**E-COMMERCE APPLICATION ON IBM CLOUD FOUNDRY**

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**Phase 1 Document Submission**

**Problem Definition** **:**

 The project is to build an artisanal e-commerce platform using IBM Cloud Foundry.

* **Objective :** Develop an e-commerce app on IBM Cloud Foundry to address these issues and provide a user-centric, secure, and scalable shopping experience
* **Market Challenge :** E-commerce faces intense competition, demanding seamless user experiences.
* **User Pain Points :** High cart abandonment rates, irrelevant product recommendations, security concerns, and poor mobile optimization.

**Design Thinking :**

**1. Platform Design**

**Objective:**  Create an intuitive, responsive, and user-friendly e-commerce platform.

**Responsive Design:** Ensure the application works seamlessly across various devices and screen sizes.

**User Interface (UI):** Design a clean, attractive, and consistent UI that encourages user engagement.

**Navigation:** Implement an easy-to-navigate menu and search functionality for quick access to products.

**2. Product Showcase**

**Objective:** Showcase products effectively to engage users and drive conversions.

**High-Quality Imagery:** Use high-resolution images and 360-degree views to provide clear product visuals.

**Detailed Descriptions:** Include detailed product descriptions, specifications, and user reviews.

**Recommendation Engine:** Implement machine learning algorithms for personalized product recommendations.

**3. User Authentication**

**Objective:** Ensure secure and convenient user authentication.

**Multi-factor Authentication (MFA):** Enable MFA to enhance security.

**Social Login:** Offer the option for users to log in using their social media accounts for convenience.

**Password Recovery:** Implement a user-friendly password recovery process.

**4. Shopping Cart and Checkout**

**Objective:** Simplify the shopping cart and checkout process to reduce cart abandonment.

**One-Click Checkout:** Provide a one-click checkout option for returning customers.

**Guest Checkout:** Allow guest checkout to reduce barriers for new customers.

**Progress Indicators:** Display clear progress indicators during the checkout process.

**5. Payment Integration**

**Objective:** Integrate secure and diverse payment options.

**Multiple Payment Gateways:** Integrate popular payment gateways like PayPal, Stripe, and credit card processors.

**Encryption:** Ensure all payment data is encrypted for security.

**Payment Confirmation:** Provide instant payment confirmation to reassure customers.

**6. User Experience**

**Objective:** Enhance overall user experience for satisfaction and retention.

**Performance:** Optimize page load times and server responsiveness.

**Feedback Mechanisms:** Collect user feedback and reviews to continuously improve the platform.

**Mobile Optimization:** Ensure a seamless mobile shopping experience.