

# E-Commerce Application Using Cloud Foundry

## **Abstraction:**

Building an e-commerce application using IBM Cloud Foundry involves leveraging IBM's platform-as-a-service (PaaS) offering to deploy and run your application. In this project, implementing programming languages to build the ecommerce application. This ecommerce application is for handmade products.

## **Modules:**

### **User module:**

It is responsible for user authentication via email id and login also. Login page layout is designed by html, css. It uses the user information.

### **Product Management Module:**

Displaying and listing the handmade products with price details, features. It also shows the available stock.

### **Cart Module:**

In this application, shopping cart is available. If you want to buy later the products add to the cart.

### **Order Module:**

Implement the order details. Order and tracking details will be shown to the user or customer.

### **Payment Module:**

Implement payment processing in this application. User will pay the amount via online and also cash on delivery payment. EMI also available.

### **Inventory Module:**

Implement product availability checks and stock updates. So user will know the availability of product. If the stock is coming notifies via email.

### **Review and Rating Module:**

Implement the ability for users to leave reviews and ratings for the products.

### **Database Module:**

Setting up a database to store user data, product information, cart contents, orders, and reviews.

### **Authentication and Authorization Module:**

Ensure secure access to the application and modules by implementing proper authentication and authorization mechanisms. If the error coming in authentication does not enter into the application.

### **Integration Module:**

Integrate with third-party services (if required) for payment processing, shipping, and other external functionalities.

### **Logging and Monitoring Module:**

Implement logging and monitoring to track application performance and user activities.

### **Security Module:**

Implement security measures such as data encryption, input validation, and protection against common web vulnerabilities.

### **Deployment Module:**

Set up deployment scripts and configurations for IBM Cloud Foundry.

### **Documentation Module:**

Document the codebase, APIs, and deployment procedures for future reference.

## **Database:**

Ibm Db2 is used for this application to store user info, product details, cart contents. Database is used in Ibm cloud foundry.

## **Layout:**

For layout, HTML, CSS, JavaScript. Home page, Login Page, Product page, Cart page, Order and tracking page, Payment page is designed by html, css, java script. After all the pages are created linked by java script and styled by CSS. These front-end languages are coded in a IBM cloud foundry.

## **Flask:**

It is a framework. It is used for multiple page web application. It provides you with tools, libraries and technologies that allow you to build a web application. This web application is ecommerce.

Flask can be used to connect databases, retrieve data from it, and update data in it. You can use libraries like SQL with flask. With flask – SQL, create models for database tables and use them to perform queries, insert, update, and drop.