

Documentation File By Group 15

**A report on E-Commerce website
“ShopForHome”**

Group Members:

Gaurav Joshi

N.R.V Sai Rakesh

ABSTRACT

Technology is the most important factor of our life nowadays especially e-commerce websites. We use e-commerce websites for shopping clothes, groceries, home décor and electronics.

We have made a E-commerce web application using MERN Technology. MERN Technology includes MongoDB, Express.JS Framework, React.JS library and Node.JS platform.

This application is fully functional with different views for users and admin .In this project, we can add different products and can delete them also.

The product is mainly divided into two main different categories : The administrators and The Users. The User is only able to browse the online shop and add a product to the cart. The user is limited to the shop.

Introduction

We all know that technology has become an essential tool for online marketing these days. If we look all over the world, most of the people are showing interest to buy things online. However, we can see that there are many small shops and grocery stores selling their things offline. With this type of selling most of us will face bad experiences. For instance, in some shops the seller has the product to sell in the offer but the buyer may not know about it, or the customer may need the product urgently then he will go to the shop, but the product is out of stock, in that case, he will face a bad experience. Moreover, in online shopping customers can select a wide range of products based upon their interests and their price. Also, one can compare prices also from one store to another by using online shopping. By encountering all the problems and weaknesses of the offline shopping system, creating an Ecommerce web application is necessary for searching and shopping in each shop. These days we have seen so many e-commerce websites are created like Flipkart, Amazon, Myntra and one can easily buy their necessary products by using these websites. By using these types of websites one can buy their products by staying in their home. Eventually, we can see the difference between the prices of products as well as if we see the cost of the product will be slightly high in offline shopping when compared to online shopping. For creating these types of E-commerce web applications MERN stack will be the best option that can help us create the most effective and powerful web applications.

PROBLEM STATEMENT

The purpose of this project is to make a web application that will make finding Home decoration items easily. Customers can easily search for their favourite goods. They can also buy them easily by just adding to the cart and they can increase or decrease by clicking on the “+” sign and “-” sign. After adding they can check the total amount of the thing which has been added to the cart.

E-Commerce

E-Commerce or Electronic Commerce means buying and selling of goods, products, or services over the internet. E-commerce is also known as electronic commerce or internet commerce. These services provided online over the internet network. Transaction of money, funds, and data are also considered as E-commerce. These business transactions can be done in four ways: Business to Business (B2B), Business to Customer (B2C), Customer to Customer (C2C), Customer to Business (C2B). The standard definition of E-commerce is a commercial transaction which is happened over the internet. Online stores like Amazon, Flipkart, Shopify, Myntra, Ebay, Quikr, Olx are examples of E-commerce websites. By 2020, global retail e-commerce can reach up to \$27 Trillion. Let us learn in detail about what is the advantages and disadvantages of E-commerce and its types.

Types of E-Commerce Models

Electronic commerce can be classified into four main categories. The basis for this simple classification is the parties that are involved in the transactions. So the four basic electronic commerce models are as follows,

1. Business to Business

This is Business to Business transactions. Here the companies are doing business with each other. The final consumer is not involved. So the online transactions only involve the manufacturers, wholesalers, retailers etc.

2. Business to Consumer

Business to Consumer. Here the company will sell their goods and/or services directly to the consumer. The consumer can browse their websites and look at products, pictures, read reviews. Then they place their order and the company ships the goods directly to them. Popular examples are Amazon, Flipkart, Jabong etc.

3. Consumer to Consumer

Consumer to consumer, where the consumers are in direct contact with each other. No company is involved. It helps people sell their personal goods and assets directly to an interested party. Usually, goods traded are cars, bikes, electronics etc. OLX, Quikr etc follow this model.

4. Consumer to Business

This is the reverse of B2C, it is a consumer to business. So the consumer provides a good or some service to the company. Say for example an IT freelancer who demos and sells his software to a company. This would be a C2B transaction.

ADVANTAGES

- E-commerce provides the sellers with a global reach. They remove the barrier of place (geography). Now sellers and buyers can meet in the virtual world, without the hindrance of location.
- Electronic commerce will substantially lower the transaction cost. It eliminates many fixed costs of maintaining brick and mortar shops. This allows the companies to enjoy a much higher margin of profit.
- It provides quick delivery of goods with very little effort on part of the customer. Customer complaints are also addressed quickly. It also saves time, energy and effort for both the consumers and the company.
- One other great advantage is the convenience it offers. A customer can shop 24×7. The website is functional at all times, it does not have working hours like a shop.
- Electronic commerce also allows the customer and the business to be in touch directly, without any intermediaries. This allows for quick communication and transactions. It also gives a valuable personal touch.

DISADVANTAGES

- The start-up costs of the e-commerce portal are very high. The setup of the hardware and the software, the training cost of employees, the constant maintenance and upkeep are all quite expensive.
- Although it may seem like a sure thing, the e-commerce [industry](#) has a high risk of failure. Many companies riding the dot-com wave of the 2000s have failed miserably. The high risk of failure remains even today.
- At times, e-commerce can feel impersonal. So it lacks the warmth of an interpersonal relationship which is important for many brands and products. This lack of a personal touch can be a disadvantage for many types of services and products like interior designing or the jewelry business.
- Security is another area of concern. Only recently, we have witnessed many security breaches where the information of the customers was stolen. Credit card theft, identity theft etc. remain big concerns with the customers.
- Then there are also fulfillment problems. Even after the order is placed there can be problems with shipping, delivery, mix-ups etc. This leaves the customers unhappy and dissatisfied.

RESEARCH AND DEVELOPMENT

In this project ,we have used MERN technologies for building a web application.

MERN stands for **MongoDB Expressjs Reactjs Nodejs**.

MongoDB

MongoDB is an open source NoSQL database management program. NoSQL is used as an alternative to traditional relational databases. NoSQL databases are quite useful for working with large sets of distributed data. MongoDB is a tool that can manage document-oriented information, store or retrieve information.

MongoDB supports various forms of data. It is one of the many nonrelational database technologies that arose in the mid-2000s under the NoSQL banner -- normally, for use in big data applications and other processing jobs involving data that doesn't fit well in a rigid relational model. Instead of using tables and rows as in relational databases, the MongoDB architecture is made up of collections and documents.

Organizations can use Mongo DB for its ad-hoc queries, indexing, load balancing, aggregation, server-side JavaScript execution and other features.

Expressjs

Express is a minimal and flexible Node.js web application framework that provides a robust set of features to develop web and mobile applications.

It facilitates the rapid development of Node based Web applications. Following are some of the core features of Express framework –

- Allows to set up middlewares to respond to HTTP Requests.
- Defines a routing table which is used to perform different actions based on HTTP Method and URL.

Nodejs

Node.js is an open-source and cross-platform JavaScript runtime environment. It is a popular tool for almost any kind of project!

Node.js runs the V8 JavaScript engine, the core of Google Chrome, outside of the browser. This allows Node.js to be very performant.

A Node.js app runs in a single process, without creating a new thread for every request. Node.js provides a set of asynchronous I/O primitives in its standard library that prevent JavaScript code from blocking and generally, libraries in Node.js are written using non-blocking paradigms, making blocking behavior the exception rather than the norm.

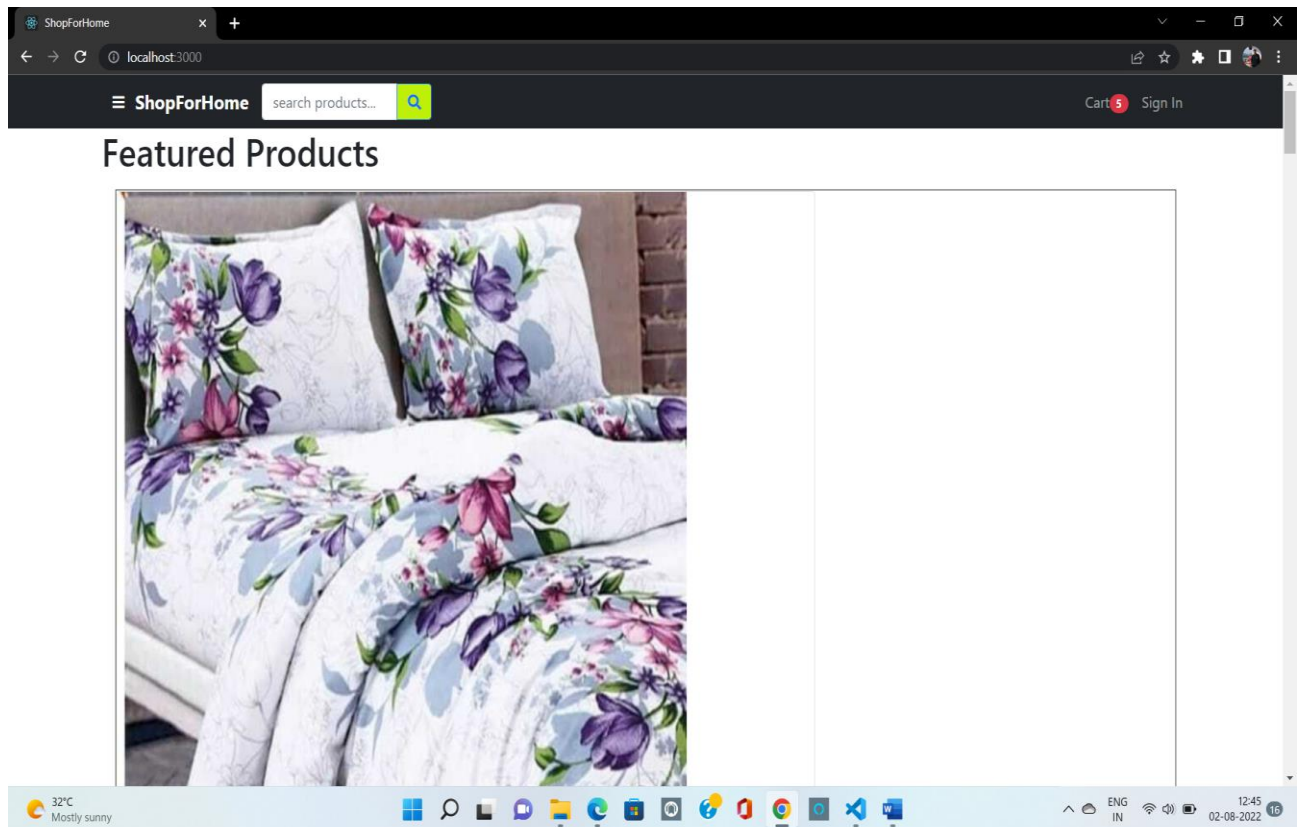
Reactjs

ReactJS is a declarative, efficient, and flexible JavaScript library for building reusable UI components. It is an open-source, component-based front end library which is responsible only for the view layer of the application. It was initially developed and maintained by Facebook and later used in its products like WhatsApp & Instagram.

The main objective of ReactJS is to develop User Interfaces (UI) that improves the speed of the apps. It uses virtual DOM (JavaScript object), which improves the performance of the app. The JavaScript virtual DOM is faster than the regular DOM. We can use ReactJS on the client and server-side as well as with other frameworks. It uses component and data patterns that improve readability and helps to maintain larger apps.

Functionalities for the Users:

Homepage : Below is the Home of our website which is also the landing page when the project is run.



Sign-In Page – It is used to sign in with their valid email address and password.

Sign In

localhost:3000/signin

ShopForHome search products...

Cart Sign In

Sign In

Email

Password

Sign In

New customer? [Create your account](#)

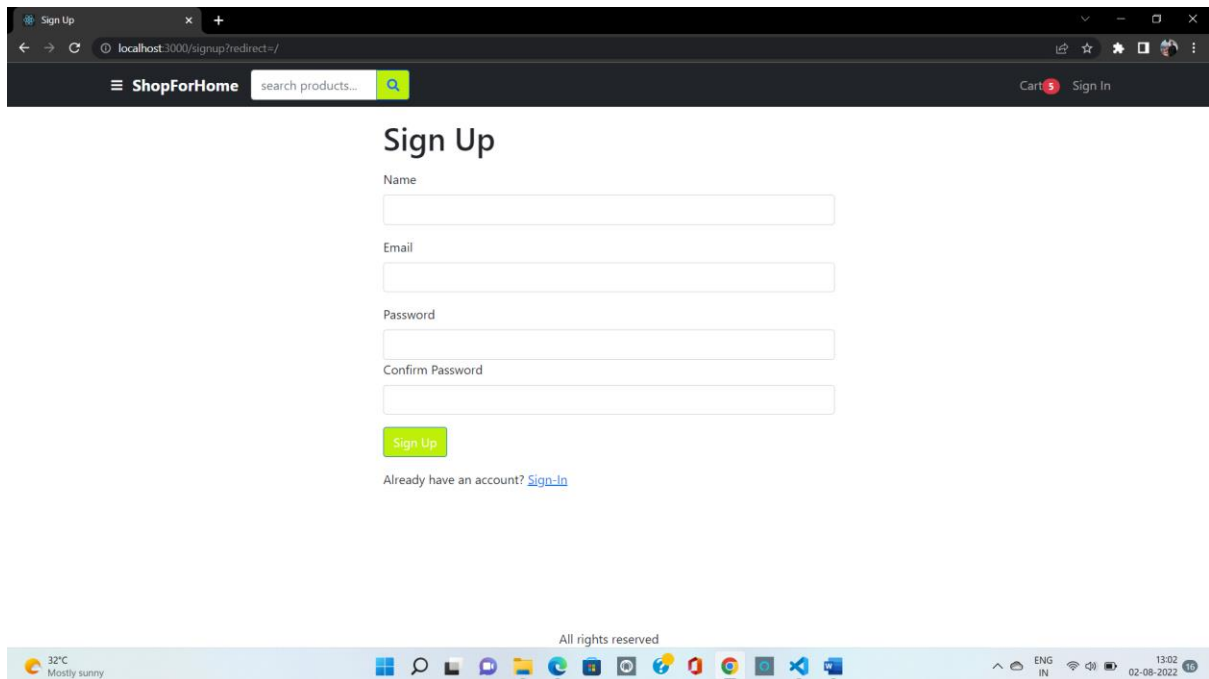
All rights reserved

32°C Mostly sunny

ENG IN

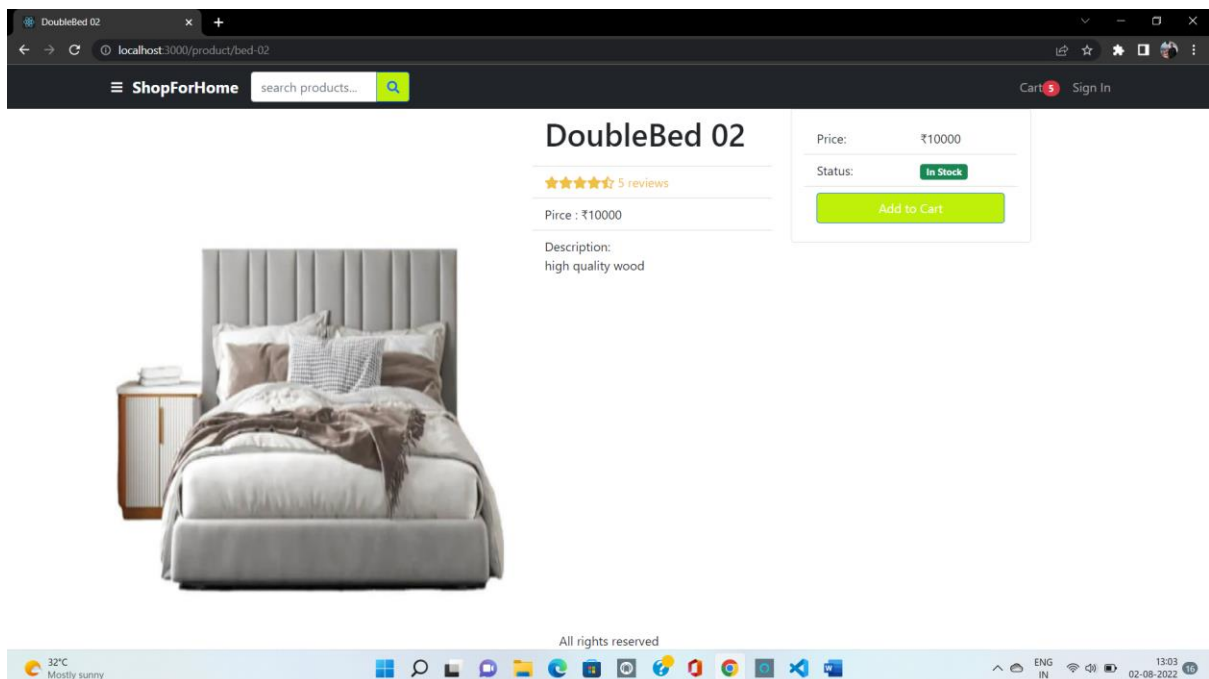
12:45 02-08-2022

SIGN UP PAGE – It is the page where you can create your account for the ecommerce website.



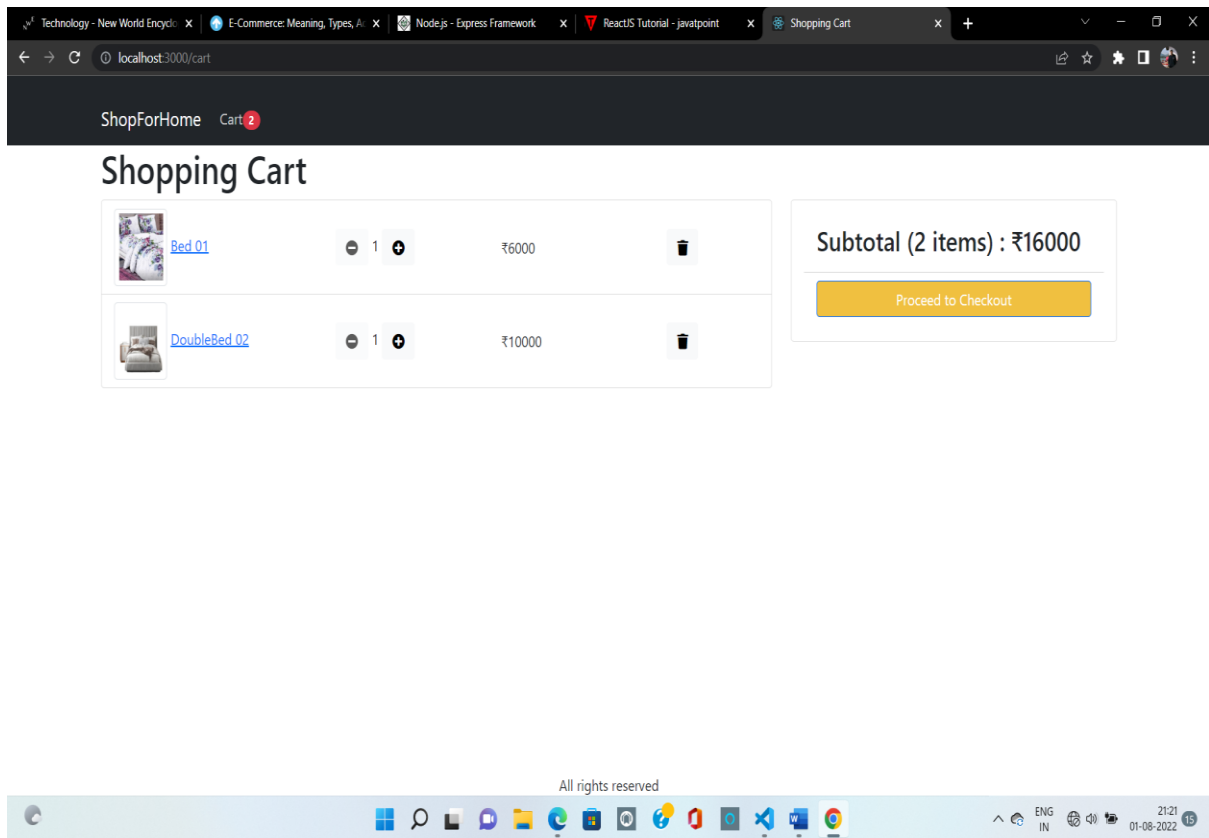
The screenshot shows a web browser window with the URL `localhost:3000/signup?redirect=`. The page has a dark header with the ShopForHome logo, a search bar, and links for Cart and Sign In. The main content area is titled "Sign Up" and contains a form with the following fields: Name, Email, Password, and Confirm Password. A green "Sign Up" button is located below the form. A link "Already have an account? [Sign-In](#)" is positioned below the button. The footer includes "All rights reserved", a weather widget showing 32°C and "Mostly sunny", a taskbar with various application icons, and system status information: "ENG IN", signal strength, battery level, and the date/time "02-08-2022 13:02".

Product Details : User can see the details of the product by clicking on the particular product and they can review the product also and see the reviews of other users also.

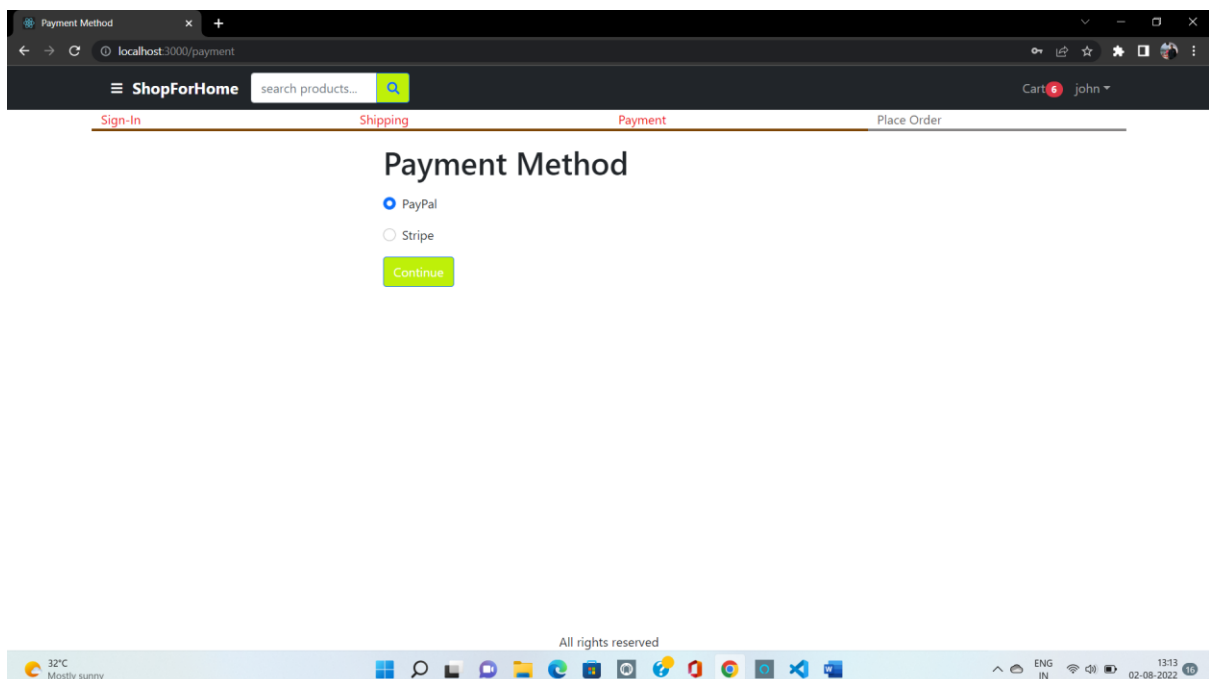


The screenshot displays the product page for "DoubleBed 02" on the ShopForHome website. The browser address bar shows `localhost:3000/product/bed-02`. The header is consistent with the previous page. The product details section includes a large image of the bed, a 5-star rating with "5 reviews", a price of ₹10000, and a description: "high quality wood". A green "Add to Cart" button is prominently displayed. To the right of the product image, a summary box shows the price as ₹10000, the status as "In Stock", and the "Add to Cart" button. The footer contains the same elements as the previous page, including the weather widget, taskbar, and system status information.

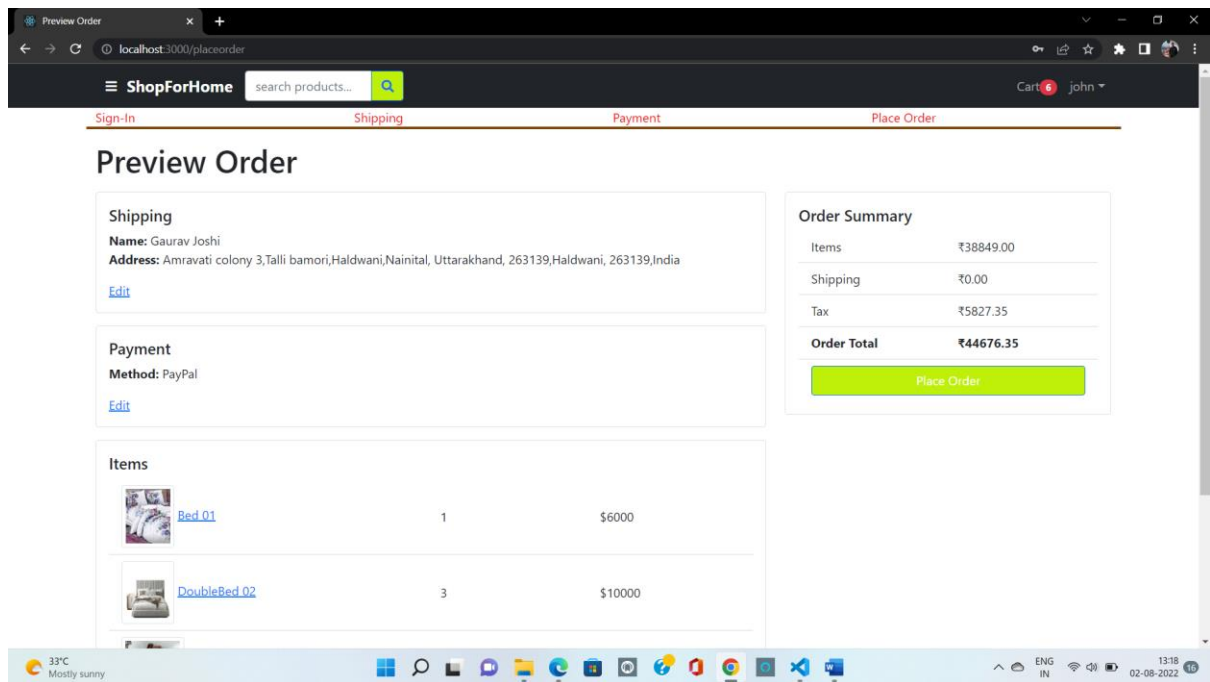
CART – From the Product page users can add their favourite products to the cart for further process.



PAYMENT PAGE -It is the page where you can select the mode of payment.



PLACE ORDER PAGE- It is the page where you can place your order and preview your order.



GITHUB REPOSITORY

Here we are providing the link of our Github repository :-

<http://Github.com/Gaur4301>

CONCLUSION

The main theme is to build an e-commerce HOME-decoration selling web application with all three i.e., Front end, back end, and database. This web application is a fully fledged working web application right from the login authentication, admin authorization, add items to cart, wishlist, and payment gateway. It can be used by any home-decor industry on either a small scale or a larger scale. The web application is easy for them to access and without any effort categories can be created and products can be added by them. It will be very attractive for the customer to see the products by sitting at home or office. It will be very helpful for the small-scale industries without selling to wholesalers, large retails mediators they can directly sell to the customer by saving money for both.