E-COMMERCE PLATFORM PROJECT DOCUMENTATION

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Project Objective

The objective of the e-commerce platform project is to develop a robust and scalable online shopping platform with essential features such as user authentication, shopping cart functionality, and a smooth checkout process. The platform aims to provide a user-friendly interface for both customers and administrators, ensuring a seamless shopping experience.

Design Thinking Process

Ideation:

The project started with brainstorming sessions to identify key features and requirements. The team considered user needs, market trends, and potential future enhancements.

Prototyping:

- Mockups and wireframes were created to visualize the platform's layout and user flow. Feedback from stakeholders and potential users was gathered to refine the design.

Development Phases:

User Authentication and Registration:

- Implemented a secure user registration and authentication system.
- Stored user data and passwords securely.

Shopping Cart Functionality:

- Introduced a shopping cart to allow users to add products.
- Calculated the total cost of items in the cart.

Checkout Process:

- Implemented a checkout process to finalize purchases.
- Displayed the total cost and enabled users to proceed to payment.

Containerization and Deployment:

- Containerized the application using Docker for improved scalability.
- Explored deployment options, considering scalability and resource utilization.

PLATFORM LAYOUT AND FEATURES

USER-FACING FEATURES:

User Authentication:

- Users can register and log in securely.
- Session management ensures a personalized experience.

Shopping Cart:

- Users can add products to the cart.
- Cart displays the selected items and their total cost.

Checkout Process:

- Users can proceed to checkout, providing necessary details.
- The platform calculates the total cost for transparency.

TECHNICAL IMPLEMENTATION DETAILS:

Backend:

- Node.js and Express for server development.
- In-memory storage for user data (to be replaced with a database in production).
- Session management for user authentication.

Frontend:

- Basic HTML pages for registration, login, and product display.
- Potential integration with a frontend framework (e.g., React) for enhanced user experience.

Conclusion

The e-commerce platform project has successfully achieved its primary objectives by implementing key features and ensuring a smooth user experience. Future iterations may focus on database integration, frontend enhancements, and additional functionalities based on user feedback and market trends.

DEPLOYING E-COMMERCE PLATFORM ON IBM CLOUD FOUNDRY:

Deployment Steps:

1. Clone the repository:

```
git clone [https://github.com/Jones-3013]
```

2. Navigate to the project directory:

```
cd e-commerce-platform
```

3. Login to IBM Cloud:

```
ibmcloud login
```

4. Target the Cloud Foundry region:

```
ibmcloud target --cf
```

5. Push the application:

```
ibmcloud cf push
```

This command will deploy the application on IBM Cloud Foundry.

6. Access the deployed application:

```
ibmcloud cf apps
```

Locate your application and note the URL. Open this URL in your web browser to access the deployed e-commerce platform.