website will allow users to create accounts, save their favorite products to their wishlist, and track their orders, providing a personalized shopping experience and fostering customer loyalty.

• Shopping Cart and Checkout: The website will have a secure and easy-to-use shopping cart and checkout process, allowing customers to add products to their cart, review their order, and complete the purchase securely.

• Size and Fit Information: The website will provide detailed size charts, fit information, and measurement guides to help customers make accurate sizing decisions and reduce returns, contributing to sustainable practices by minimizing waste.

• Social and Environmental Impact Information: The website may provide information on the social and environmental impact of each product, such as the use of sustainable materials, fair labour practices, carbon footprint reduction, and waste reduction, to educate customers and promote transparency.

• Blog and Editorial Content: The website may feature a blog or editorial content section that highlights sustainable fashion trends, styling tips, brand stories, and other relevant topics to engage with customers and promote awareness about ethical and sustainable fashion.

• Social Media Integration: The website will integrate with social media platforms to promote products, share updates, and engage with customers, creating a community of conscious consumers.

• Responsive Design: The website will be designed to be responsive, ensuring optimal viewing experience across various devices such as desktops, laptops, tablets, and mobile phones.

**1.3 Motivation:**

• Promoting Ethical and Sustainable Fashion: The fashion industry is notorious for its negative impact on the environment and social issues such as labor exploitation and poor working conditions. By creating a platform that exclusively features ethically and sustainably produced clothing items, the website can promote conscious consumerism and encourage customers to make more responsible fashion choices.

• Fostering Transparency and Education: Many consumers are becoming more aware and concerned about the social and environmental impact of their purchases. The website can provide detailed information about the sustainability practices, certifications, and values of each brand, as well as the social and environmental impact of each product, to educate customers and foster transparency in the fashion industry.

• Supporting Ethical Brands: The website can provide a platform for ethical and sustainable fashion brands to showcase their products and reach a wider audience. By supporting these brands, the website can contribute to the growth of the ethical fashion industry and encourage more brands to adopt sustainable practices.

• Enhancing Customer Experience: The website can provide a user-friendly and

personalized shopping experience, with features such as product catalogs, search and filter options, user accounts, and wishlist functionality. This can create a seamless and enjoyable shopping experience for customers, leading to higher customer satisfaction and loyalty.

• Contributing to Sustainability and Social Responsibility: By promoting ethical and sustainable fashion, the website can contribute to reducing the negative impact of the fashion industry on the environment and society. This can include promoting the use of sustainable materials, fair labor practices, waste reduction, and carbon footprint reduction, among others.

• Building a Community of Conscious Consumers: The website can foster a community of conscious consumers who share similar values and interests in ethical and sustainable fashion. This can include engaging with customers through social media, blog content, and other community-building initiatives, creating a supportive and informed community of individuals who are passionate about making a positive impact through their fashion choices.

**1.4 Scope:**

• Vendor Profiles: The website can provide profiles for each ethical and sustainable fashion brand featured on the platform, showcasing their brand story, sustainability practices, certifications, and products.

• Product Upload and Management: Vendors can have the ability to upload and manage their products, including product descriptions, images, pricing, inventory management, and other relevant information.

• Order and Payment Management: Vendors can receive and manage orders placed by customers through the website, including order fulfillment, shipping, and payment processing.

• Brand Verification: The website can verify the sustainability practices and certifications of the brands featured on the platform to ensure that they align with the website's mission and values.

• Communication and Support: The website can provide a communication channel between vendors and customers for inquiries, product information, and support. This can include email notifications, chat features, and customer service support.

• Sales and Analytics: Vendors can access sales and analytics data, such as sales reports, customer analytics, and product performance data, to track their performance on the platform and make informed business decisions.

• Promotion and Exposure: The website can promote vendors and their products through various marketing initiatives, such as social media campaigns, blog features, and promotions, to increase their visibility and reach to a wider audience.

**2. PROJECT DESIGN**

**Hardware, Software, resources, requirements:**

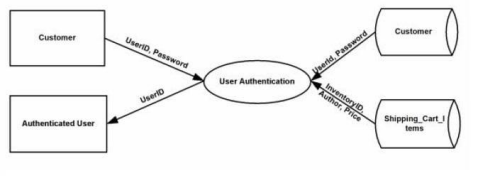
• Any Hardware able to host the demo website on localhost.

• Any Operating System able to run the website on the network localhost.

• Mongodb, React, Node.js, Express.js

**3. Module Description:**

**Block Diagram:**

**4. Modules and Description:**

**4.1 Source Code:**

**1)App.js**

// import data from "./data";

import { useEffect, useState } from 'react';

import { BrowserRouter, Route, Routes } from 'react-router-dom'

import { toast, ToastContainer } from 'react-toastify'

import HomeScreen from "./screens/HomeScreen";

import 'react-toastify/dist/ReactToastify.css'

import ProductScreen from './screens/ProductScreen'; import Navbar from 'react-bootstrap/Navbar'

import Badge from 'react-bootstrap/Badge'

import Nav from 'react-bootstrap/Nav'

import NavDropdown from 'react-bootstrap/NavDropdown' import Container from 'react-bootstrap/Container'

import { LinkContainer } from 'react-router-bootstrap' import { useContext } from 'react';

import { Store } from './Store';

import { Link } from 'react-router-dom';

import CartScreen from './screens/CartScreen';

import SignInScreen from './screens/SignInScreen';

import SignUpScreen from './screens/SignUpScreen';

import ShippingAddressScreen from './screens/ShippingAddressScreen'; import PaymentMethodScreen from './screens/PaymentMethodScreen'; import PlaceOrderScreen from './screens/PlaceOrderScreen'; import OrderScreen from './screens/OrderScreen';

import OrderHistoryScreen from './screens/OrderHistoryScreen'; import ProfileScreen from './screens/ProfileScreen'; import Button from 'react-bootstrap/Button'

import { getError } from './utils';

import axios from 'axios';

import SearchBox from './components/SearchBox';

import SearchScreen from './screens/SearchScreen';

import ProtectedRoute from './components/ProtectedRoute'; function App() {

const { state, dispatch: ctxDispatch } = useContext(Store) const { cart, userInfo } = state

const signoutHandler = () => {

ctxDispatch({ type: 'USER\_SIGNOUT' });

localStorage.removeItem('userInfo')

localStorage.removeItem('shippingAddress')

localStorage.removeItem('paymentMethod')

window.location.href='/signin'

}

const [sidebarIsOpen,setSideBarIsOpen]=useState(false) const [categories,setCategories]=useState([])

useEffect(()=>{

const fetchCategories=async()=>{

try {

const {data}=await axios.get(`/api/products/categories`) setCategories(data)

} catch (err) {

toast.error(getError(err))

}

}

fetchCategories()

},[])

return (

<BrowserRouter>

<div className={sidebarIsOpen?'d-flex flex-column site-container active cont':'d-flex flex-column site-container'}>

<ToastContainer position='bottom-center' limit={1} />

<header>

<Navbar bg="dark" variant="dark" expand='lg'>

<Container>

<Button

variant='dark'

onClick={()=>setSideBarIsOpen(!sidebarIsOpen)}

>

<i className='fas fa-bars'></i>

</Button>

<LinkContainer to="/">

<Navbar.Brand> amazona</Navbar.Brand>

</LinkContainer>

<Navbar.Toggle aria-controls='basic-navbar-nav'></Navbar.Toggle> <Navbar.Collapse id='basic-navbar-nav'>

<SearchBox />

<Nav className='me-auto w-100 justify-content-end'>

<Link className="nav-link" to='/cart'>

Cart

{cart.cartItems.length > 0 && (

<Badge pill bg="danger">

{cart.cartItems.reduce((a, c) => a + c.quantity, 0)}

</Badge>

)}

</Link>

{userInfo ? (

<NavDropdown title={userInfo.name} id="basic-nav-dropdown">

<LinkContainer to="/profile">

<NavDropdown.Item>User Profile</NavDropdown.Item>

</LinkContainer>

<LinkContainer to="/orderhistory">

<NavDropdown.Item>Order History</NavDropdown.Item>

</LinkContainer>

<NavDropdown.Divider />

<Link

className='dropdown-item'

to='#signout'

onClick={signoutHandler}

>

Signout

</Link>

</NavDropdown>

) : (<Link className="nav-link" to="/signin">Sign In</Link>)}

{userInfo && userInfo.isAdmin && (

<NavDropdown title="Admin" id="admin-nav-dropdown">

<LinkContainer to="/dashboard">

<NavDropdown.Item>DashBoard</NavDropdown.Item>

</LinkContainer>

<LinkContainer to="/productList">

<NavDropdown.Item>Products</NavDropdown.Item>

</LinkContainer>

<LinkContainer to="/orderList">

<NavDropdown.Item>Orders</NavDropdown.Item>

</LinkContainer>

<LinkContainer to="/userList">

<NavDropdown.Item>Users</NavDropdown.Item>

</LinkContainer>

</NavDropdown>

)}

</Nav>

</Navbar.Collapse>

</Container>

</Navbar>

</header>

<div

className={sidebarIsOpen?

'active-nav side-navbar d-flex justify-content between flex-wrap flex-column' :'side-navbar d-flex justify-content-between flex-wrap flex-column'}> <Nav className='flex-column text-white w-100 p-2'>

<Nav.Item>

<strong>Categories</strong>

</Nav.Item>

{categories.map((category)=>(

<Nav.Item key={category}>

<LinkContainer

to={{ pathname: '/search', search: `category=${category}` }} onClick={()=>setSideBarIsOpen(false)}

>

<Nav.Link>{category}</Nav.Link>

</LinkContainer>

</Nav.Item>

))}

</Nav>

</div>

<main>

<Container className='mt-3'>

<Routes>

<Route path='/product/:slug' element={<ProductScreen />} /> <Route path='/' element={<HomeScreen />} />

<Route path='/signin' element={<SignInScreen />} />

<Route path='/signup' element={<SignUpScreen />} />

<Route path='/placeorder' element={<PlaceOrderScreen />} /> <Route path='/cart' element={<CartScreen />} />

<Route path='/payment' element={<PaymentMethodScreen />} /> <Route path='/shipping' element={<ShippingAddressScreen />} />

<Route path='/order/:id' element={<ProtectedRoute><OrderScreen /></ProtectedRoute>}></Route>

<Route path='/orderhistory'

element={<ProtectedRoute><OrderHistoryScreen /></ProtectedRoute>} /> <Route path='/profile' element={

<ProtectedRoute><ProfileScreen /></ProtectedRoute>} />

<Route path='/search' element={<SearchScreen />} />

</Routes>

</Container>

</main>

<footer>

<div className='text-center'>All Rights Reserved</div>

</footer>

</div>

</BrowserRouter>

);

}

export default App;

**2) Server.js**

import express from "express";

import data from "./data.js";

import mongoose from "mongoose";

import dotenv from "dotenv"

import seedRouter from "./routes/seedRoutes.js";

import productRouter from "./routes/productRoutes.js";

import userRouter from "./routes/userRoutes.js";

import orderRouter from "./routes/orderRoutes.js";

dotenv.config()

mongoose.connect(process.env.MONGO\_URI).then(()=>{

console.log('connected to db');

})

.catch((err)=>{

console.log(err.message);

})

const app=express()

app.use(express.json())

app.use(express.urlencoded({extended:true}))

app.use('/api/seed',seedRouter)

app.use('/api/products',productRouter)

app.use('/api/users',userRouter)

app.use('/api/orders',orderRouter)

app.use((err,req,res,next)=>{

res.status(500).send({message:err.message})

})

app.get('/api/keys/paypal',(req,res)=>{

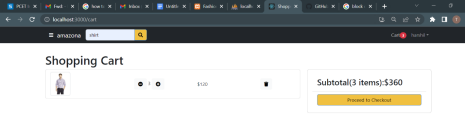
res.send(process.env.PAYPAL\_CLIENT\_ID || 'sb') })

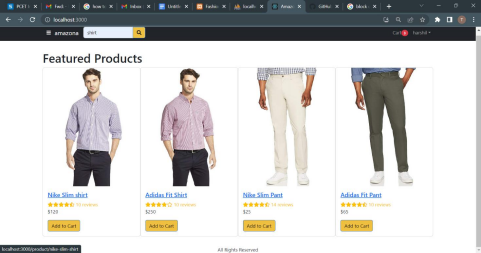
const port=process.env.PORT || 5001

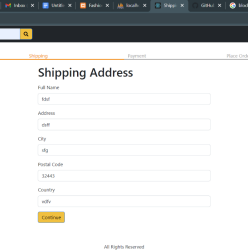
app.listen(port,()=>{

console.log(`serve at http://localhost/${port}`); })

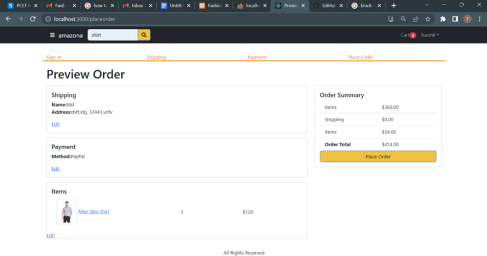
**3)Output:**

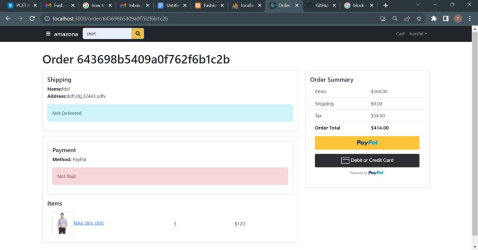
**Home Page**

**Finding a Produt**

****

**Shipping Details**

**Order Preview**

**Order confirmation**

**Conclusion:**

• Based on the analysis of the website's performance, there are significant opportunities to optimize the website to increase traffic, engagement, and sales. These opportunities include improving the user experience, optimizing product pages, and implementing more effective marketing strategies.

• The report provides valuable insights into customer behaviour and preferences, which can inform product development and marketing strategies. By understanding customer needs and preferences, the business can tailor its offerings and messaging to better meet customer needs and increase customer satisfaction.

• The benchmarking analysis conducted as part of the report reveals opportunities for the business to gain a competitive advantage in the e-commerce space. By identifying areas where the website is underperforming relative to competitors, the business can make targeted improvements to close the gap and gain a competitive edge.

• The report provides stakeholders with a comprehensive understanding of the website's performance, which can inform better decision-making and investments in website optimization and marketing. By making data-driven decisions, the business can maximize the return on its investments and achieve its goals more effectively.