

KGiSL Institute Of Technology

NAAN MUDHALVAN

Project Name:

E-commerce application on IBM Cloud Foundry

Team Members:

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Problem Statement:

Build an artisanal e-commerce platform using IBM Cloud Foundry. Connect skilled artisans with a global audience. Showcase handmade products, from exquisite jewelry to artistic home decor. Implement secure shopping carts, smooth payment gateways, and an intuitive checkout process. Nurture creativity and support small businesses through an artisan's dream marketplace.

Phase 1: Problem Definition and Design Thinking:

Problem Definition:

The project is to build an artisanal e-commerce platform using IBM Cloud Foundry. The goal is to connect skilled artisans with a global audience, showcasing their handmade products and providing features like secure shopping carts, payment gateways, and an intuitive checkout process. This involves designing the e-commerce platform, implementing necessary features, and ensuring a seamless user experience.

PROBLEM DESCRIPTION:

Building an artisanal e-commerce platform on IBM Cloud Foundry is a substantial project that involves various steps, from designing the platform to implementing features and ensuring a smooth user experience. Here's a high-level overview of how you can approach this project:

1. Project Planning:

- Define the project scope, objectives, and goals.*
- Identify the target audience and their needs.*
- Create a project timeline and allocate resources.*

2. Design and Architecture:

- Define the database schema for products, users, orders, and other essential entities.*
- Choose the technology stack, including programming languages, frameworks, and databases.*
- Design the user interface (UI) and user experience (UX) for both artisans and customers.*
- Plan the information architecture and navigation.*

3. Setting Up IBM Cloud Foundry:

- *Create an IBM Cloud account if you don't have one.*
- *Set up a Cloud Foundry environment within IBM Cloud.*
- *Provision necessary services like databases, object storage, and monitoring tools.*

4. Backend Development:

- *Develop the backend application for managing products, user accounts, orders, and payments.*
- *Implement user authentication and authorization mechanisms.*
- *Integrate payment gateways for secure transactions.*
- *Ensure data security and privacy compliance (e.g., GDPR).*

5. Frontend Development:

- *Develop the frontend of the e-commerce website.*
- *Implement responsive design for mobile and desktop users.*
- *Create product listings, product detail pages, and shopping cart functionality.*
- *Design and implement an intuitive checkout process.*

6. Artisan Onboarding:

- *Develop a registration process for artisans to create their profiles.*
- *Enable artisans to upload product listings with images, descriptions, and prices.*
- *Implement a review and approval process for artisan products to maintain quality.*

7. Customer Features:

- *Implement user registration and login for customers.*
- *Enable customers to browse products, search, and filter by categories and artisans.*
- *Provide features like wish lists, product reviews, and ratings.*
- *Implement a secure shopping cart with real-time updates.*

8. Testing:

- *Conduct thorough testing, including unit testing, integration testing, and user acceptance testing.*
- *Ensure cross-browser and cross-device compatibility.*
- *Test payment gateway integrations thoroughly to prevent payment issues.*

9. Deployment:

- *Deploy your e-commerce platform on IBM Cloud Foundry.*
- *Configure DNS settings and domain mapping if using a custom domain.*
- *Implement CDN (Content Delivery Network) for faster page load times.*

10. Monitoring and Optimization:

- *Set up monitoring tools to track website performance and user behavior.*

- *Optimize database queries and code for better performance.*
- *Continuously monitor and update security measures to protect against threats.*

11. Marketing and Growth:

- *Develop a marketing strategy to attract artisans and customers to the platform.*
- *Implement SEO techniques to improve visibility on search engines.*
- *Consider social media marketing, email campaigns, and partnerships.*

12. Maintenance and Support:

- *Provide ongoing maintenance and support to ensure the platform's stability.*
- *Regularly update software components, including security patches.*
- *Address customer inquiries and issues promptly.*