E-COMMERCE APPLICATION

1. Setup and Configuration:

Set up your development environment by creating a new directory for your project and initializing a virtual environment.

Install Flask and any necessary extensions, e.g., Flask-WTF for forms.

Configure your Flask application and define your secret key and database connection.

2. User Registration and Authentication:

Create data models for users, products, and orders. You can use SQLAlchemy as an ORM.

Implement user registration and login forms using Flask-WTF.

Create routes and views for user registration, login, and logout.

Implement secure password hashing (e.g., bcrypt) for user passwords.

Use Flask-Login to manage user sessions.

3. Product Listings:

Set up a product database (in this example, you can use Python dictionaries).

Create routes to display product listings.

4. Shopping Cart:

Implement a shopping cart mechanism using session storage.

Allow users to add/remove items from the cart.

Calculate and display the total cost of items in the cart.

5. Checkout Process:

Create a checkout form using Flask-WTF.

Implement a route and view for the checkout process.

Verify user authentication before proceeding with the checkout.

For a simplified example, simulate the payment process.

6. HTML Templates:

Create HTML templates for user registration, login, product listings, shopping cart, and checkout pages using Jinja2 templating.

7. Styling and Frontend:

Apply CSS styles to your HTML templates for a better user interface.

Optionally, use JavaScript to enhance the client-side interactivity (e.g., updating the shopping cart without page reload).

8. Testing:

Thoroughly test your e-commerce platform's functionality.

Consider using testing frameworks like pytest for automated testing.

9. Deployment:

Deploy your e-commerce platform on a web server or cloud hosting service (e.g., Heroku, AWS, DigitalOcean).

10. Security and Data Storage:

Enhance security with secure password hashing (e.g., bcrypt).

Implement security measures for payments, such as SSL encryption and integrating with real payment gateways.

Replace the in-memory data store with a real database (e.g., PostgreSQL, MySQL) for production use.

11. Scaling and Additional Features:

As your e-commerce platform grows, consider adding features like user profiles, order history, product reviews, and product search.

Please note that this is a simplified guide, and building a fully functional e-commerce platform involves a lot of work. It's essential to stay updated on best practices for security and user data protection. Additionally, if your e-commerce platform is going to handle real payments, it's advisable to engage with professionals for payment processing and security audits.

HTML code:login

```
                  <!DOCTYPE html>
<html>
<head>
    <title>Login</title>
</head>
<body>
    <h1>Please Log In</h1>
    <form method="POST" action="/login">
        <label for="username">Username:</label>
        <input type="text" name="username" id="username" required>
        <br>
        <label for="password">Password:</label>
        <input type="password" name="password" id="password" required>
        <br>
        <input type="submit" value="Log In">
    </form>
</body>
</html>
```

HTML code:Register

```
<!DOCTYPE html>
<html>
<head>
    <title>Register</title>
</head>
<body>
    <h1>Register for an Account</h1>
    <form method="POST" action="/register">
        <label for="username">Username:</label>
        <input type="text" name="username" id="username" required>
        <br>
        <label for="password">Password:</label>
        <input type="password" name="password" id="password" required>
        <br>
        <input type="submit" value="Register">
    </form>
</body>
</html>
```

HTML code:Cart

```
<!DOCTYPE html>
<html>
<head>
    <title>Shopping Cart</title>
</head>
<body>
    <h1>Shopping Cart</h1>
    <ul>
        {% for item in cart %}
            <li>{{ item.product.name }} - ${{ item.product.price }}</li>
        {% endfor %}
    </ul>
    <a href="checkout.html">Checkout</a>
</body>
</html>
```

JAVASCRIPT:

```
const express = require('express');
const session = require('express-session');
const bodyParser = require('body-parser');

const app = express();
const port = 3000;

// Use sessions for tracking user login state
app.use(session({
  secret: 'your-secret-key',
  resave: true,
  saveUninitialized: false,
}));

app.use(bodyParser.urlencoded({ extended: true }));

// In-memory user and product data (for demonstration)
const users = [];
const products = [
  { id: 1, name: 'Product 1', price: 10 },
  { id: 2, name: 'Product 2', price: 20 },
  { id: 3, name: 'Product 3', price: 30 },
];
```

```
// Middleware to check if the user is logged in
const requireLogin = (req, res, next) => {
    if (!req.session.user) {
        res.redirect('/login');
    } else {
        next();
    }
};

// Home page
app.get('/', (req, res) => {
    res.send('Welcome to the e-commerce platform');
});

// User registration
app.get('/register', (req, res) => {
    res.send('Register for an account');
});

app.post('/register', (req, res) => {
    const { username, password } = req.body;
    users.push({ username, password });

    res.redirect('/login');

});


// User login

app.get('/login', (req, res) => {

    res.send('Please log in');

});


app.post('/login', (req, res) => {

    const { username, password } = req.body;

    const user = users.find((u) => u.username === username && u.password ===
password);

    if (user) {

        req.session.user = user;

        res.redirect('/dashboard');

    } else {

        res.send('Login failed. Check your username and password.');

    }

});


// User dashboard
```

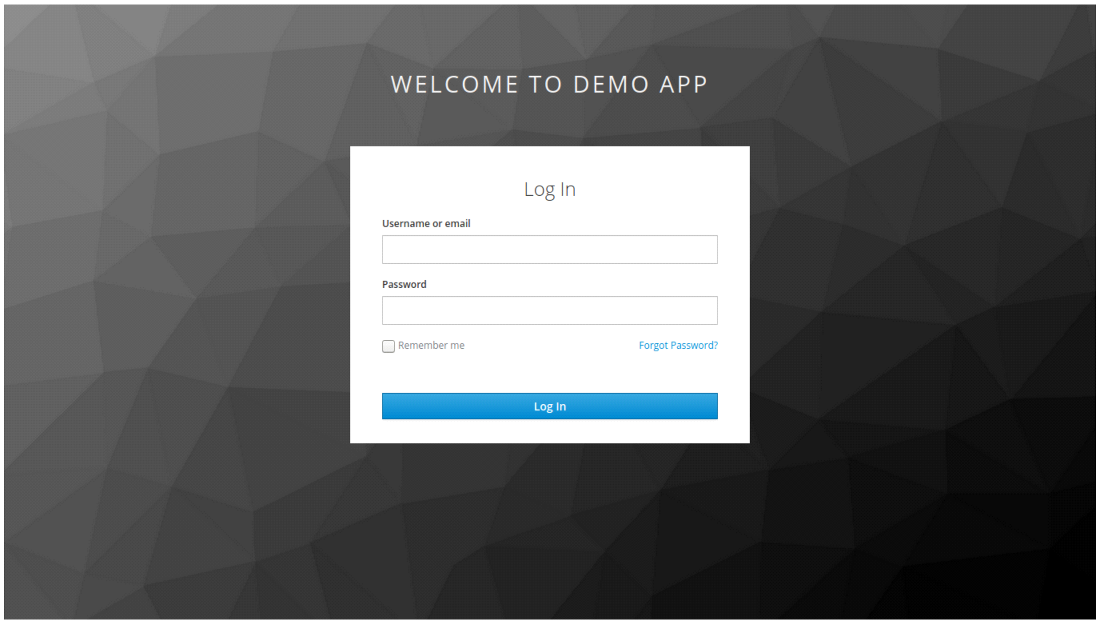
```
app.get('/dashboard', requireLogin, (req, res) => {
    res.send(`Welcome, ${req.session.user.username}! This is your dashboard.`);
});

// Product listings
app.get('/products', (req, res) => {
    res.send('Product listings:\n' + products.map(p => `${p.name} -
$${p.price}`).join('\n'));
});

// Shopping cart (simplified)
const cart = [];
app.get('/cart', requireLogin, (req, res) => {
    res.send('Shopping Cart:\n' + cart.map(item => `${item.product.name} -
$${item.product.price}`).join('\n'));
});

app.post('/cart/add/:productId', requireLogin, (req, res) => {
    const productId = parseInt(req.params.productId, 10);
    const product = products.find(p => p.id === productId);
    if (product) {
        cart.push({ product });
        res.redirect('/cart');
    } else {
        res.send('Product not found.');
    }
});

// Checkout (simplified)
app.get('/checkout', requireLogin, (req, res) => {
    const total = cart.reduce((acc, item) => acc + item.product.price, 0);
    res.send(`Checkout - Total: $${total}`);
});

app.listen(port, () => {
    console.log(`Server is running on port ${port}`);
});
```

DATABASE:

```
CREATE DATABASE e_commerce;
CREATE USER e_commerce_user WITH PASSWORD 'your_password';
GRANT CONNECT ON DATABASE TO USER e_commerce_user;
GRANT CREATEIN ON SCHEMA PUBLIC TO USER e_commerce_user;
GRANT IMPLICIT_SCHEMA ON DATABASE TO USER e_commerce_user;
```

OUTLOOK:

LOGIN PAGE


WELCOME TO DEMO APP

Log In

Username or email

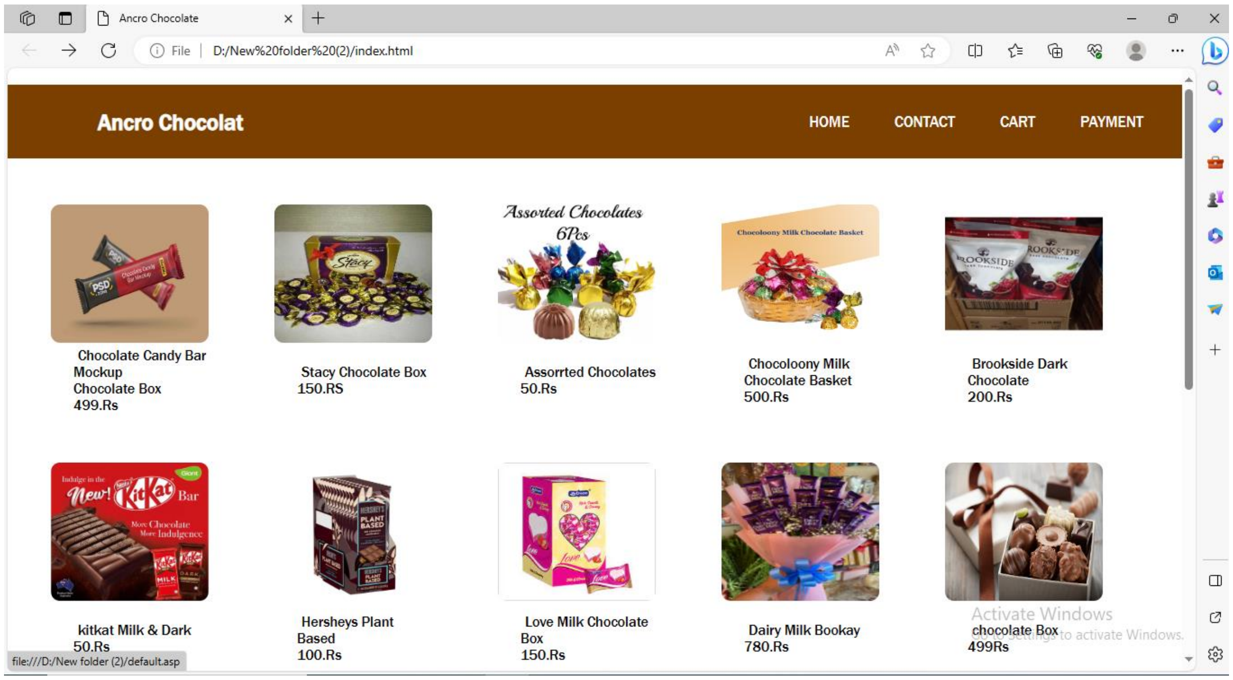
Password

Remember me

Forgot Password?

Log In

HOME PAGE


Ancro Chocolate

D:/New%20folder%20(2)/index.html

Ancro Chocolat

HOME CONTACT CART PAYMENT

Chocolate Candy Bar Mockup Chocolate Box 499.Rs

Stacy Chocolate Box 150.RS

Assorrted Chocolates 50.Rs

Chocolony Milk Chocolate Basket 500.Rs

Brookside Dark Chocolate 200.Rs

kitkat Milk & Dark 50.Rs

Hersheys Plant Based 100.Rs

Love Milk Chocolate Box 150.Rs

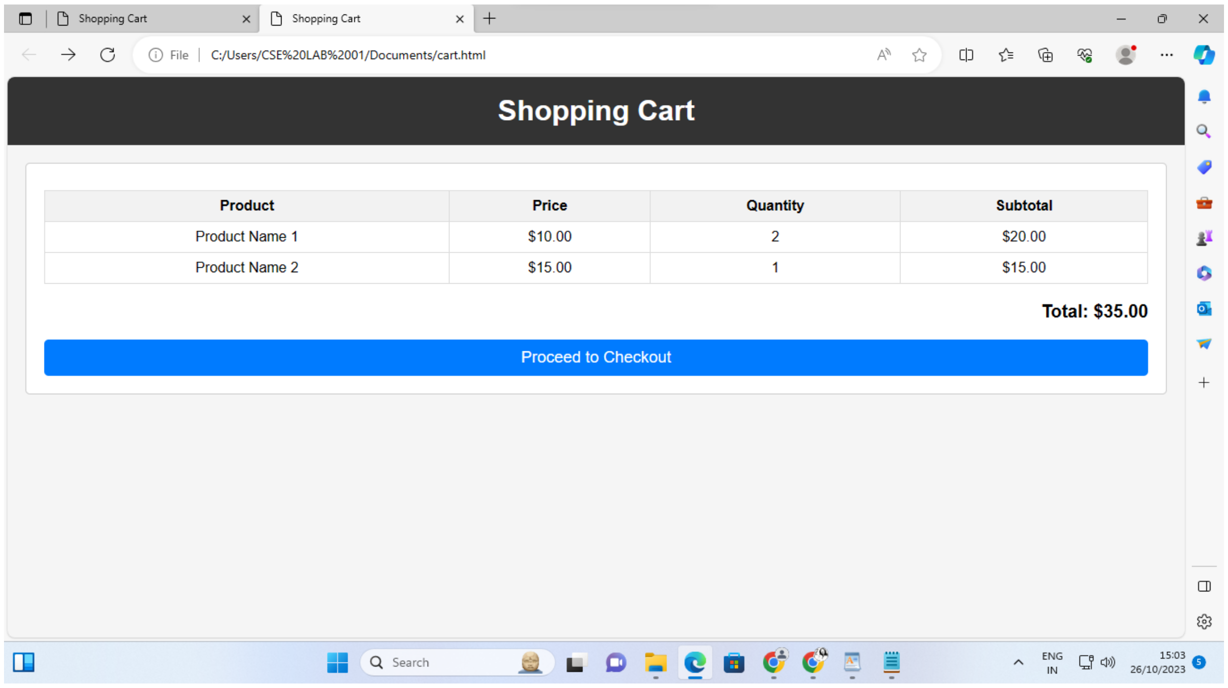
Dairy Milk Bookay 780.Rs

chocolate Box 499Rs

file:///D:/New folder (2)/default.asp

Activate Windows
Go to Settings to activate Windows.

CART AND CHECKOUT



Shopping Cart

Product	Price	Quantity	Subtotal
Product Name 1	$10.00	2	$20.00
Product Name 2	$15.00	1	$15.00

Total: $35.00

Proceed to Checkout