# PROJECT REPORT



# Dharmsinh Desai University Faculty of Technology Department of Computer Engineering

# **B.Tech CE Semester – V**

**Subject :-** (CE-520) Advanced Technologies

**Project Title:** Online Medicine Delivery System

# By:

# **Group 5**

Harshkumar Rajeshbhai Godkar CE043 (21CEUSF147)
Abhishek Kamleshbhai Jamkar CE053 (21CEUTF069)

# **Guided By:**

Ms. Pooja Patel
Computer Operator

# Department of Computer Engineering



# Dharmsinh Desai University Faculty of Technology Department of Computer Engineering

# **CERTIFICATE**

This is to certify that the **practical / term work** carried out in the subject of **Advanced Technologies** and recorded in this journal is the Bonafide work of

CE043 Harsh Godkar(21CEUSF147)

CE053 Abhishek Jamkar(21CEUTF069)

of B.Tech semester **V** in the branch of **Computer Engineering**during the academic year **2023-2024**.

Ms. Pooja Patel
Computer Operator,
Department of Computer Engineering,
Faculty Of Technology,
Dharmsinh Desai University, Nadiad

Dr. C. K. Bhensdadia
Head,
Department of Computer Engineering
Faculty Of Technology,
Dharmsinh Desai University, Nadiad

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#### Abstract :

The Online Medicine Delivery System is a web-based application that facilitates the efficient and convenient delivery of medicines to customers. It aims to bridge the gap between pharmacies and customers by providing an online platform where customers can easily order their prescribed medications and have them delivered to their doorstep. The system allows customers to create an account and provide their prescription details, which are verified by licensed pharmacists. Customers can then browse through a comprehensive catalog of medicines, search for specific medications, and add them to their virtual shopping cart.

The purpose of an online medicine ordering system is to provide a convenient and efficient way for people to order medications. The system should allow users to search for and browse a wide variety of medications, view detailed information about each medication, create and manage a personal profile, place orders for medications, and track the status of their orders. The system should also be secure and protect the privacy of user data

#### Introduction:

Online Medicine Delivery System is implemented to simplify task of choosing product by their category and managing cart. It's a user-friendly platform where customer can select an item, add to the cart and change its quantity according their need without physically reaching to any medical in their bad health condition. This platform made it easy for users to order their medicines with zero efforts. The System also contains payment handling. This project aims to develop, implement, and evaluate a comprehensive Online Medicine Delivery System, which addresses various challenges in the traditional pharmaceutical supply chain and empowers patients to access medications more conveniently.

#### Platform/Technologies/Tools Used:

MongoDb: Database (Used to store data)

**Express:** Framework for NodeJS (Used for Routing)

**React**: Javascript Library (Used for Frontend development)

**React-Router**: Javascript Library (Used for Routing development)

**NodeJS:** Javascript runtime environment (Used for Backend development)

**Bootstrap:** Frontend Framework (Used for frontend layout designing)

Other libraries like jsonwebtoken(authentication), bcryptjs(password hashing), etc...

# **Software Requirements Specification :**

#### 1. Functionalities:

#### **Admin Functionality:**

- Log in/ log out : Admin can log in and log out .
- **Search and Filtering:** Products are show in category wise manner.
- Add New Products
- Update Products
- Delete Products

#### **User Functionality:**

- Registration
- Log in / Log out
- **Filtering :** Customer can select a category and category wise all products will be shown.
- Add products to cart
- Change cart Products' Quantity
- **Secure Payment Processing :** The system integrates secure payment gateways to ensure safe and convenient online transactions.
- Check My Orders
- Update User Profile

#### 2. User Classes and Characteristics

#### Normal User:

normal user is expected to invoke the functionalities such as login, search, add to cart, purchase, view orders, view profile.

#### Super user:

super user is expected to invoke the functionalities such as admin login, update tracking of order, and operations related to managing the orders, items and users.

# 3. Operating Environment

The system will be compatible with all popular web browsers, including Chrome, Firefox, Safari, Edge, and Internet Explorer. The machine should have sufficient RAM and speed of internet connection.

#### 4. Design and Implementation Constraints

The constraints related to design and implementation of this software are specified by the programming language used for implementation, the software engineering environment, the programming methodology used, and the availability of supporting tools for automatic system analysis to keep the patent functions in distinct modules.

#### 5. Assumptions and Dependencies

The accuracy of the information provided by the software regarding the related diseases. medicines specifications, usages, dosages depend upon the authenticity of primary data sources. The system will assume that customers have a device that meets the minimum technical requirements, such as a modern web browser.

# 6. Functional Requirements

**User RequireMents:** 

#### **R.1: Manage Accounts**

#### R.1.1: Register User

**Description:** User has to create an account by giving the Name, email, phone no, password, confirm password, location.

**Input:** User will enter Name, email, phone no, password, confirm password, location.

Output: If all fields are validated then user will be redirected to the Home page.

Preprocessing: Checking if the input fields are valid or no

#### R.1.2: Login User

Input: User will enter the email and password

**Output:** If both the fields entered by the user are correct, user will be directed to the home page.

#### R.1.3: Logout User

**Input:** Pressing logout button.

Output: User will be logged out.

#### R.2: Browse and Search

#### R.2.1: Filtering

**Description:** The site offers a user-friendly interface for users to browse various medicines and cosmetics. Medine categories given and from that user have to choose.

**Input:** user will select a category

**Output**: According to selected category list of products will shown.

#### **R.3: Medication Catalog**

**Description**: Maintain a comprehensive catalog of available medications, including their names, descriptions, dosages, and prices.

Input: Medication details (name, description, dosage, price)

Output: Display of available medications in the catalog

#### **R.4 Cart and Order Management**

**Description:** Users should be able to add multiple food items to their cart and view the cart summary before proceeding to checkout. The site should support the modification of item quantities or removal of items from the cart. Users will have the option to save items in the cart for future orders. The system will store and manage order details, including items, quantities, total amount and delivery address

#### R.4.1: Add to cart

Input: Users will click on the option

**Output:** selected item will be added to cart.

#### R.4.2: Increment or Decrement quantity

**Input**: User can click on dropdown where user can select quantity of particular product.

**Output**: quantity of that particular item will be incremented or decremented as per the selected option.

#### R.4.3: Remove from cart

**Input:** If user want to remove the particular item from the cart, then click on the "delete" button.

**Output**: Selected item will be removed from the cart and the payable amount will be modified according to it.

#### **R.5: Prescription**

**Description:** Implement a system for users to request prescription renewals, including a verification process to ensure the validity and legality of the renewed prescription.

Input: Request for prescription renewal

Output: Verification status and confirmation of renewed prescription

#### **R.6 Checkout and payment**

**Description**: On checkout, users will be asked to pay the total amount by choosing from multiple payment options such as net banking or cash on delivery. The site displays a clear breakdown of the final amount, including taxes, delivery charges and any applicable taxes.

#### R.6.1: Customer select for checkout

**Input**: customer prompted to enter the email, mobile no, {address}

**Output**: prompted to fill the payment details

#### R.6.2: make payment

**Input**: enter the details for payment

Output: confirm the order and show the message "payment Successful"

#### **R.7 Order Confirmation**

**Description**: Users should receive an order confirmation email or SMS after Successfully placing an order. The platform will send notifications to users at

various stages of the order process, such as order acceptance, preparation and dispatch.

#### R.7.1: view order details

**Input**: Customer selects the "Orders" on their home page.

**Output**: A list of the customer's orders is displayed, including the status of each order, also can download the invoice.

#### **Admin Requirements:**

#### R.1: Admin Login

**Input**: enter username and password

Output: redirected to admin-dashboard

#### R.2 view all products

**Input**: selects products

**Output**: prompted with details of all products

#### R.3: edit item

**Description**: This feature is useful for updating the details of a product if they have changed, such as if the price has increased or it can also be used to correct any mistakes in the product's information.

#### R.3.1: select update product

**Input**: selects update product

**Output**: prompted with the page

#### R.3.2: update product information

**Input**: fill the desirable details

**Output**: information updated

#### R.3.3: delete product

**Input**: select delete product

Output: product gets deleted

**R.3.4**: add item

**Input**: selects and fill the details of new item

Output: new item adde

### 7. Other Nonfunctional Requirements

#### **N1: Usability**

Description: The website should be easy to navigate and understand for customers of all ages and technical abilities.

#### N2: Performance:

Description: The website should be able to handle a high volume of traffic and user requests without experiencing delays or crashes.

### N3: Security:

Description: The website should protect personal and financial information of customers, as well as prevent unauthorized access to the system.

#### N4: Scalability:

Description: The website should be able to accommodate an increasing number of users and transactions without requiring significant changes to the system.

#### **N5: Responsiveness:**

Description: The website should be accessible and optimized for different devices, including desktop computers, laptops, tablets, and smartphones.

#### **N6: Reliability:**

Description: The website should consistently provide accurate and up-to-date information and perform its intended functions without errors.

# Database Design

**Database Used: MongoDB** 

**Models:** 

#### **Products:**

```
□S Product.js / IS productSchema / / category
const productSchema = mongoose.Schema({
  imgsrc: {
    type: String,
    required: true,
  title: {
    type: String,
    required: true,
  indication: {
    type: String,
    required: true,
  },
  dosage: {
    type: String,
    required: true,
  sideEffects: {
    type: String,
    required: true,
  price: {
    type: Number,
    required: true,
  category: {
   type: String,
    required: true,
  countInStock: {
    type: Number,
    required: true,
});
const Product = mongoose.model("products", productSchema);
```

#### **Medicine category:**

```
const medicineCategorySchema = new mongoose.Schema({
    category: {
        type: String,
            required: true,
            unique: true, // Ensure each category name is unique
        trim: true,
        },
});
const MedicineCategory = mongoose.model('medicine_categories', medicineCategorySchema);
```

#### **User:**

```
const users = new Schema({
    name:{
        type: String,
        required : true
    location:{
        type:String,
        required : true
    },
    email:{
        type:String,
        required : true
    password:{
        type:String,
        required : true
    date:{
        type:Date,
        default:Date.now
    },
    mobile:{
        type: String,
        required:true
})
module.exports = mongoose.model('User', users);
```

#### Orders:

```
const OrderSchema = new Schema({
    email: {
        type: String,
        required: true,
        unique: true
    },
    order_data: {
        type: Array,
        required: true,
    },
}

module.exports = mongoose.model('order', OrderSchema)
```

#### **Contact:**

```
const contactSchema = mongoose.Schema({
    fullName: {
       type: String,
        required: false,
    email: {
        type: String,
        required: false,
    gender: {
       type: String,
        required: false,
    message: {
        type: String,
        required: false,
    city: {
       type: String,
        required: false,
   },
});
const Contact = mongoose.model("contact", contactSchema);
```

#### Implementation Details :

#### 1. Modules created and brief description of each modules.

#### User Management Module

This module handles user-related operations such as user registration, login, and profile management.

#### • Admin Management Module

This module handles admin-related operations such as login, logout.

#### • Product Management Module

This module manages Products details, including creating, updating, and deleting products.

#### • Add to Cart Module

This module includes select category, view products, select quantity and add products to Cart. Also, user can remove from cart.

#### Payment Gateway

This module includes count all product prices and get total amount and payment through stripe module.

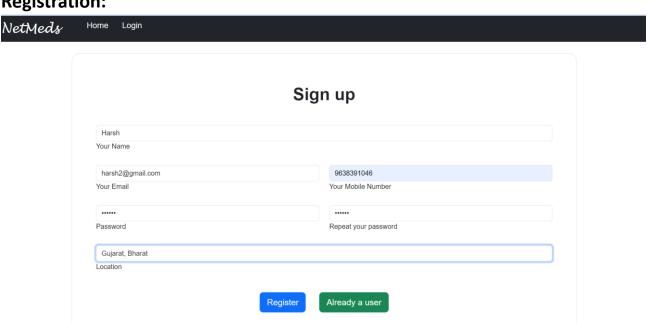
#### About Us

User can know about our website.

#### Contact us

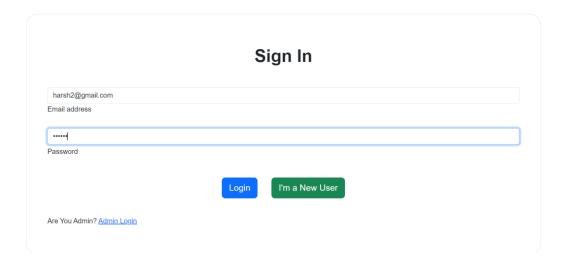
User can contact through email or they can message us.

# 2. Function prototypes which implements major functionality. Registration:



# Login:

NetMeds	Home	Logi
Nelmeas	Home	Logi



# **Home Page:**



#### Online Medicine Store



#### Explore By







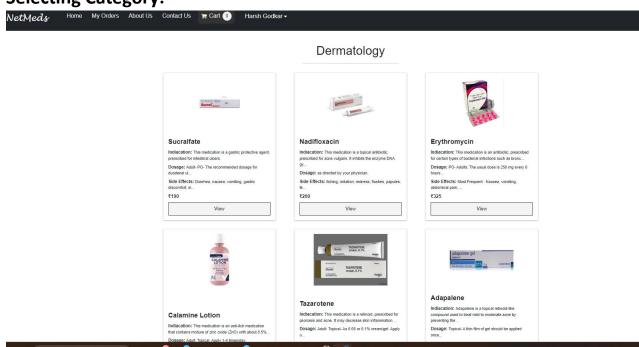


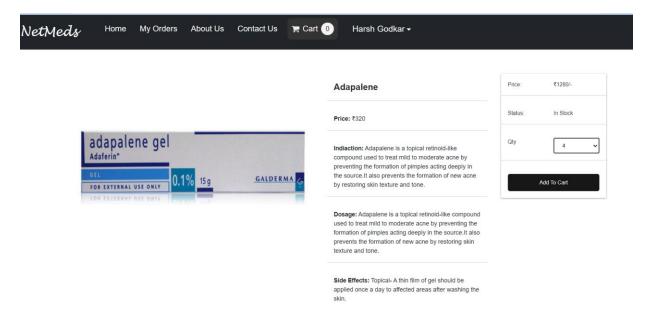




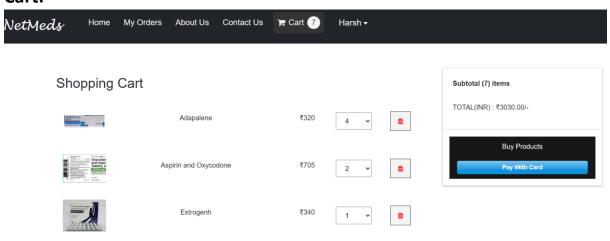


# **Selecting Category:**

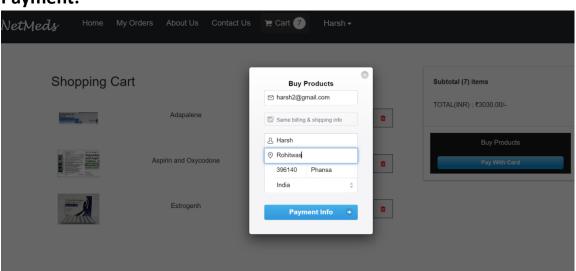




#### Cart:

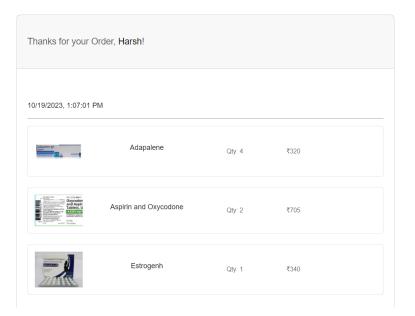


#### Payment:



# **MyOrders:**





#### **About Us:**



# MISSION Our mission is to transport your medicines with high speed and good quality.

#### About Us

We utilize our insight into the pharmacoutical business to ensure that the majority of our magnificence items and medicines are results driven, with the goal that we can offer brands that are ideal for every person. NetMeds pharmacy is a warm and well disposed place, with experienced specialists giving proficient skincare medicines, and magnificence exhortation in a quiet and loosening up condition.

#### Motiv

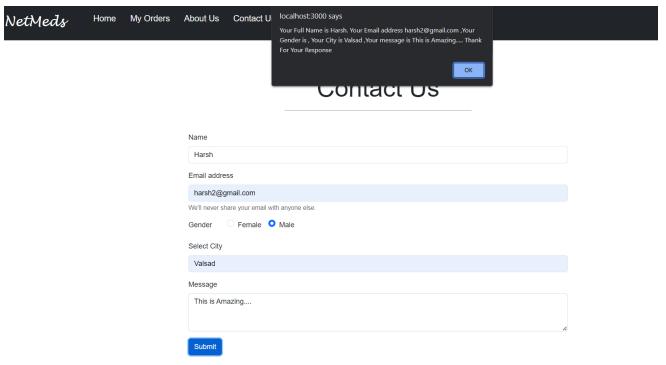
E-Pharm offers one of a kind mix of pharmacy and magnificence facility all over the world with numerous superlative wellbeing and excellent medicines. Our services incorporate administering remedies, new drug benefits, a gathering and conveyance work, glucose and cholesterol checks, a stroll in movement facility, and a huge number of wellbeing and excellence medicines and items.

#### OUR COMMITMENT

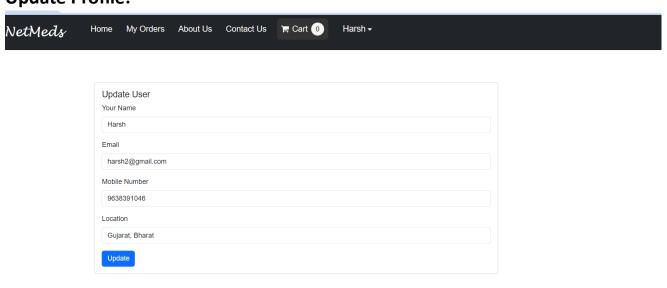
Thank you for considering E-Pharm to provide your important medicine requirements and logistics needs. Our vision and commitment to our customers is to deliver best qualifix conics and present attention.

Services	About	E-pharmacy
Medicines	Company	Praesent sed lobortis mi. Suspendisse vel placerat ligula. Vivamus ac sem lacus. Ut

#### **Contact US:**



# **Update Profile:**





#### **Admin Site**



Home Create Product Logout

#### Women's Care







Delete

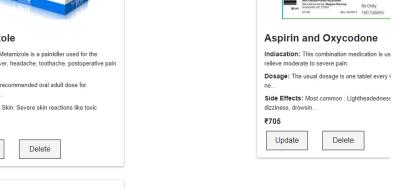
Update





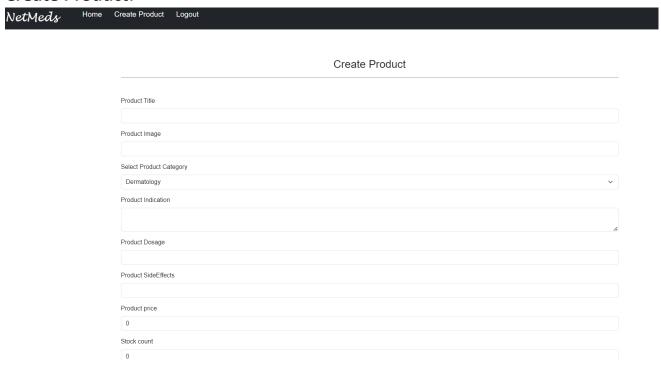
# Fracture



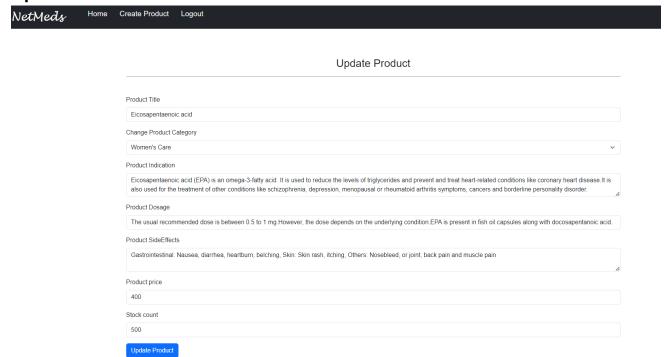


Oxycoc and As Tablets

# **Create Product:**



# **Update Product:**



#### Conclusion:

#### **Functionalities successfully implemented:**

**Registration:** Register user with encryption password.

**Login**: Verification of user.

**Authorization :** Differentiate normal user and super user and give controlled access to certain functionalities.

**Logout**: Logout from the system

**User Profile**: User Profile can be update and can see their orders with date and time.

**Payment gateway**: Payment is successfully done with proper price in rupees as well as in dollars.

**Validations**: Different validations are there. (e.g., If some input field is empty then user will be prompted with Alert with appropriate colour. On the other hand, on success also user will be prompted with success message)

**Product Management**: Admin can View All products and Can Update and Delete that particular product and Create new Product.

**Responsiveness**: Website is fully responsive tested.

#### Limitation and Future Extension

#### • Functionalities which were not implemented :

#### **Password recovery:**

By which user can reset and update the password for account.

#### **Email verification:**

Notify user while registering him/herself.

#### **Order Via Email:**

After successful payment user should get email for confirmation with bill.

#### Admin should view all comments:

When user send message via contact page that should be shown to Admin.

#### Future Extensions

#### 1. Password Recovery:

**Description**: Implement a secure password recovery mechanism that allows users to reset and update their passwords in case they forget it.

**Benefits**: Enhances user experience by providing a way for users to regain access to their accounts without manual intervention from support staff.

**Implementation Strategy**: Utilize email-based password recovery or security questions to verify the user's identity before allowing a password reset.

#### 2. Email Verification:

**Description**: Integrate an email verification system to confirm the user's email address during the registration process.

**Benefits**: Enhances account security and ensures that the user's email address is valid and accessible.

**Implementation Strategy**: Send a verification email containing a unique link or code to the user's registered email address. Prompt users to click the link or enter the code to verify their email.

#### 3. Order Via Email:

**Description**: Implement an automated email notification of confirmation Order placed.

**Benefits**: Provides users with a confirmation of their Order details, enhancing trust and reducing uncertainty and issue a bill is very important.

# \* Bibliography:

#### **Sources:**

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- https://www.w3schools.com/nodejs/ (for node)
- https://razorpay.com/docs/payments/serverintegration/nodejs/paymentgateway/build-integration/ (for payment gateway integration) <a href="https://www.youtube.com/watch?v=eC73edQ5jmw">https://www.youtube.com/watch?v=eC73edQ5jmw</a> (for payment integration)
- <a href="https://www.npmjs.com/">https://www.npmjs.com/</a> (to get knowledge about different packages to use with node and react) <a href="https://www.mongodb.com/atlas/database">https://www.mongodb.com/atlas/database</a> (Database) <a href="https://getbootstrap.com/">https://getbootstrap.com/</a> (For design purpose)

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