# 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]

1. Navigate to the project directory:

cd e-commerce-platform

1. Login to IBM Cloud:

ibmcloud login

1. Target the Cloud Foundry region:

ibmcloud target --cf

1. Push the application:

ibmcloud cf push

This command will deploy the application on IBM Cloud Foundry.

1. 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.