

CLOUD APPLICATION DEVELOPMENT

TEAM MEMBER

812821205301 : ANAND V

Phase-1 word Submission

PROJECT :

**E-Commerce Application On IBM
Cloud Foundry**

PHASE-1:

Development Part 1

ABSTRACT:

**** This project aims to create
an artisanal E-Commerce platform
hosted on IBM Cloud Foundry.**

**** The platform will support the sale of handmade and unique products.**

****This initiative leverages the power of cloud computing to enable artisans and small businesses to reach a global customer base.**

OBJECTIVES:

1. **Platform Development*:*

Develop a user-friendly eCommerce platform that allows artisans to showcase their products and customers to browse, select, and purchase items.

2. *IBM Cloud Foundry Integration*:

Host the platform on IBM Cloud Foundry, leveraging its scalability and reliability.

3. *User Authentication*:

Implement a secure user authentication system to protect user data and transactions.

4. *Product Database*:

Create a database structure to store detailed product information, including product name, description, price, and images.

5. *Search and Navigation*:

Implement search and navigation features to help customers easily find and explore products.

6. *Payment Processing*:

Integrate secure payment processing to facilitate online transactions.

7. *Vendor Dashboard*:

Provide artisans with a dashboard to manage product listings, inventory, and order fulfillment.

**Development of E-Commerce
Application On IBM Cloud
Foundry:**

1. *Setting up IBM Cloud Foundry:*

First, make an IBM Cloud account and have the IBM Cloud CLI installed. Then, target the Cloud Foundry service and create an app.

Log in to IBM Cloud

ibmcloud login

Target the Cloud Foundry service

ibmcloud target --cf

Create an app

ibmcloud cf create-service

<service-name> <service-plan>

<service-instance>

2. *Create a Basic Platform Layout:*

For the platform layout, can use HTML, CSS, and JavaScript to create a simple web page.

```
<!-- index.html -->
<!DOCTYPE html>
<html>
<head>
  <title>Artisanal eCommerce</title>
  <link rel="stylesheet"
type="text/css" href="style.css">
</head>
<body>
  <header>
    <h1>Welcome to Artisanal
eCommerce</h1>
```

```
</header>
<main>
    <!-- Product listings will be
displayed here -->
</main>
<footer>
    &copy; 2023 Artisanal
eCommerce
</footer>
</body>
</html>
```

3. *Create a Database to Store Product Information:*

Can use a database service like IBM Cloudant to store product information.

```
# Create a Cloudant service instance
ibmcloud cf create-service cloudant
lite my-cloudant-db
```

```
# Bind the service to app
ibmcloud cf bind-service <app-name>
my-cloudant-db
```

4. *Design the Database

Schema:*

Define the structure of database to store product information, e.g., product name, description, price, image URL, etc. Can use JSON documents for this purpose.

5. *Develop Backend API:*

To need a server-side application to interact with the database and serve product information to an eCommerce platform. Can use a web framework like Node.js with Express for this. Create API endpoints to perform CRUD operations on the product data.

6. *Connect Frontend and Backend:*

Use JavaScript and AJAX or a frontend framework (e.g., React) to fetch and display product data from the backend API.

7. **Deploy and Scale:**

Finally, deploy the web application to IBM Cloud Foundry:

```
bash
ibmcloud cf push
<app-name>
```

SUMMARY:

***This project seeks to build an artisanal eCommerce platform on IBM Cloud Foundry. It will support artisans in selling their unique products to a global audience. The platform will include a user-friendly interface, secure authentication, a comprehensive

product database, efficient search functionality, and secure payment processing. Artisans will have access to a vendor dashboard to manage their listings and orders. This project combines cloud technology with eCommerce to empower artisans and small businesses in the digital marketplace.