E-COMMERCE APPLICATION ON IBM CLOUD FOUNDRY

PHASE-4: DEVELOPMENT PART - 2

Continue building the e-commerce platform by implementing user authentication, shopping cart, and checkout functionality.

User authentication:

It is a crucial aspect of web applications, ensuring that only authorized users can access sensitive information or perform certain actions. It involves validating a user's identity through a set of credentials, typically a username and password. When a user attempts to log in, the system checks if the provided credentials match those stored in a secure database. If they do, the user gains access; otherwise, they are denied entry.

To enhance security, passwords are often encrypted before storage, making it extremely difficult for attackers to retrieve the original input. Additionally, techniques like session management and token-based authentication are employed to maintain user states and protect against unauthorized access.User authentication is foundational for safeguarding user data and controlling access to protected resources, making it an indispensable feature for any application dealing with sensitive information.

After creating Login Page, further **REGISTER PAGE** and **PROFILE PAGE** has been created

HTML code for Register Page
https://github.com/SUDH003/CLOUD_SKILL-UP/blob/main/register.html
CODE:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Register - Artisanal E-Commerce</title>
    <link rel="stylesheet" href="{{ url_for('static', filename='css/styles.css') }}">
</head>
<body>
    <header>
        <h1>Register</h1>
        <nav>
            <ul>
                <li><a href="/">Home</a></li>
                <li><a href="/cart">Cart</a></li>
            </ul>
        </nav>
    </header>
    <main>
        <section class="register-form">
            <form action="/register" method="post">
```

```
        <label for="username">Username:</label>
        <input type="text" id="username" name="username" required><br>
        <label for="password">Password:</label>
        <input type="password" id="password" name="password" required><br>
        <input type="submit" value="Register">
      </form>
    </section>
  </main>
  <script src="{{ url_for('static', filename='js/scripts.js') }}"></script>
</body>
</html>
```

Register

- [Home]
- [Cart]

Username: [   ]
Password: [   ]
[Register]

To Build Shopping Cart and Checkout functionality

Product Page:
Products are central to commerce, shaping industries and meeting the diverse needs and desires of consumers worldwide.

https://github.com/SUDH003/CLOUD_SKILL-UP/blob/main/product.html

CODE:
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>{{ product.name }} - Artisanal E-Commerce</title>
  <link rel="stylesheet" href="{{ url_for('static', filename='css/styles.css') }}">
</head>
<body>
  <header>
    <h1>Product Detail</h1>
    <nav>
      <ul>
        <li><a href="/">Home</a></li>
        <li><a href="/cart">Cart</a></li>
        <li><a href="/checkout">Checkout</a></li>
      </ul>
```

```
      </nav>
    </header>
    <main>
      <section class="product-details">
        <img src="{{ product.image }}" alt="{{ product.name }}">
        <h2>{{ product.name }}</h2>
        <p>Price: ${{ product.price }}</p>
        <button onclick="addToCart({{ product.id }})">Add to Cart</button>
      </section>
    </main>
    <script src="{{ url_for('static', filename='js/scripts.js') }}"></script>
</body>
</html>
```

Welcome to Artisanal E-Commerce

- [Home](#)
- [Cart](#)
- [Checkout](#)

Product 1

Product 1

Price: $10.00

[Add to Cart]
Product 2

Product 2

Price: $15.00

[Add to Cart]

Shopping Cart Page:

A shopping cart page is an essential component of e-commerce websites. It serves as a virtual basket or container where users can review and manage the items they intend to purchase before proceeding to checkout. This page typically displays a list of selected products, including their names, prices, quantities, and sometimes images. Users can adjust quantities, remove items, or add new ones directly from the cart.

https://github.com/SUDH003/CLOUD_SKILL-UP/blob/main/cart.html

CODE:

```
<!DOCTYPE html>

<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Shopping Cart - Artisanal E-Commerce</title>
    <link rel="stylesheet" href="{{ url_for('static', filename='css/styles.css') }}">
</head>

<body>

    <header>
        <h1>Shopping Cart</h1>
        <nav>
            <ul>
                <li><a href="/">Home</a></li>
                <li><a href="/checkout">Checkout</a></li>
            </ul>
        </nav>
    </header>

    <main>
        <section class="cart-items">
            <!-- Display cart items dynamically -->
            <div class="cart-item">
                <img src="product1.jpg" alt="Product 1">
                <h2>Product 1</h2>
                <p>Price: $10.00</p>
                <button onclick="removeFromCart(1)">Remove</button>
            </div>
            <div class="cart-item">
                <img src="product2.jpg" alt="Product 2">
                <h2>Product 2</h2>
                <p>Price: $15.00</p>
                <button onclick="removeFromCart(2)">Remove</button>
            </div>

            <!-- Add more cart items as needed -->
        </section>
    </main>
    <script src="{{ url_for('static', filename='js/scripts.js') }}"></script>
</body>
</html>
```

Shopping Cart

- [Home](#)
- [Checkout](#)

Product 1

Product 1

Price: $10.00

[Remove]

Product 2

Product 2

Price: $15.00

[Remove]

CHECKOUT:

A checkout page is a critical component of e-commerce websites, representing the final stage of the purchasing process. It serves as the gateway for customers to complete their transactions and make payments for the selected items in their shopping cart.

https://github.com/SUDH003/CLOUD_SKILL-UP/blob/main/checkout.html

CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Checkout - Artisanal E-Commerce</title>
    <link rel="stylesheet" href="{{ url_for('static', filename='css/styles.css') }}">
</head>
<body>
    <header>
        <h1>Checkout</h1>
        <nav>
            <ul>
                <li><a href="/">Home</a></li>
                <li><a href="/cart">Cart</a></li>
            </ul>
        </nav>
    </header>
    <main>
```

```
    <section class="checkout-form">
      <form action="/process_order" method="post">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br>
        <label for="email">Email:</label>
        <input type="email" id="email" name="email" required><br>
        <label for="address">Address:</label>
        <input type="text" id="address" name="address" required><br>
        <input type="submit" value="Submit Order">
      </form>
    </section>
  </main>
  <script src="{{ url_for('static', filename='js/scripts.js') }}"></script>
</body>
</html>
```

Checkout

- [Home](#)
- [Cart](#)

Name: [_____]
Email: [_____]
Address: [_____]
[Submit Order]

RENDERING HTML FILES TO DEPLOY USING FLASK

- **Save the file with .py extention**

app.py

```
from flask import Flask, render_template

app = Flask(__name__)

# Dummy product data for demonstration
products = [
    {"id": 1, "name": "Product 1", "price": 10.00, "image": "product1.jpg"},
    {"id": 2, "name": "Product 2", "price": 15.00, "image": "product2.jpg"}
]

@app.route('/')
def index():
    return render_template('index.html')
```

```python
@app.route('/product/<int:product_id>')
def product(product_id):
    product = next((p for p in products if p['id'] == product_id), None)
    if product:
        return render_template('product.html', product=product)
    return "Product not found"

@app.route('/cart')
def cart():
    return render_template('cart.html', products=products)

@app.route('/checkout')
def checkout():
    return render_template('checkout.html')

if __name__ == '__main__':
    app.run(debug=True)
```
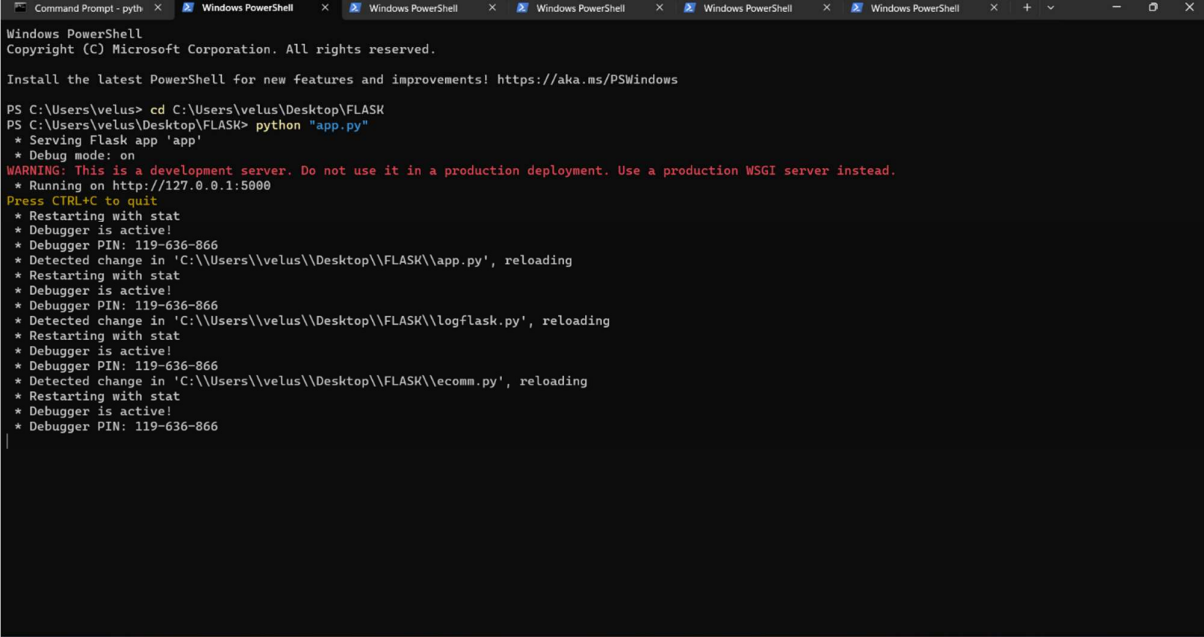
CHANGING DIRECTORY TO RENDER THE FLASK: