

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

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CERTIFICATE

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

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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. Medicine 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:

```
end > model > Product.js > 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:

The screenshot shows the 'Sign up' form for NetMeds. At the top, there is a dark navigation bar with the 'NetMeds' logo and links for 'Home' and 'Login'. The form itself is titled 'Sign up' and contains several input fields: 'Your Name' (with 'Harsh' entered), 'Your Email' (with 'harsh2@gmail.com' entered), 'Your Mobile Number' (with '9638391046' entered), 'Password' (masked with dots), 'Repeat your password' (masked with dots), and 'Location' (with 'Gujarat, Bharat' entered). At the bottom of the form, there are two buttons: a blue 'Register' button and a green 'Already a user' button.

Login:

Sign In

Email address

Password

Login I'm a New User


Are You Admin? [Admin Login](#)

Home Page:

Online Medicine Store




Explore By




Women's Care
Medicines On Women's Care

[Shop Now](#)




Fracture
Medicines On Fracture

[Shop Now](#)




Dermatology
Medicines On Dermatology

[Shop Now](#)




Dental
Medicines On Dental

[Shop Now](#)



Depression
Medicines On Depression

[Shop Now](#)



Diabetes
Medicines On Diabetes

[Shop Now](#)

Services

- Medicines
- Orders
- Hosting

About

- Company
- Team
- Careers


E-pharmacy

Praesent sed lobortis mi. Suspendisse vel placerat ligula. Vivamus ac sem lacus. Ut vehicula rhoncus elementum. Etiam quis tristique lectus. Aliquam in arcu eget velit pulvinar dictum vel in justo.

Selecting Category:


NetMeds [Home](#) [My Orders](#) [About Us](#) [Contact Us](#) [Cart](#) [Harsh Godkar](#)

Dermatology




Sucralfate
Indication: This medication is a gastric protective agent, prescribed for intestinal ulcers.
Dosage: Adult, PO: The recommended dosage for duodenal ul...
Side Effects: Diarrhea, nausea, vomiting, gastric discomfort, in...
₹190

[View](#)




Nadifloxacin
Indication: This medication is a topical antibiotic, prescribed for acne vulgaris. It inhibits the enzyme DNA gy...
Dosage: as directed by your physician.
Side Effects: Itching, irritation, redness, flushes, papules, fe...
₹200

[View](#)




Erythromycin
Indication: This medication is an antibiotic, prescribed for certain types of bacterial infections such as bronc...
Dosage: PO- Adults: The usual dose is 250 mg every 6 hours...
Side Effects: Most Frequent : Nausea, vomiting, abdominal pain, ...
₹325


[View](#)



Calamine Lotion
Indication: This medication is an anti-itch medication that contains mixture of zinc oxide (ZnO) with about 0.5%...
Dosage: Adult, Topical: Apply 1-4 times daily



Tazarotene
Indication: This medication is a retinoid, prescribed for psoriasis and acne. It may decrease skin inflammation.
Dosage: Adult: Topical- As 0.05 or 0.1% cream/gel: Apply o...



Adapalene
Indication: Adapalene is a topical retinoid-like compound used to treat mild to moderate acne by preventing the...
Dosage: Topical- A thin film of gel should be applied once.



Adapalene

Price: ₹320

Indication: Adapalene is a topical retinoid-like compound used to treat mild to moderate acne by preventing the formation of pimples acting deeply in the source. It also prevents the formation of new acne by restoring skin texture and tone.

Dosage: Adapalene is a topical retinoid-like compound used to treat mild to moderate acne by preventing the formation of pimples acting deeply in the source. It also prevents the formation of new acne by restoring skin texture and tone.

Side Effects: Topical- A thin film of gel should be applied once a day to affected areas after washing the skin.

Price: ₹1280/-

Status: In Stock

Qty:

Add To Cart

Cart:

Shopping Cart



Adapalene

₹320

4



Aspirin and Oxycodone

₹705

2



Estrogenh

₹340

1



Subtotal (7) items

TOTAL(INR) : ₹3030.00/-

Buy Products

Pay With Card

Payment:

NetMeds
Home
My Orders
About Us
Contact Us
Cart 7
Harsh

Shopping Cart

Adapalene
₹320
4

Aspirin and Oxycodone
₹705
2

Estrogenh
₹340
1

Subtotal (7) items
TOTAL(INR) : ₹3030.00/-

Buy Products
Pay With Card

Buy Products

harsh2@gmail.com

☒ Same billing & shipping info

Harsh
Rohitwas

396140
Phansa

India

Payment Info

MyOrders:

Thanks for your Order, Harsh!

10/19/2023, 1:07:01 PM



Adapalene

Qty: 4

₹320



Aspirin and Oxycodone

Qty: 2

₹705



Estrogenh

Qty: 1

₹340

About Us:

MISSION

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

About Us

We utilize our insight into the pharmaceutical 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.

Motive

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 quality service and personal attention.

Services

Medicines

About

Company

E-pharmacy

Praesent sed lobortis mi. Suspendisse vel placerat ligula. Vivamus ac sem lacus. Ut

Contact US:

NetMeds

[Home](#) [My Orders](#) [About Us](#) [Contact Us](#)

localhost:3000 says
Your Full Name is Harsh. Your Email address harsh2@gmail.com ,Your Gender is , Your City is Valsad ,Your message is This is Amazing..... Thank For Your Response

OK

Contact Us

Name

Harsh

Email address

harsh2@gmail.com

We'll never share your email with anyone else.

Gender ☐ Female ☒ Male

Select City

Valsad

Message

This is Amazing....

Submit

Update Profile:

NetMeds

[Home](#) [My Orders](#) [About Us](#) [Contact Us](#) [Cart](#) 0 [Harsh](#)

Update User

Your Name

Harsh

Email

harsh2@gmail.com

Mobile Number

9638391046

Location

Gujarat, Bharat

Update

Services

Medicines

Orders

Medicine

About

Company

Team

Doctors

E-pharmacy

Praesent sed lobortis mi. Suspendisse vel placerat ligula. Vivamus ac sem lacus. Ut vehicula rhoncus elementum. Etiam quis tristique lectus. Aliquam in arcu eget velit

Admin Site

NetMeds

Home

Create Product

Logout

Women's Care



Estrogenh

Indication: This medication is prescribed for severe vasomotor symptoms due to menopause, ovarian failure, osteo...

Dosage: Adult: IV/IM/PO: The recommended dose range is 0.3...

Side Effects: Gastrointestinal : Stomach upset, vomiting, heartb...

₹340

Update

Delete



Ethiny- Estradiol- Norethindrone

Indication: This combination medication contains estrogen and progestin, prescribed for menopausal symptoms such...

Dosage: PO: A single tablet to be taken orally once daily.

Side Effects: Body As A Whole : Headache, back pain, viral infec...

₹305

Update

Delete



Update

Delete

Fracture



Metamizole

Indication: Metamizole is a painkiller used for the treatment of fever, headache, toothache, postoperative pain ...

Dosage: The recommended oral adult dose for metamizole is ...

Side Effects: Skin: Severe skin reactions like toxic epidermal n...

₹432

Update

Delete



Aspirin and Oxycodone

Indication: This combination medication is used to relieve moderate to severe pain.

Dosage: The usual dosage is one tablet every 4 hours as needed...

Side Effects: Most common : Lightheadedness, dizziness, drowsin...

₹705

Update

Delete



Create Product:

Create Product

Product Title	<input type="text"/>
Product Image	<input type="text"/>
Select Product Category	<input type="text" value="Dermatology"/>
Product Indication	<input type="text"/>
Product Dosage	<input type="text"/>
Product SideEffects	<input type="text"/>
Product price	<input type="text" value="0"/>
Stock count	<input type="text" value="0"/>

Update Product:

Update Product

Product Title	<input type="text" value="Eicosapentaenoic acid"/>
Change Product Category	<input type="text" value="Women's Care"/>
Product Indication	<input type="text" value="Eicosapentaenoic acid (EPA) is an omega-3-fatty acid. It is used to reduce the levels of triglycerides and prevent and treat heart-related conditions like coronary heart disease.It is also used for the treatment of other conditions like schizophrenia, depression, menopausal or rheumatoid arthritis symptoms, cancers and borderline personality disorder."/>
Product Dosage	<input type="text" value="The usual recommended dose is between 0.5 to 1 mg.However, the dose depends on the underlying condition.EPA is present in fish oil capsules along with docosapentanoic acid."/>
Product SideEffects	<input type="text" value="Gastrointestinal: Nausea, diarrhea, heartburn, belching, Skin: Skin rash, itching, Others: Nosebleed, or joint, back pain and muscle pain"/>
Product price	<input type="text" value="400"/>
Stock count	<input type="text" value="500"/>
<input type="button" value="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/server-integration/nodejs/paymentgateway/build-integration/> (for payment gateway integration) <https://www.youtube.com/watch?v=eC73edQ5jmw> (for payment integration)
- <https://www.npmjs.com/> (to get knowledge about different packages to use with node and react) <https://www.mongodb.com/atlas/database> (Database) <https://getbootstrap.com/> (For design purpose)
