**E-commerce applcation using IBM Cloud Foundry**

**Abstraction:**

**User Management Abstraction:**

Define interfaces for user authentication, registration, and profile management.

**Product Management Abstraction:**

Define interfaces for adding, updating, and displaying products.

**Cart Management Abstraction:**

Define interfaces for adding/removing items to/from the shopping cart and calculating the total.

**Order Management Abstraction:**

Define interfaces for creating, tracking, and managing orders.

**Payment Processing Abstraction:**

Define interfaces for processing payments securely.

**Inventory Management Abstraction:**

Define interfaces for checking product availability and updating stock.

**Review and Rating Abstraction:**

Define interfaces for users to leave reviews and ratings for products.

**Modules:**

**User Module:**

Implement user registration, authentication, and profile management using the User Management Abstraction.

**Product Module:**

Implement product listing, details, and management using the Product Management Abstraction.

**Cart Module:**

Implement shopping cart functionality using the Cart Management Abstraction.

**Order Module:**

Implement order creation and tracking using the Order Management Abstraction.

**Payment Module:**

Implement payment processing using the Payment Processing Abstraction.

**Inventory Module:**

Implement product availability checks and stock updates using the Inventory Management Abstraction.

**Review and Rating Module:**

Implement the ability for users to leave reviews and ratings using the Review and Rating Abstraction.

**Database Module:**

Set 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.

**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.

**Testing Module:**

Create unit tests, integration tests, and perform quality assurance to ensure the application’s reliability.

**Documentation Module:**

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

**Maintenance and Support Module:**

Plan for ongoing maintenance, bug fixes, and customer support

**Design thinking:**

Thisapplication is useful for common people. So everyone easy to use easily accessible. So my team will design the application

* Notification for the tracking details to the user
* All type of payment method
* Remainder to the user before one day of delivery
* Support in every type of device and system