CLOUD APPLICATION DEVELOPMENT

TEAM MEMBER

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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.