



DHARMSINH DESAI UNIVERSITY,NADIAD

FACULTY OF TECHNOLOGY

Department of Computer Engineering

B. Tech. CE Semester – V

Subject: (CE – 520) Advanced Technologies

**Online Grocery Store
(Group no - 1)**

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CERTIFICATE

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4) Abstract

"Development of an Online Grocery Store Using the MERN Stack"

Objective:

This project aims to create a user-friendly online grocery store platform that provides a seamless shopping experience for customers, offers a wide range of products, and addresses the increasing demand for convenient and safe grocery shopping solutions.

Online Grocery Shopping is a way of buying food and other household necessities using a web-based shopping service.

Online Grocery Store is a supermarket that allows online purchasing of fruits, vegetables, cooking oils and food grains etc. The user can conveniently use your computer to place your order online. Users can select the choice of grocery items he wants at the grocery store. Once the user has finalized the order, then he can add the items to the shopping cart. And after the payment the products will be shipped to the mentioned address.

One of the main benefits of online grocery shopping is the convenience it provides. With online grocery shopping, customers can place their order from the comfort of their own home, and have it delivered to their door or picked up at a convenient location.

This is particularly useful for people who are short on time, have mobility issues, or live in remote areas.

Additionally, many online grocery stores offer a wider range of products than physical stores, including organic, specialty and international items.

So, it becomes easy for the customer to order from a wide variety of products and save time by not going to the supermarket.

5) Introduction

In an era characterized by digital transformation and changing consumer preferences, the development of an online grocery store stands as a testament to the evolving landscape of e-commerce. This project represents an exploration into the world of online retail, specifically focusing on the grocery sector, which has witnessed a surge in demand for digital solutions to streamline the shopping experience. By leveraging cutting-edge technologies and a robust technology stack, this online grocery store aims to provide customers with a convenient, secure, and efficient means of purchasing their daily essentials.

The contemporary consumer seeks not only convenience but also a seamless and secure online shopping environment. This project endeavors to address these evolving needs. By leveraging cutting-edge technologies and a robust technology stack, this online grocery store aims to provide customers with a convenient, secure, and efficient means of purchasing their daily essentials.

-Technology/Platform/Tools Used

The creation of this online grocery store has relied on a range of modern technologies, platforms, and tools to ensure a seamless and user-friendly experience. The key components and tools used in the development of this project include:

MERN Stack: The project is built on the MERN stack, a popular and powerful combination of technologies consisting of MongoDB (for the database), Express.js (for the server), React (for the front-end user interface), and Node.js (for server-side JavaScript).

Front-End Technologies: React, along with HTML, CSS, and JavaScript, forms the foundation of the front-end user interface, enabling dynamic and responsive web pages.

Back-End Technologies: Node.js and Express.js are employed on the server side to handle data processing, user authentication, and the seamless interaction between the front-end and the database.

Database: MongoDB, a NoSQL database, is used to efficiently store and manage product listings, user data, and transaction records.

User Authentication: The project incorporates secure user authentication using technologies like JWT (JSON Web Tokens) to ensure data privacy and security.

Responsive Design: The project is designed to be responsive, ensuring a seamless user experience across various devices, including desktops, tablets, and smartphones.

6) Software Requirement Specifications (SRS)

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1. Introduction

1.1 Purpose

The purpose of an online grocery store is to document and clearly define the functional and non-functional requirements for the development of the online grocery store system. The SRS serves as a guide for the development team and stakeholders, outlining the features and functionality of the system, as well as any constraints or limitations that must be considered during the development process. It also helps to keep the development process aligned with the overall business goals and objectives.

1.2 Document conventions

Standard IEEE Conventions

1.3 Intended Audience and Reading Suggestions

We are making this document by keeping in mind different types of readers. This document will be useful for different audiences in various ways.

Developers:- They will use this document for guidance for the design and implementation phase.

Managers:- They will see the constraints all cover properly. Time and cost is within limits or not.

Marketing Staff:- They can use this document to make advertisements for this web store because by reading this document they will know what the system will do? How this system is different from others.

User:- They can ensure there self by reading the SRS that their needs being met in the web store or not

Testers:- They will test the implementation of the project according to the SRS base.

DocumentationWriter:- They will use this document during the documentation of the project. It will be really helpful for them.

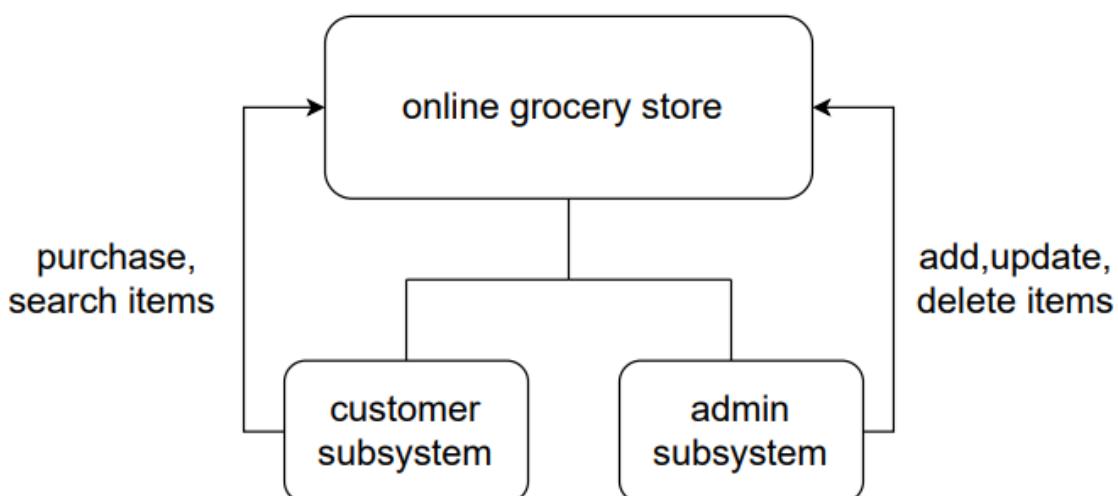
1.4 Product Scope

The system should allow customers to create an account and log in to access the store's features and functionalities. Customers should be able to browse products by category, search for specific products, and view product details such as images, descriptions, and pricing. The system should include a shopping cart feature that allows customers to add and remove products from their cart and to view the total cost of their order. Customers should be able to complete their purchase by providing their shipping and payment information and submitting the order. The system should include a product management feature for store administrators to add, update, and remove products from the store's inventory. The system should include features for store administrators to create and manage promotions and discounts to attract customers. The online store should be mobile-friendly and responsive to different screen sizes and devices. Customers should be able to contact customer service for assistance with their order or for general inquiries.

2. Overall Description

2.1 Product Perspective

The system includes the user subsystem as well the admin subsystem. The online grocery system provides an outstanding way of bringing customers on an online platform to make purchases in an efficient and secure manner irrespective of the distance between the two. It is a platform for customers to shop items online without having to visit a store. This system is a one stop for customers to shop from millions of products online.



2.2 Product Functions

- **Register:** for customers
- **Login:** for customers and admin
- **Logout:** for customers and admin
- **Edit Account Details:** for customers and admin
- **Search item:** for customers
- **View item:** for customers
- **Add item to cart:** for customers
- **View shopping cart:** for customers
- **Change items in cart:** for customers
- **Proceed to buy:** for customers
- **Delivery & payment:** for customers
- **Place order:** for customers
- **Cancel order:** for customers
- **Return item:** for customers
- **Add items:** for admin
- **Modify items:** for admin
- **Remove items:** for admin

2.3 User Classes and Characteristics

Customer - He/she is a verified user of the system who is intended to buy a product using the platform. The functions used by customers are register, view account, login, browse item, view item, buy item now, add to cart, view cart, proceed to buy, enter delivery address, enter mode of payment, make payment, place order, view orders, cancel order, return item, logout.

Admin - He/she is a verified user of the system. The product functions used by admin are view account, login, add items, modify items, remove items from system.

2.4 Operating Environment

There is only one mode of using the software - web applications. Web applications can be run on Windows 10: Google Chrome, Mozilla Firefox, Internet Explorer, Microsoft Edge, Mac OS X: Apple Safari. The Internet is a basic necessity for the system to be accessed.

2.5 Design and Implementation Constraints

The system should be designed to protect customer's personal and financial information, and comply with relevant security standards. The system should be designed to provide fast response times and handle a large number of concurrent users. The system should be compatible with the most popular web browsers, including Chrome, Firefox, Safari, and Internet Explorer. The system should be designed to be mobile-friendly and responsive to different screen sizes and devices. The system should be designed to be accessible to users with disabilities, in compliance with relevant accessibility standards, such as WCAG 2.0. The system should be developed using current web technologies, such as HTML and CSS.

2.6 User Documentation

Any user of the software system is the target audience for user documentation generated about the software system. A range of short document types (e.g., guidelines, tutorials, frequently asked questions, user manuals, on-line help, and trouble-shooting manuals) in HyperText Markup Language (HTML) and/or Portable Document Format (PDF) format must describe the use of the software system.

2.7 Assumptions and Dependencies

Under the assumption that a Windows/iOS/ Linux based operating system is available with C++/Python working along with WSGI Server as a dev server with Sqlite database, designing a modular view of the system is smooth. The recommendation models are assumed to be dependent on the server and its functionalities though relevant to customers will be more clearly defined by the server

3. External Interface Requirements

3.1 Hardware Interfaces

The system is compatible with a wide range of hardware, including desktop computers, laptops, and mobile devices. The system should be hosted on one or more web servers capable of handling the expected traffic and processing power requirements. The system should use a RDBMS to store and manage customer and product data. The system should be connected to a high-speed network, providing a fast and reliable connection to customers. RAM:- 4GB, Hard Drive Storage Needed:- 2GB

Other Hardware Requirement: None

3.2 Software Interfaces

The system should be compatible with the most popular operating systems, including Windows, MacOS, and Linux and also compatible with the most popular web browsers, including Chrome, Firefox, Safari. The system should be built using a programming language such as JavaScript, Python. The system should use RDBMS such as MySQL, MongoDB to store and manage customer and product data. The system should integrate with a payment gateway, such as Stripe or PayPal.

3.3 Communications Interfaces

The user can access the online grocery system through the internet by searching the system's name on the web browser. The system shall use the HTTP protocol for communication over the internet. The system shall give a confirmation to the customer that their order is placed by sending a message to the customer's email id.

4. System Features

4.1 admin and customer

R.1 :- User Accounts

Description :- Users from both subsystems- customers and admin must have an account on the grocery system. Customers accounts will hold information about their name, email id or password. Both users can view and login to their accounts and even edit account details in the future.

R.1.1 :- Sign up

User :- Customers

Input :- Enters name, email-id,password

Output :- Successfully registered, the login page is displayed

R.1.2 :- Sign in/Login

User :- Customers and Admin

Input :- Enters registered email-id,password

Output :- Successfully logged in, the home page is displayed

R.1.3 :- Logout

User :- Customers and Admin

Input :- Click on ‘logout’ in home page

Output :- User is logged out of the account, Login page will be displayed

R.1.4 :- Edit account details

User :- Customers and Admin

Input :- Re-Enter the details which need to be updated

Output :- Successfully updated List

4.2 Customer

R.2 :- The search facility

Description :- Customers can search for an item from the large catalogue of items in the grocery system by two methods. They can either search for a product using keywords related to the product or by providing the category of the product.

R.2.1 :- Search item

Input :- The customer can request the name of the product he/she is interested in.

Output :- List of products related to the item searched for.

R.2.2 :- Search category

Input :- The customer can request the category.

Output :- List of products related to the category searched for.

R.3 :- The shopping cart facility

Description :- Once the customer views and selects an item that he/she wishes to purchase, one must add the item to cart using the add to cart button. The shopping cart contains all the items that the customer intends to buy, there is one shopping cart associated with one customer account.

R.3.1 :- Add item to cart

Input :- Select the interested item to be added to cart.

Output :- Added item to cart, will remain in the same page

R.3.2 :- View shopping cart

Input :- After there are few items in the cart, it can be seen.

Output :- List of items that were added to cart is displayed along with item details and total cost

R.3.3 :- Change items in cart

Input :- select on delete item present next to the item to delete the item from the cart and to change the quantity of items click on '+' to increase quantity by 1, or '-' to decrease quantity by 1

Output :- The item will be removed from the page if it is deleted

R.3.4 :- Proceed to buy

Input :- Buy the selected item and payment details can be entered.

Output :- Payment page is displayed

R.4 :- Payment

Description :- Once the customer proceeds to buy from the cart page, the delivery and payment page is visible where the total cost of all the items in the card is visible and the customer has to fill in the details necessary such as address and payment method.

R.4.1 :- Delivery details

Input :- Enter the delivery address

Output :- The payment option is displayed

R.4.2 :- Payment options

Input :- select the payment option

Output :- show the details of the selected payment option

R.4.3 :- Payment details

Input :- Enter the payment details

Output :- Payment is successful, the place order is displayed

R.4.4 :- Order Placed

Input :- select place order to conform the order

Output :- Order successfully placed, the home page is displayed

R.5 :- Orders and returns

Description :- The customer can view and manage orders that are yet to be delivered to the customer. He/she can cancel the order that is yet to be delivered or return the item that is delivered and get the paid amount back, or view past orders and returns.

R.5.1 :- View orders

Input :- Select the view order to see all the orders placed

Output :- the past and existing orders and past returns are displayed

R.5.3 :- Return item

Input :- Select the item to be returned

Output :- The item is successfully booked for return

4.3 Admin

R.6 :- Admin features

Description :- Admin can add the items one by one in the Grocery Store. Admin can also remove the item and modify items by name, price and image. Admin also views new orders placed by the customers.

R.6.1 :- Add items

Input :- Enter details of all the items to be added

Output :- The items successfully added, customers can view these items

R.6.2 :- Remove Items

Input :- Search the item by the name and id of the item to be removed

Output :- The item successfully removed

R.6.3 :- Modify Items

Input :- Modify the items such as name, price, image, etc.

Output :- The item successfully modified

R.6.4 :- View new orders

Input :- Select View new orders placed by the customers.

Output :- Displays the orders for his/her items from the customers

5. Other Nonfunctional Requirements

5.1 Performance Requirements

You will be signed in within 20 sec. If anybody makes a new account then he will

receive confirmation email within 5 minutes. Search results shown within 15 sec. Credit card validate within 5 sec. Web support 200 customers logged at the same time. The server will be working 24X7 time.

5.2 Safety Requirements

The system should clearly indicate to the user any potential risks associated with certain actions. The system should validate user input and prevent any data injection attacks.

5.3 Security Requirements

The system should use encryption to protect sensitive data, such as user passwords. The system should have regular vulnerability assessments and penetration tests to identify and remediate any security weaknesses.

5.4 Software Quality Attributes

Security: The application is password protected and also any update of new product entries and order processing is done by only privileged users.

Maintainability: The application is to be designed so that it is easily maintained. Also it should allow incorporating new requirements in any module of the system.

Reliability: The application will be able to handle two orders. When a user confirms his/her order the database will be updated immediately and the next user will not face problems in ordering.

Portability: The application will be easily portable on any window based system.

5.5 Business Rules

Given the presence of two subsystems for the customers and admin, the two types of users have different levels of privileges - including functionalities. Some of the functionalities common to the two subsystems are- login, viewing account details. Some functionalities specific to admin subsystems are add, modify and remove items. Customers also have browsing features, cart features, delivery details, payment options.

7) Database Design

The screenshot shows the MongoDB Compass interface for a database named 'grocery_store'. On the left, a sidebar lists databases like admin, sample_airbnb, sample_analytics, etc., and collections within 'grocery_store' such as categories, orders, products, and users. The main area displays four collection statistics:

Collection	Storage size	Documents	Avg. document size	Indexes	Total index size
categories	20.48 kB	4	70.00 B	1	36.86 kB
orders	20.48 kB	2	2.80 kB	1	36.86 kB
products	405.50 kB	9	46.23 kB	1	36.86 kB
users	20.48 kB	11	253.00 B	2	73.73 kB

The screenshot shows the MongoDB Compass interface for the 'categories' collection within the 'grocery_store' database. The sidebar shows the same structure as the previous screenshot. The main area displays the following documents:

Document	name	slug
{...}	"vegetable"	"vegetable"
{...}	"soap"	"soap"
{...}	"cold_drinks"	"cold-drinks"
{...}	"chocolates"	"chocolates"

MongoDB Compass - cluster0.d8t28cm.mongodb.net/grocery_store.orders

Connect Edit View Collection Help

cluster0.d8t28c... ...

Documents grocery_store.order...

My Queries Databases +

Search

admin grocery_store categories orders products users

local sample_airbnb sample_analytics sample_geospatial sample_guides sample_mflix sample_restaurants sample_supplies sample_training sample_weatherdata

grocery_store.orders

2 1 DOCUMENTS INDEXES

Documents Aggregations Schema Indexes Validation

Filter Type a query: { field: 'value' }

Explain Reset Find Options

ADD DATA EXPORT DATA

1 - 2 of 2

`_id: ObjectId('6539c210ca7ae835dcabb89')
 products: Array (2)
 payment: Object
 buyer: ObjectId('652fa7a76122bd9885dc0904')
 status: "Shipped"
 createdAt: 2023-10-19T05:43:44.634+00:00
 updatedAt: 2023-10-19T07:45:26.916+00:00
 __v: 0`

`_id: ObjectId('6539edc68582bc42047d01c7')
 products: Array (2)
 payment: Object
 buyer: ObjectId('652fa7a76122bd9885dc0904')
 status: "Processing"
 createdAt: 2023-10-19T08:50:14.057+00:00
 updatedAt: 2023-10-19T08:54:45.333+00:00
 __v: 0`

14:31 19-10-2023

MongoDB Compass - cluster0.d8t28cm.mongodb.net/grocery_store.products

Connect Edit View Collection Help

cluster0.d8t28c... ...

Documents grocery_store.pro...

My Queries Databases +

Search

admin grocery_store categories orders products users

local sample_airbnb sample_analytics sample_geospatial sample_guides sample_mflix sample_restaurants sample_supplies sample_training sample_weatherdata

grocery_store.products

9 1 DOCUMENTS INDEXES

Documents Aggregations Schema Indexes Validation

Filter Type a query: { field: 'value' }

Explain Reset Find Options

ADD DATA EXPORT DATA

1 - 9 of 9

`_id: ObjectId('651b2a2b5cd1124cc32e4680')
 name: "tomato"
 slug: "tomato"
 description: "Tomatoes offer several benefits, including protection for brain, heart..."
 price: 18
 category: ObjectId('6512b5630ae72e43d96d3882')
 quantity: 2
 photo: Object
 createdAt: 2023-10-02T20:38:03.656+00:00
 updatedAt: 2023-10-19T08:17:28.679+00:00
 __v: 0`

`_id: ObjectId('651b2a7e7e4257f91ea2563a')
 name: "onion"
 slug: "onion"
 description: "Onions are a fundamental ingredient in cooking and add depth of flavor..."
 price: 11
 category: ObjectId('6512b5630ae72e43d96d3882')
 quantity: 1
 photo: Object
 createdAt: 2023-10-02T20:39:26.721+00:00
 updatedAt: 2023-10-19T08:14:03.628+00:00
 __v: 0`

14:31 19-10-2023

MongoDB Compass - cluster0.d8t28cm.mongodb.net/grocery_store.users

Connect Edit View Collection Help

cluster0.d8t28cm... ...

My Queries

Databases

Search

admin

grocery_store

- categories
- orders
- products
- users

local

sample_airbnb

sample_analytics

sample_geospatial

sample_guides

sample_mflix

sample_restaurants

sample_supplies

sample_training

sample_weatherdata

Documents grocery_store.us...

grocery_store.users

11 DOCUMENTS 2 INDEXES

Documents Aggregations Schema Indexes Validation

Filter Type a query: { field: 'value' }

Explain Reset Find Options >

ADD DATA EXPORT DATA 1 - 11 of 11

`_id: ObjectId('650e5d5d032728fd648fd3e7')
name: "test"
email: "test@gmail.com"
password: "$2b$10$3dYwjjMlje4vlwdGPWNNOqgG8mp8UhGEy.2BllI/KiFjIfyS750K"
phone: "123123233"
address: "gujarat,india"
role: 0
createdAt: 2023-09-23T03:37:01.259+00:00
updatedAt: 2023-09-23T03:37:01.259+00:00
__v: 0`

`_id: ObjectId('651035dc10a77ac417830b54')
name: "mit"
email: "mit@gmail.com"
password: "$2b$10$PD73eYibNkyAt75qYriu.X0RTyzQn2KbgZ./fNFqKN5B4QCAYM0K"
phone: "1234567890"
address: "gujarat,india"
role: 0
createdAt: 2023-09-24T13:13:00.597+00:00
updatedAt: 2023-09-24T13:13:00.597+00:00
__v: 0`

_MONGOSH

Search

ENG IN

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8) Implementation Details

i) Modules created and brief description of each module.

1.Login Module - Lets the user login into the system by checking credentials provided through the login form and checking it against the user table.

2.Register Module - Lets the user register into the system by giving the credential into the register form. The user gets registered depending on whether they are already registered into the system.

3.Managing products Module - This module is responsible for providing the crud operations on the products in the database so that the user can issue the book by searching.

4. Manage Category Module - The admin can modify, add, delete the categories of the grocery items.

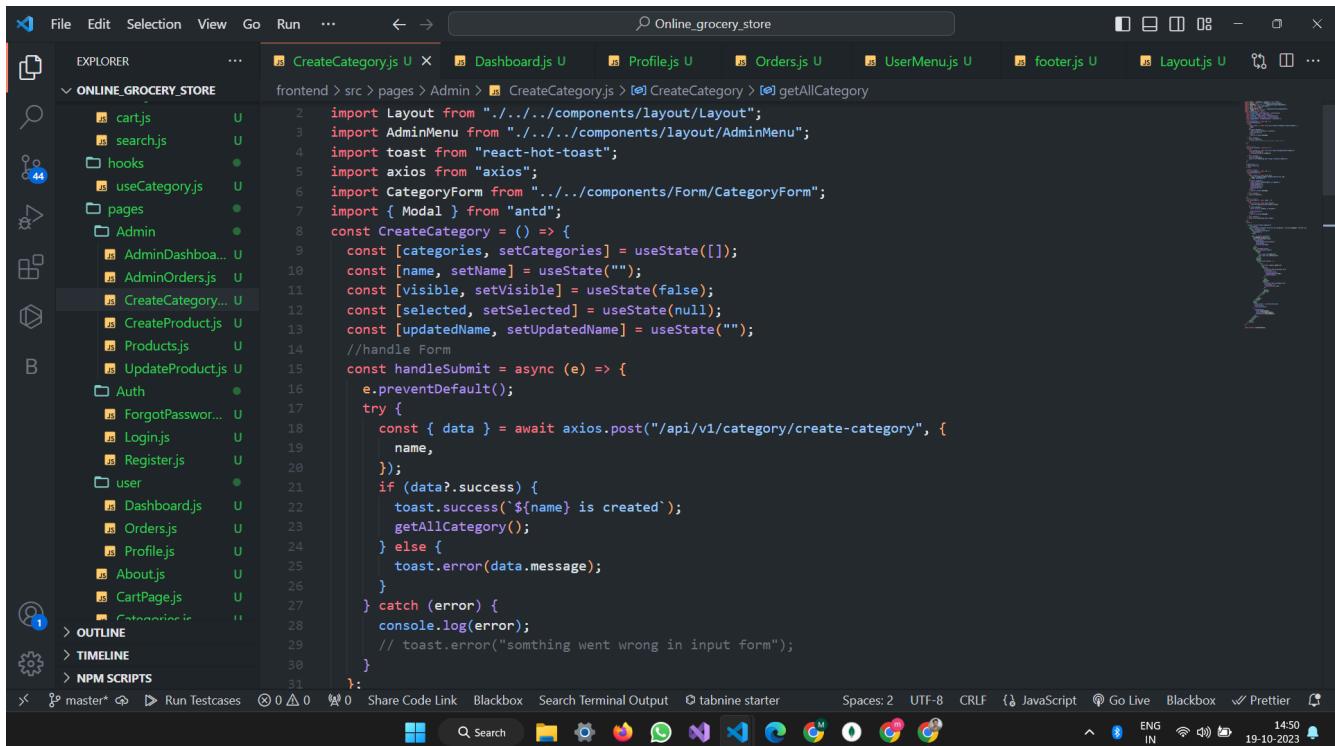
5. Search Product Module- This helps the user to search any product which he wishes to buy.

6. Payment Module - It is used by the user to buy the products added by him in the cart.

ii) Function prototypes which implements major functionality.

Admin functionalities -

Manage Category



```
import Layout from "../../components/layout/Layout";
import AdminMenu from "../../components/layout/AdminMenu";
import toast from "react-hot-toast";
import axios from "axios";
import CategoryForm from "../../components/Form/CategoryForm";
import { Modal } from "antd";
const CreateCategory = () => {
  const [categories, setCategories] = useState([]);
  const [name, setName] = useState("");
  const [visible, setVisible] = useState(false);
  const [selected, setSelected] = useState(null);
  const [updatedName, setUpdatedName] = useState("");
  //handle Form
  const handleSubmit = async (e) => {
    e.preventDefault();
    try {
      const { data } = await axios.post("/api/v1/category/create-category", {
        name,
      });
      if (data?.success) {
        toast.success(`${name} is created`);
        getAllCategory();
      } else {
        toast.error(data.message);
      }
    } catch (error) {
      console.log(error);
      // toast.error("somthing went wrong in input form");
    }
  };
}
```

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER ONLINE GROCERY STORE
frontend > src > pages > Admin > CreateCategory.js > CreateCategory > getAllCategory
  const getAllCategory = async () => {
    try {
      const { data } = await axios.get("/api/v1/category/get-category");
      if (data?.success) {
        setCategories(data?.category);
      }
    } catch (error) {
      console.log(error);
      toast.error("Something went wrong in getting category");
    }
  };

  useEffect(() => {
    getAllCategory();
  }, []);

//update category
const handleUpdate = async (e) => {
  e.preventDefault();
  try {
    const { data } = await axios.put(
      `/api/v1/category/update-category/${selected._id}`,
      { name: updatedName }
    );
    if (data?.success) {
      toast.success(`${updatedName} is updated`);
      setSelected(null);
      setUpdatedName("");
      setVisible(false);
      getAllCategory();
    } else {
      toast.error(data.message);
    }
  } catch (error) {
    console.log(error);
  }
};

```

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Outline Timeline NPM Scripts

14:51 19-10-2023

Manage Products

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER ONLINE GROCERY STORE
frontend > src > pages > Admin > CreateProduct.js > CreateProduct > CreateInput
  import React, { useState, useEffect } from "react";
  import Layout from "../../components/Layout/Layout";
  import AdminMenu from "../../components/Layout/AdminMenu";
  import toast from "react-hot-toast";
  import axios from "axios";
  import { Select } from "antd";
  import { useNavigate } from "react-router-dom";
  const { Option } = Select;

  const CreateProduct = () => {
    const navigate = useNavigate();
    const [categories, setCategories] = useState([]);
    const [name, setName] = useState("");
    const [description, setDescription] = useState("");
    const [price, setPrice] = useState("");
    const [category, setCategory] = useState("");
    const [quantity, setQuantity] = useState("");
    const [shipping, setShipping] = useState("");
    const [photo, setPhoto] = useState("");

    //get all category
    const getAllCategory = async () => {
      try {
        const { data } = await axios.get("/api/v1/category/get-category");
        if (data?.success) {
          setCategories(data?.category);
        }
      } catch (error) {
        console.log(error);
        toast.error("Something went wrong in getting category");
      }
    };

    useEffect(() => {
      getAllCategory();
    }, []);
  };

```

Ln 68, Col 38 Spaces: 2 UTF-8 CRLF JavaScript Go Live Blackbox Prettier

master* 0 0 Share Code Link Blackbox Search Terminal Output tabnine starter

Outline Timeline NPM Scripts

14:53 19-10-2023

```
const handleCreate = async (e) => {
  try {
    const productData = new FormData();
    productData.append("name", name);
    productData.append("description", description);
    productData.append("price", price);
    productData.append("quantity", quantity);
    productData.append("photo", photo);
    productData.append("category", category);
    const { data } = await axios.post(
      "/api/v1/product/create-product",
      productData
    );
    if (data?.success) {
      toast.error(data?.message);
    } else {
      toast.success("Product Created Successfully");
      navigate("/dashboard/admin/products");
    }
  } catch (error) {
    console.log(error);
    toast.error("something went wrong");
  }
};

const handleSubmit = (e) => {
  e.preventDefault();
  handleCreate();
};

return (
  <Layout title={"Create Product"}>
    <div className="container-fluid m-3 p-3">
      <div className="row">
        <div className="col-md-3">
          <AdminMenu />
        </div>
        <div className="col-md-9">

```

```
const UpdateProduct = () => {
  const navigate = useNavigate();
  const params = useParams();
  const [categories, setCategories] = useState([]);
  const [name, setName] = useState("");
  const [description, setDescription] = useState("");
  const [price, setPrice] = useState("");
  const [category, setCategory] = useState("");
  const [quantity, setQuantity] = useState("");
  const [shipping, setShipping] = useState("");
  const [photo, setPhoto] = useState("");
  const [id, setId] = useState("");

  //get single product
  const getSingleProduct = async () => {
    try {
      const { data } = await axios.get(
        `/api/v1/product/get-product/${params.slug}`
      );
      setName(data.product.name);
      setId(data.product._id);
      setDescription(data.product.description);
      setPrice(data.product.price);
      setPrice(data.product.price);
      setQuantity(data.product.quantity);
      setShipping(data.product.shipping);
      setCategory(data.product.category._id);
    } catch (error) {
      console.log(error);
    }
  };
  getSingleProduct();
};


```

```

const getAllCategory = async () => {
  try {
    const { data } = await axios.get("/api/v1/category/get-category");
    if (data?.success) {
      setCategories(data?.category);
    }
  } catch (error) {
    console.log(error);
    toast.error("Something went wrong in getting category");
  }
};

useEffect(() => {
  getAllCategory();
}, []);

//create product function
const handleUpdate = async (e) => {
  e.preventDefault();
  try {
    const productData = new FormData();
    productData.append("name", name);
    productData.append("description", description);
    productData.append("price", price);
    productData.append("quantity", quantity);
    photo && productData.append("photo", photo);
    productData.append("category", category);
    const { data } = await axios.put(
      `/api/v1/product/update-product/${id}`,
      productData
    );
    if (data?.success) {
      toast.error(data?.message);
    } else {
      toast.success("Product Updated Successfully");
      navigate("/dashboard/admin/products");
    }
  } catch (error) {
    console.log(error);
  }
};

```

Manage Order

```

const AdminOrders = () => {
  const [status, setStatus] = useState([
    "Not Process",
    "Processing",
    "Shipped",
    "Delivered",
    "Cancel",
  ]);
  const [changeStatus, setChangeStatus] = useState("");
  const [orders, setOrders] = useState([]);
  const [auth, setAuth] = useAuth();
  const getOrders = async () => {
    try {
      const { data } = await axios.get("/api/v1/auth/all-orders");
      setOrders(data);
    } catch (error) {
      console.log(error);
    }
  };

  useEffect(() => {
    if (auth?.token) getOrders();
  }, [auth?.token]);

  const handleChange = async (orderId, value) => {
    try {
      const { data } = await axios.put(`/api/v1/auth/order-status/${orderId}`, {
        status: value,
      });
      getOrders();
    } catch (error) {
      console.log(error);
    }
  };
}

```

User functionalities :-

Filter The Product

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER
ONLINE GRO... CreateProductjs Productsjs UpdateProductjs Auth ForgotPassword... Loginjs Registerjs user Dashboardjs Ordersjs Profilejs Aboutjs CartPagejs Categoriesjs CategoryProduct... Contactjs HomePagejs Pagenotfoundjs ProductDetailsjs Searchjs styles App.css App.js App.test.js index.css index.js logo.svg reportWebVitals.js setupTests.js
frontend > src > pages > HomePage.js
const navigate = useNavigate();
const [cart, setCart] = useCart();
const [products, setProducts] = useState([]);
const [categories, setCategories] = useState([]);
const [checked, setChecked] = useState([]);
const [radio, setRadio] = useState("");
const [total, setTotal] = useState(0);
const [page, setPage] = useState(1);
const [loading, setLoading] = useState(false);

//get all cat
const getAllCategory = async () => {
  try {
    const { data } = await axios.get("/api/v1/category/get-category");
    if (data?.success) {
      setCategories(data?.category);
    }
  } catch (error) {
    console.log(error);
  }
};

useEffect(() => {
  getAllCategory();
  getTotal();
}, []);

//get products
const getAllProducts = async () => {
  try {
    setLoading(true);
    const { data } = await axios.get(`/api/v1/product/product-list/${page}`);
    setLoading(false);
    setProducts(data.products);
  } catch (error) {
    setLoading(false);
    console.log(error);
  }
};

```

Share Code Link Blackbox Search Terminal Output tabnine starter Ln 12, Col 37 (34 selected) Spaces: 2 UTF-8 CRLF JavaScript Go Live Blackbox Prettier 15:11 ENG IN 19-10-2023

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER
ONLINE GRO... CreateProductjs Productsjs UpdateProductjs Auth ForgotPassword... Loginjs Registerjs user Dashboardjs Ordersjs Profilejs Aboutjs CartPagejs Categoriesjs CategoryProduct... Contactjs HomePagejs Pagenotfoundjs ProductDetailsjs Searchjs styles App.css App.js App.test.js index.css index.js logo.svg reportWebVitals.js setupTests.js
frontend > src > pages > HomePage.js
// filter by cat
const handleFilter = (value, id) => {
  let all = [...checked];
  if (value) {
    all.push(id);
  } else {
    all = all.filter((c) => c !== id);
  }
  setChecked(all);
};

useEffect(() => {
  if (!checked.length || !radio.length) getAllProducts();
}, [checked.length, radio.length]);

useEffect(() => {
  if (checked.length || radio.length) filterProduct();
}, [checked, radio]);

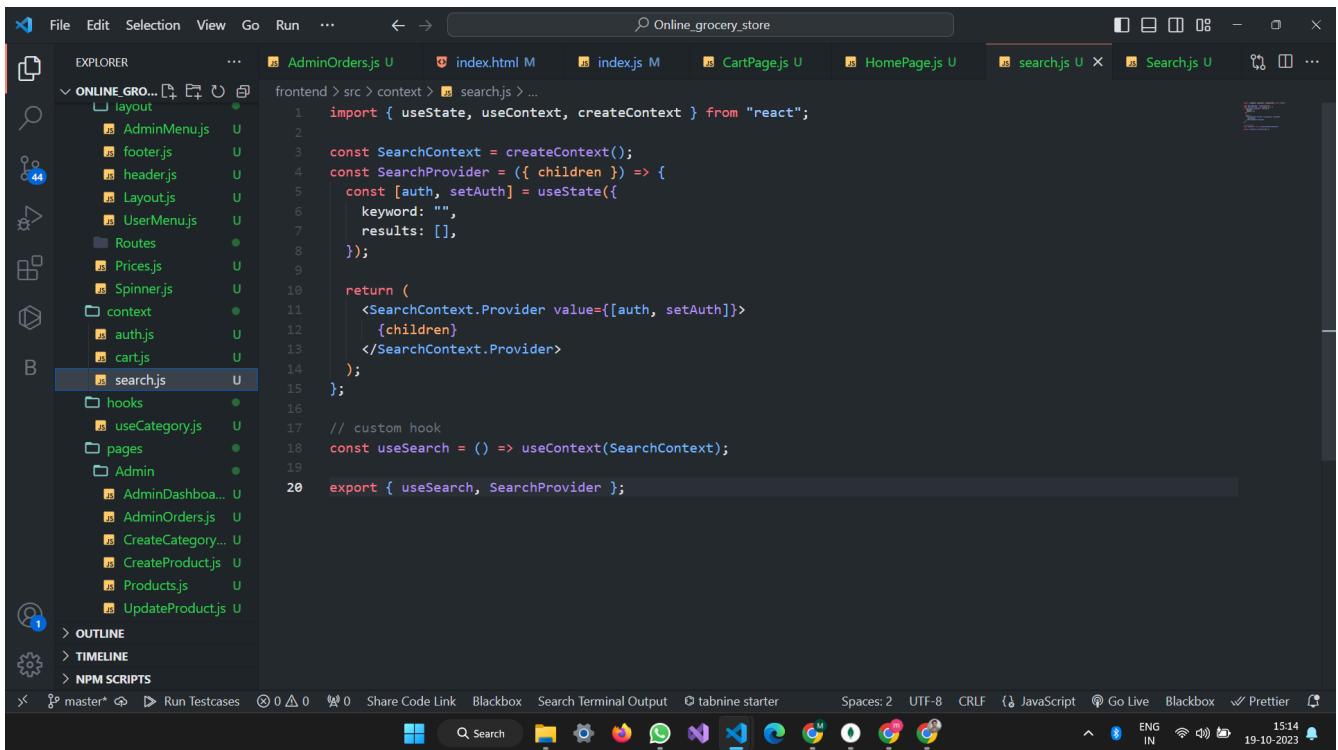
//get filtered product
const filterProduct = async () => {
  try {
    const { data } = await axios.post("/api/v1/product/product-filters", {
      checked,
      radio,
    });
    setProducts(data.products);
  } catch (error) {
    console.log(error);
  }
};

return (
  <Layout title={"All Products - Best offers"}>
    <div className="container-fluid row mt-3">
      <div className="col-md-2">
        <FormSelect name="filterByCategory" />
      </div>

```

Share Code Link Blackbox Search Terminal Output tabnine starter Ln 12, Col 37 (34 selected) Spaces: 2 UTF-8 CRLF JavaScript Go Live Blackbox Prettier 15:12 ENG IN 19-10-2023

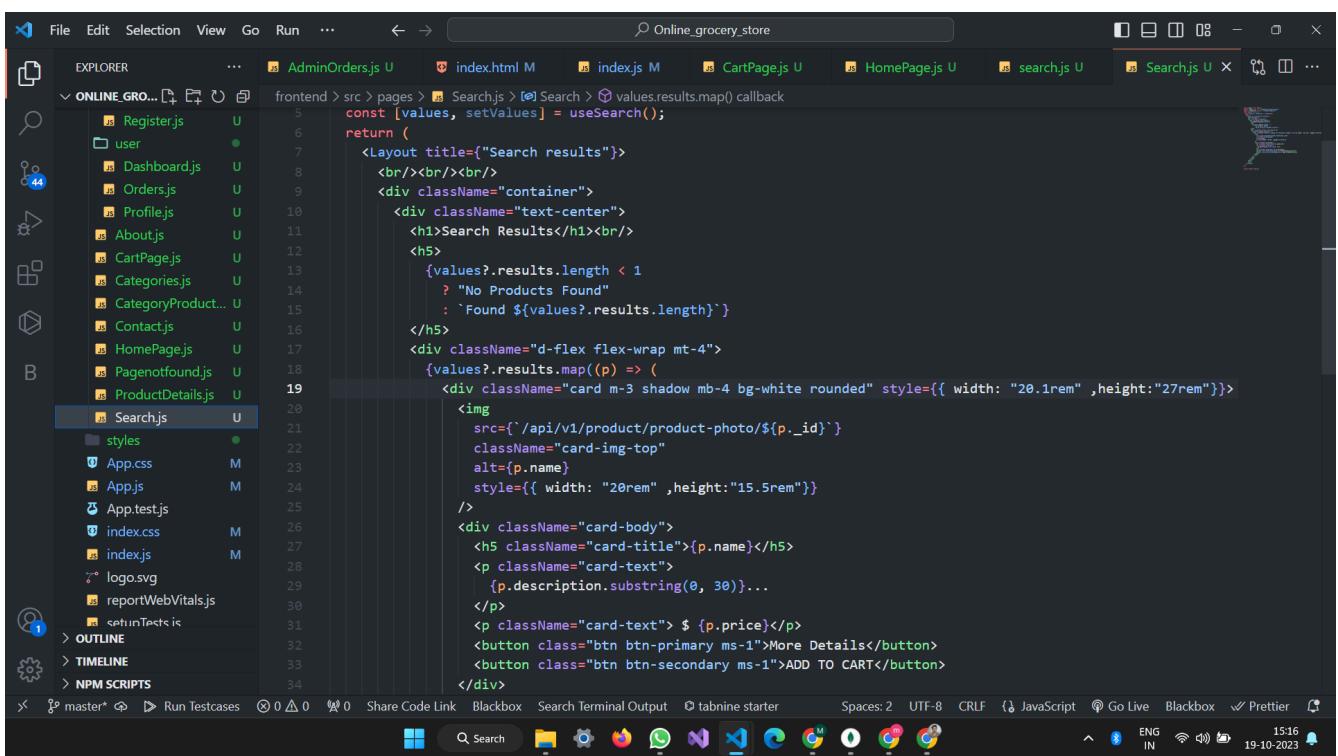
Search Product



This screenshot shows a code editor interface with the title bar "Online_grocery_store". The left sidebar is the "EXPLORER" view, showing a project structure under "ONLINE_GRO...". The "search.js" file is selected in the Explorer. The main editor area contains the following code:

```
import { useState, useContext, createContext } from "react";
const SearchContext = createContext();
const SearchProvider = ({ children }) => {
  const [auth, setAuth] = useState({
    keyword: "",
    results: []
  });
  return (
    <SearchContext.Provider value={[auth, setAuth]}>
      {children}
    </SearchContext.Provider>
  );
};
// custom hook
const useSearch = () => useContext(SearchContext);
export { useSearch, SearchProvider };
```

The status bar at the bottom shows various icons and the date "19-10-2023".



This screenshot shows a code editor interface with the title bar "Online_grocery_store". The left sidebar is the "EXPLORER" view, showing a project structure under "ONLINE_GRO...". The "Search.js" file is selected in the Explorer. The main editor area contains the following code:

```
const [values, setValues] = useSearch();
return (
  <Layout title={"Search results"}>
    <br/><br/>
    <div className="container">
      <div className="text-center">
        <h1>Search Results</h1><br/>
        <h5>
          {values?.results.length < 1
            ? "No Products Found"
            : `Found ${values?.results.length}`}
        </h5>
        <div className="d-flex flex-wrap mt-4">
          {values?.results.map((p) => (
            <div className="card m-3 shadow mb-4 bg-white rounded" style={{ width: "20.1rem" ,height:"27rem"}>
              <img
                src={`/api/v1/product/product-photo/${p._id}`}
                className="card-img-top"
                alt={p.name}
                style={{ width: "20rem" ,height:"15.5rem"}}
              />
              <div className="card-body">
                <h5 className="card-title">{p.name}</h5>
                <p className="card-text">
                  {p.description.substring(0, 30)}...
                </p>
                <p className="card-text"> $ {p.price}</p>
                <button className="btn btn-primary ms-1">More Details</button>
                <button className="btn btn-secondary ms-1">ADD TO CART</button>
              </div>
            </div>
          ))
        
```

Manage Cart

A screenshot of the Visual Studio Code interface. The title bar shows "Online_grocery_store". The left sidebar has a tree view of files under "ONLINE GROCERY STORE". The main editor area displays the "CartPage.js" file. The code is a JavaScript file with several functions and variables. It includes imports for "useAuth", "useCart", "useState", "useNavigate", and "useRef". It defines a "CartPage" function that handles cart items, calculates total price, and removes items from the cart. It also includes a "removeCartItem" function that updates the local storage. The bottom status bar shows "Ln 107, Col 62 (42 selected)" and various icons.

```
const CartPage = () => {
  const [auth, setAuth] = useAuth();
  const [cart, setCart] = useCart();
  const [clientToken, setClientToken] = useState("");
  const [instance, setInstance] = useState("");
  const [loading, setLoading] = useState(false);
  const navigate = useNavigate();

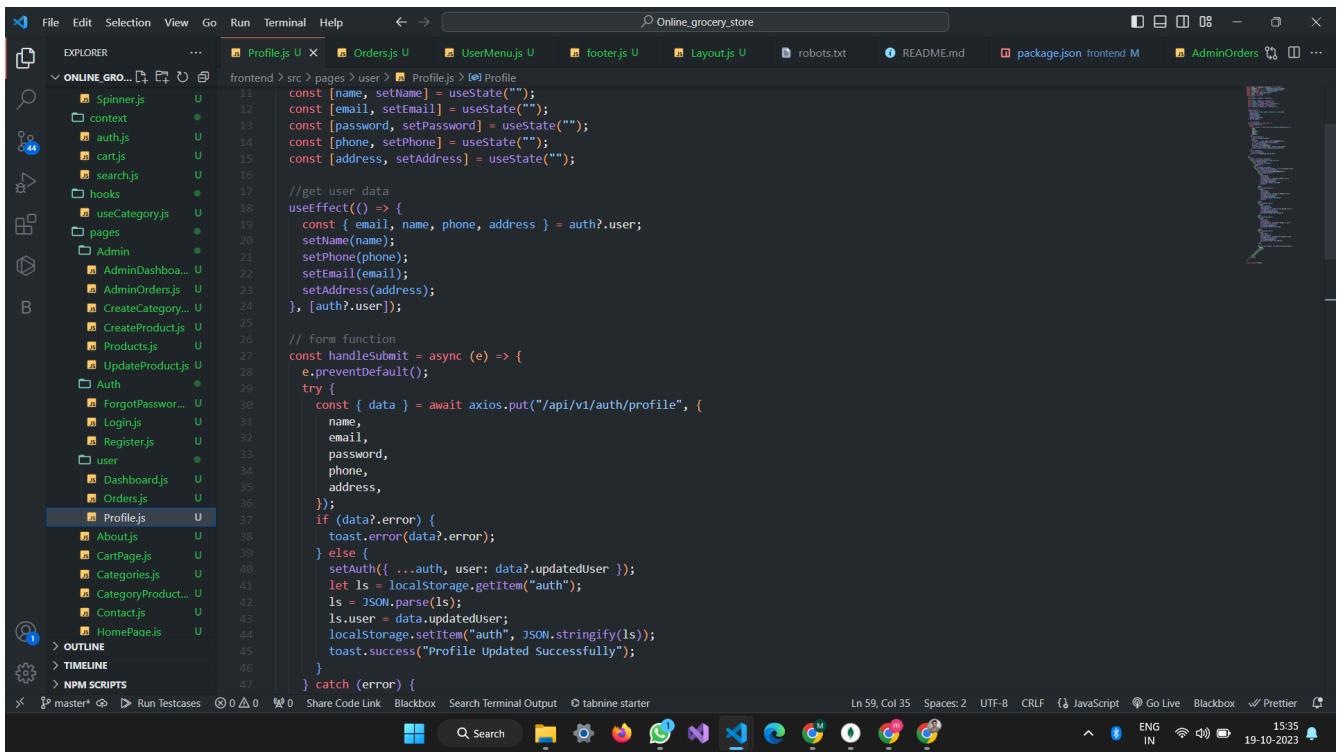
  //total price
  const totalPrice = () => {
    try {
      let total = 0;
      cart?.map((item) => {
        total = total + item.price;
      });
      return total.toLocaleString("en-US", {
        style: "currency",
        currency: "USD",
      });
    } catch (error) {
      console.log(error);
    }
  };
  //delete item
  const removeCartItem = (pid) => {
    try {
      let myCart = [...cart];
      let index = myCart.findIndex((item) => item._id === pid);
      myCart.splice(index, 1);
      setCart(myCart);
      localStorage.setItem("cart", JSON.stringify(myCart));
    } catch (error) {
      console.log(error);
    }
  };
}
```

A screenshot of the Visual Studio Code interface. The title bar shows "Online_grocery_store". The left sidebar has a tree view of files under "ONLINE GROCERY STORE". The main editor area displays the "HomePage.js" file. The code is a JavaScript file with several functions and variables. It includes imports for "useAuth", "useCart", "useState", and "useEffect". It defines a "HomePage" component that maps over products and creates cards for each. Each card has a thumbnail, product name, description, price, and an "ADD TO CART" button. The "ADD TO CART" button triggers a function to add the item to the cart and update local storage. The bottom status bar shows "Ln 166, Col 55" and various icons.

```
<div className="col-md-9">
  <h1 className="text-center">All Products</h1>
  <div className="d-flex flex-wrap">
    {products.map((p) => (
      <div className="card m-3 shadow mb-4 bg-white rounded" style={{ width: "20rem", height: "27rem" }}>
        <img
          src={`/api/v1/product/product-photo/${p._id}`}
          className="card-img-top"
          alt={p.name}
          style={{ width: "20rem", height: "15.5rem" }}
        />
        <div className="card-body">
          <h5 className="card-title">{p.name}</h5>
          <p className="card-text">
            {p.description.substring(0, 30)}...
          </p>
          <p className="card-text">${p.price}</p>
          <button className="btn btn-primary ms-1" onClick={() => navigate(`/product/${p.slug}`)}>
            More Details
          </button>
          <button
            className="btn btn-secondary ms-1"
            onClick={() => {
              setCart([...cart, p]);
              localStorage.setItem(
                "cart",
                JSON.stringify([...cart, p])
              );
              toast.success("Item Added to cart");
            }}
          >
            ADD TO CART
          </button>
        </div>
      </div>
    ))
  </div>

```

Manage Profile

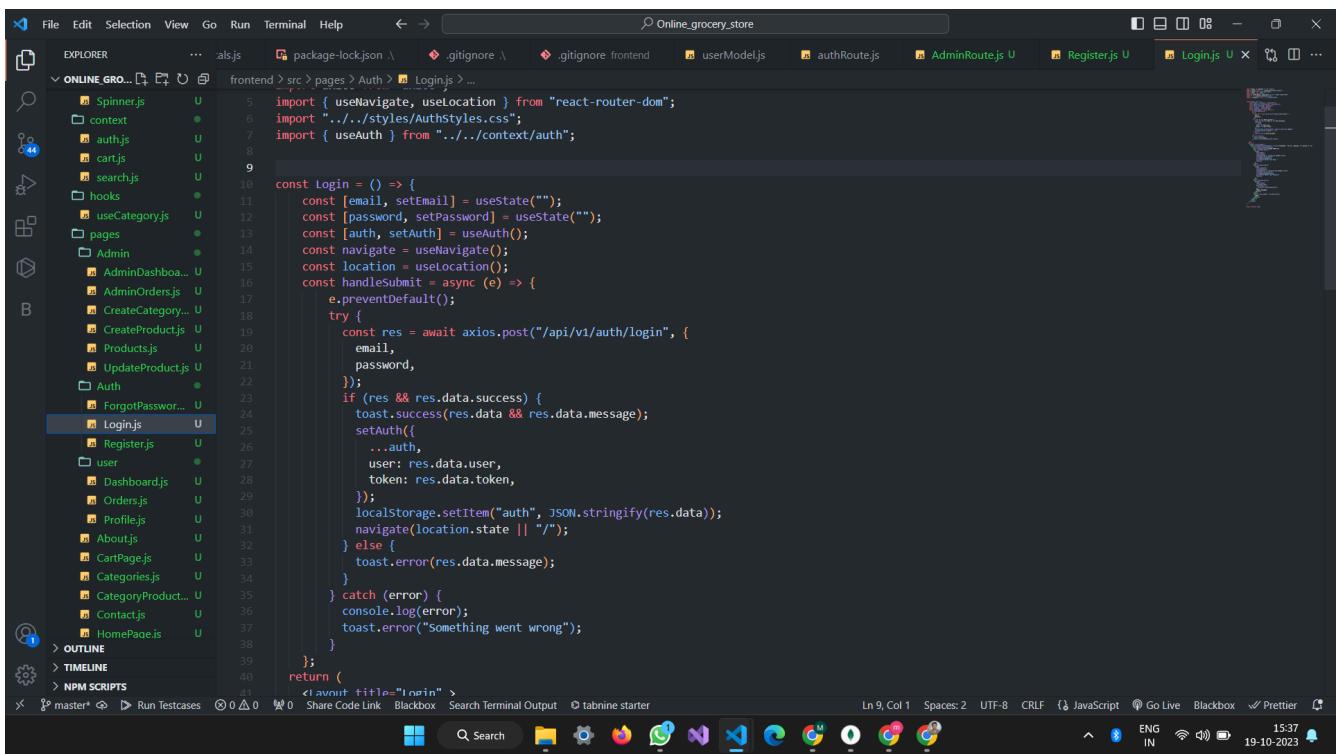


```
const [name, setName] = useState("");
const [email, setEmail] = useState("");
const [password, setPassword] = useState("");
const [phone, setPhone] = useState("");
const [address, setAddress] = useState("");

useEffect(() => {
  const { email, name, phone, address } = auth?.user;
  setName(name);
  setPhone(phone);
  setEmail(email);
  setAddress(address);
}, [auth?.user]);

const handleSubmit = async (e) => {
  e.preventDefault();
  try {
    const { data } = await axios.put("/api/v1/auth/profile", {
      name,
      email,
      password,
      phone,
      address,
    });
    if (data?.error) {
      toast.error(data?.error);
    } else {
      setAuth({ ...auth, user: data?.updatedUser });
      let ls = localStorage.getItem("auth");
      ls = JSON.parse(ls);
      ls.user = data.updatedUser;
      localStorage.setItem("auth", JSON.stringify(ls));
      toast.success("Profile Updated Successfully");
    }
  } catch (error) {
    console.log(error);
    toast.error("Something went wrong");
  }
};
```

Login and Register



```
import { useNavigate, useLocation } from "react-router-dom";
import "../../styles/Authstyles.css";
import { useAuth } from "../../context/auth";

const Login = () => {
  const [email, setEmail] = useState("");
  const [password, setPassword] = useState("");
  const [auth, setAuth] = useAuth();
  const navigate = useNavigate();
  const location = useLocation();
  const handleSubmit = async (e) => {
    e.preventDefault();
    try {
      const res = await axios.post("/api/v1/auth/login", {
        email,
        password,
      });
      if (res && res.data.success) {
        toast.success(res.data.message);
        setAuth({
          ...auth,
          user: res.data.user,
          token: res.data.token,
        });
        localStorage.setItem("auth", JSON.stringify(res.data));
        navigate(location.state || "/");
      } else {
        toast.error(res.data.message);
      }
    } catch (error) {
      console.log(error);
      toast.error("Something went wrong");
    }
  };
  return (
    <div>
      <h2>Login</h2>
      <form>
        <input type="text" value={email} onChange={e => setEmail(e.target.value)} />
        <input type="password" value={password} onChange={e => setPassword(e.target.value)} />
        <button type="submit" onClick={handleSubmit}>Login</button>
      </form>
    </div>
  );
};

export default Login;
```

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER ... als.js package-lock.json .gitignore .gitignore frontend userModel.js authRoute.js AdminRoute.js Register.js Login.js ...
ONLINE_GRO... E U frontend > src > pages > Auth > Register.js
import axios from "axios";
import { useState } from "react-router-dom";
import "../styles/AuthStyles.css";

const Register = () => {
  const [name, setName] = useState("");
  const [email, setEmail] = useState("");
  const [password, setPassword] = useState("");
  const [phone, setPhone] = useState("");
  const [address, setAddress] = useState("");
  const [answer, setAnswer] = useState("");
  const navigate = useNavigate();

  const handleSubmit = async (e) => {
    e.preventDefault();
    try {
      const res = await axios.post("/api/v1/auth/register", {
        name,
        email,
        password,
        phone,
        address,
        answer
      });
      if (res && res.data.success) {
        toast.success(res.data && res.data.message);
        navigate("/login");
      } else {
        toast.error(res.data.message);
      }
    } catch (error) {
      console.log(error);
      toast.error("Something went wrong");
    }
  };
  return (
    <div>
      <form>
        <input type="text" value={name} onChange={(e) => setName(e.target.value)} />
        <input type="text" value={email} onChange={(e) => setEmail(e.target.value)} />
        <input type="password" value={password} onChange={(e) => setPassword(e.target.value)} />
        <input type="text" value={phone} onChange={(e) => setPhone(e.target.value)} />
        <input type="text" value={address} onChange={(e) => setAddress(e.target.value)} />
        <input type="text" value={answer} onChange={(e) => setAnswer(e.target.value)} />
        <button type="submit" onClick={handleSubmit}>Register</button>
      </form>
    </div>
  );
}

export default Register;

```

Forgot Password

```

File Edit Selection View Go Run Terminal Help < > Online_grocery_store
EXPLORER ... ForgotPassword.js auth.js AdminDashboard.js header.js cart.js Header.js favicon.ico Spinner.js AdminMenu.js ...
ONLINE_GRO... E U frontend > src > pages > Auth > ForgotPassword.js
import React, { useState } from "react";
import Layout from "../../components/layout/Layout";
import axios from "axios";
import { useNavigate } from "react-router-dom";
import toast from "react-hot-toast";
import "../styles/AuthStyles.css";

const ForgotPassword = () => {
  const [email, setEmail] = useState("");
  const [newPassword, setNewPassword] = useState("");
  const [answer, setAnswer] = useState("");

  const navigate = useNavigate();

  // form function
  const handleSubmit = async (e) => {
    e.preventDefault();
    try {
      const res = await axios.post("/api/v1/auth/forgot-password", {
        email,
        newPassword,
        answer
      });
      if (res && res.data.success) {
        toast.success(res.data && res.data.message);
        navigate("/login");
      } else {
        toast.error(res.data.message);
      }
    } catch (error) {
      console.log(error);
      toast.error("Something went wrong");
    }
  };
  return (
    <Layout title="Forgot Password">
      <div className="form-container">
        <form>
          <input type="text" value={email} onChange={(e) => setEmail(e.target.value)} />
          <input type="password" value={newPassword} onChange={(e) => setNewPassword(e.target.value)} />
          <input type="text" value={answer} onChange={(e) => setAnswer(e.target.value)} />
          <button type="submit" onClick={handleSubmit}>Forgot Password</button>
        </form>
      </div>
    </Layout>
  );
}

export default ForgotPassword;

```

9) Testing

i) Describe the testing framework and testing method used. List down the test cases used to test your system.

For testing our application, a mixed approach of integration testing and regression testing is used.

Integration testing : each main part of the application is tested after each small small function is tested first and then combine them and test that main part.

Regression testing : After the main part of the application is created, add them in the whole system, and then test the whole system to make sure the whole system is working fine after adding some main part.

Manual Testing:- Manual testing is used to find and fix the bug in our application.

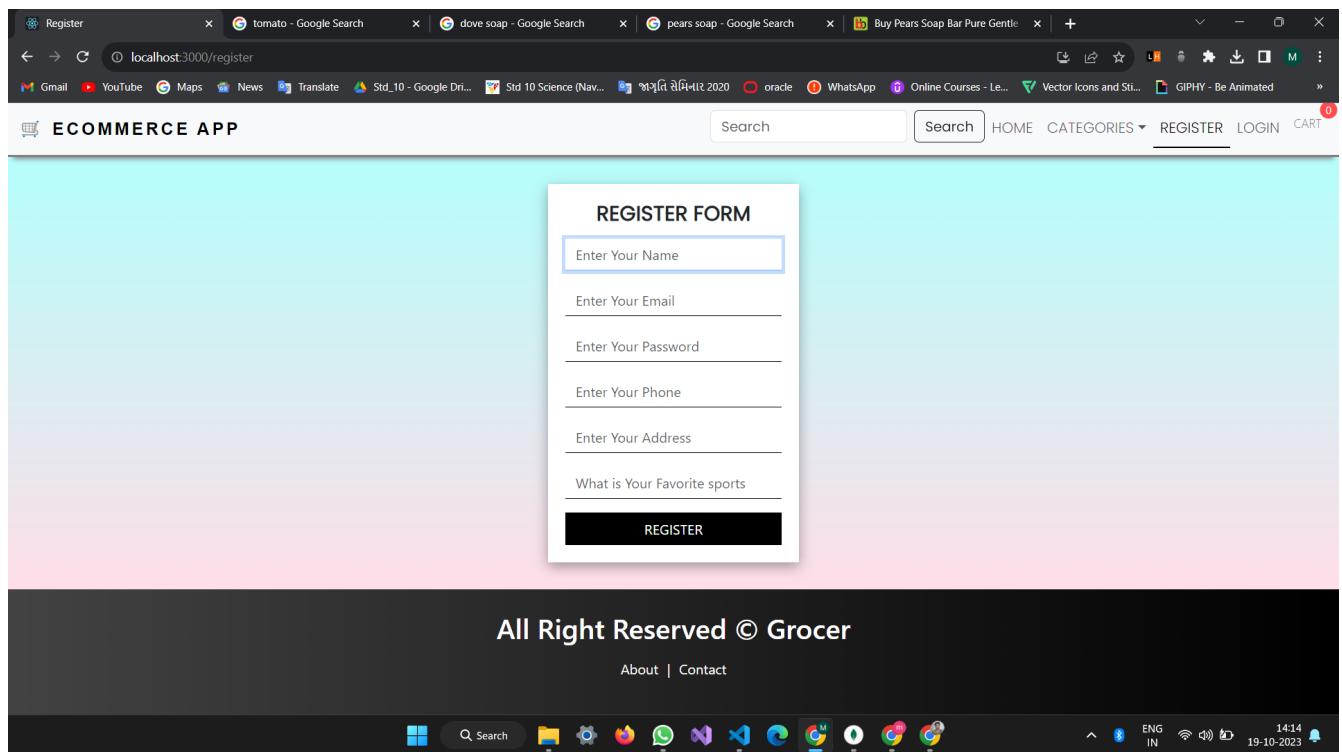
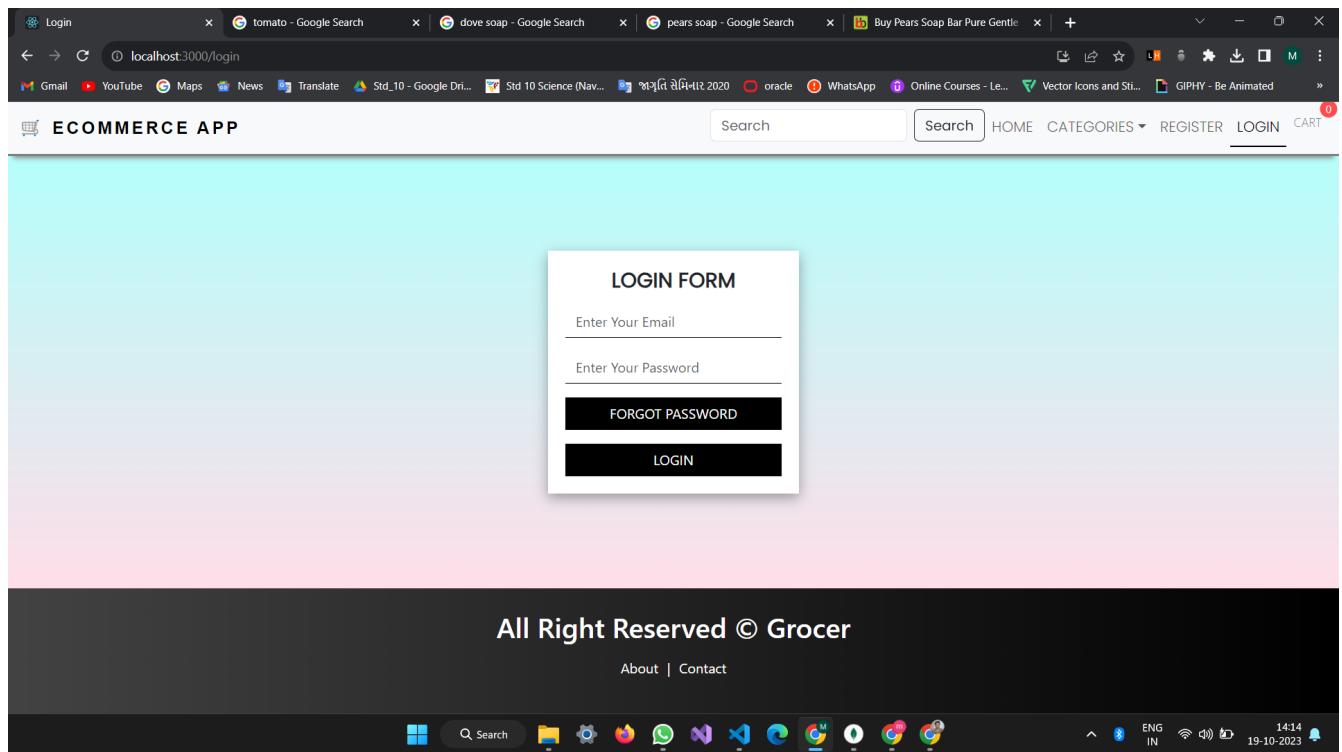
Sr No.	Test Scenario	Expected Result	Actual Result	Status
1	Login	The user or admin should be able to login	The user and the admin is able to login	Success
2	Register	The user should be able to register to the system	The user is able to register to the system	Success
3	Add Product to the cart	Product should be added into cart	Product added successfully	Success
4	Delete product from cart	Product Should be deleted from the cart	Product Deleted Successfully	Success
5	Search Product	Only that Product is to be displayed which are searched by the user	Product Is Displayed Successfully	Success

10) Screen-shots

i) Important screen-shots of the system -

The screenshot shows the homepage of an E-commerce application. On the left, there are two filter sections: 'Filter By Category' (checkboxes for vegetable, soap, cold drinks, chocolates) and 'Filter By Price' (radio buttons for \$0 to 19, \$20 to 39, \$40 to 59, \$60 to 79, \$80 to 99, \$100 or more). A red 'RESET FILTERS' button is below these. On the right, the main area is titled 'All Products' and displays three product cards: 'Dairy milk' (Cadbury Dairy Milk bar), 'amul dark chocolate' (Amul Dark Chocolate bar), and 'pears' (Pears Pure and Gentle soap). Each card includes a small image, the product name, a brief description, the price (\$24, \$50, \$34 respectively), and 'More Details' and 'ADD TO CART' buttons. A yellow 'Loadmore' button is at the bottom.

The screenshot shows the 'Category - vegetable' page. The title 'Category - vegetable' is at the top, followed by a message '3 results found'. Three product cards are displayed: 'tomato' (a red tomato), 'onion' (two red onions), and 'potato' (three yellow potatoes). Each card shows an image, the product name, a brief description, the price (\$18, \$11, \$7 respectively), and 'More Details' and 'ADD TO CART' buttons. At the bottom, a dark footer bar contains the text 'All Right Reserved © Grocer'.



Grocery store - shop now | tomato - Google Search | dove soap - Google Search | pears soap - Google Search | Buy Pears Soap Bar Pure Gentle | +

localhost:3000/cart

Dairy milk
Dairy Milk chocolate is genera
Price : 24

[Remove](#)

amul dark chocolate
it like other dark chocolates
Price : 50

[Remove](#)

pears
Pears is a popular soap known
Price : 34

[Remove](#)

Cart Summary
Total | Checkout | Payment
Total : \$108.00
Current Address
andheri,mumbai
[Update Address](#)

Pay with card
VISA Mastercard American Express Discover
Card Number:
Expiration Date (MM/YY): CVV (3 digits):
MM/YY:
[By paying with my card, I agree to the PayPal Privacy Statement.](#)
[Make Payment](#)

14:17 19-10-2023

Your Orders | tomato - Google Search | dove soap - Google Search | pears soap - Google Search | Buy Pears Soap Bar Pure G | Test Card Numbers | Master | +

localhost:3000/dashboard/user/orders

ECOMMERCE APP

Dashboard

Profile

Orders

All Orders

#	Status	Buyer	Date	Payment	Quantity
1	Shipped	minti	a few seconds ago	Success	2

potato
Potatoes are a versatile and w
Price : 7


potato
Potatoes are a versatile and w
Price : 7


14:21 19-10-2023

The screenshot shows a web browser window with multiple tabs open at the top. The main content area displays the 'Ecommerce App' dashboard. On the left, a sidebar menu has 'Profile' selected. The right side features a 'USER PROFILE' form with fields for name ('minti'), email ('minti@gmail.com'), password ('Enter Your Password'), and address ('995943845, andheri,mumbai'). A large 'UPDATE' button is at the bottom of the form. The background has a light blue-to-pink gradient.

All Right Reserved © Grocer

The screenshot shows a web browser window with multiple tabs open at the top. The main content area displays the 'Admin Panel' of the ecommerce application. On the left, a sidebar menu has 'Create Product' selected. The right side features a 'Create Product' form with fields for category selection ('Select a category'), photo upload ('Upload Photo'), product name ('write a name'), product description ('write a description'), price ('write a Price'), quantity ('write a quantity'), and shipping selection ('Select Shipping'). A large 'CREATE PRODUCT' button is at the bottom of the form. The background has a light blue-to-pink gradient.

All Right Reserved © Grocer

Admin Panel

Manage Category

Create Category

Enter new category

Submit

Name	Actions
vegetable	Edit Delete
soap	Edit Delete
cold drinks	Edit Delete
chocolates	Edit Delete

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All Orders Data

localhost:3000/dashboard/admin/orders

E COMMERCE APP

All Orders

Create Category

Create Product

Products

Orders

#	Status	Buyer	Date	Payment	Quantity
1	Processing	minti	a few seconds ago	Failed	2

Dairy milk



Dairy Milk chocolate is generally enjoyed for its delicious taste and satisfying texture.

Price : 24

#	Status	Buyer	Date	Payment	Quantity
2	Shipped	minti	a few seconds ago	Success	2

potato



Potato is a popular vegetable known for its unique appearance and mild, glycerin-based formulation.

Price : 34

11)Conclusion

- The functionality successfully implemented are -

User Functionality -

- The user can filter the products by category or by price.
- The user can search for the desired products.
- The user can add items in the cart which he wishes to buy.
- The User can change his/her profile.
- User can add card payment details

Admin Functionality -

- Admin can add and remove products
- Admin can see all the orders of different users
- Admin can create and remove categories
- Admin can change the order shipping status

12) Limitation and Future Extension

- The limitations of your project

- The user cannot track their own product and where it is right now.
- The user can not increase the quantity of product in their cart with the help of + or – buttons which are not implemented by our system.
- Payment method is not fully functional
- The user can not return the product

- The functionality which was not implemented (if any)

- No tracking functionality implemented
- No functionality to increase or decrease the product quantity in cart.

- List of future extension to your project

- We would add + and – buttons in the cart to increase or decrease the quantity of product.
- We would add product tracking functionality for the users for their convenience.

13) Bibliography:- <https://www.w3schools.com/>
<https://reactjs.org/>
<https://www.mongodb.com/>
<https://expressjs.com/>
<https://www.youtube.com/>