Phase 2

E-Commerce Application on IBM Cloud Foundry

**Problem Statement**:

Build a artisanal e-Commerce platform using IBM foundry. Connect the skilled artisans with the global audience. Showcase handmade products from exquisite jewellry to artistic home decor. Implement secure shopping carts, smooth payment gateway and an intuitive checkout process. Nurture creativity and support small business through an artisan's dream marketplace.

**Innovation phase:**

**Personalized Recommendation:**

**1. Real-Time Updates:**

- Personalized recommendations are not static; they evolve with the user. As users interact with the platform, their profiles are updated in real time. This means that recommendations continually adjust based on user behavior.

**2. Recommender Engine:**

- Behind the scenes, there's a recommender engine that processes the data and algorithms. This engine is responsible for matching user profiles with product profiles and generating a list of recommended products.

**3. User Interface Integration:**

- The personalized recommendations are seamlessly integrated into the user interface. This might be in the form of a "Recommended for You" section, related products, or even personalized emails.10. Evaluation and Optimization:

- To ensure the recommendations are effective, they need continuous evaluation. Metrics like click-through rate (CTR), conversion rate, and user feedback are used to assess the quality of recommendations. The system is optimized based on this feedback.

**4. Benefits:**

- Personalized recommendations offer several advantages. They help users discover new products they're likely to be interested in, which can lead to increased sales and customer engagement. It also makes the shopping experience more enjoyable, as users spend less time searching for products.

**5.Challenges:**

- Challenges in implementing personalized recommendations include data privacy concerns, potential filter bubbles, and ensuring that recommendations remain relevant as user behavior changes over time.

**6. Collaborative Filtering:**

- Collaborative filtering looks at user behavior and preferences. It identifies users who have similar tastes and suggests products that others with similar profiles have liked or interacted with.

**Wishlist:**

**1. User Engagement:**

- Wishlists are a tool for increasing user engagement on an e-commerce platform. They provide users with a way to interact with the website beyond just browsing and purchasing.

**2. Product Bookmarking:**

- Think of a wishlist as a digital bookmark for products. Users can add items they like, aspire to buy, or are considering for future purchases. This saves them from having to search for those products all over again.

**3. Time and Budget Management:**

- Wishlists assist users in managing their time and budget. They can use wishlists to track products they like, monitor price changes, or plan for future occasions, such as birthdays or holidays.

**4. Push Notifications:**

- E-commerce platforms can send notifications to users when items on their wishlist go on sale, have limited availability, or are back in stock. This nudges users to complete their purchases.

**5. Customer Insights:**

- Wishlists provide valuable data for e-commerce platforms. They help in understanding user preferences, trending products, and demand for specific items.

**6. Social Sharing:**

- Some platforms allow users to share their wishlists on social media, enhancing product visibility and potentially driving traffic to the platform.

**7. Adding and Removing Items:**

- Users can easily add or remove items from their wishlist, giving them full control over the products they wish to track.

**Product Review:**

**1. Improving Customer Satisfaction:**

- Sellers can respond to reviews, addressing any issues or concerns raised by customers. This responsiveness can lead to improved customer satisfaction and loyalty.

**2. Star Ratings:**

- Alongside written reviews, star ratings are a quick way for customers to assess a product's overall quality. Higher ratings can boost a product's visibility and sales.

**3. Filtered Reviews:**

- Many e-commerce platforms allow users to filter reviews based on criteria such as the most recent, most helpful, or highest-rated reviews, helping them find the information they need more easily.

**4. Photo and Video Reviews:**

- Some platforms allow users to upload photos or videos along with their reviews, providing visual evidence of their experiences with the product.

**5. Personalization:**

- Personalization algorithms use reviews to offer users product recommendations based on their interests and preferences.

**Flowchart for implementing:**

The above given problem statement can be implemented as per the idea given in the previous phase is represented through flowchart.

Start

User

Admin

Register

Login

nn

login

Search item

Add item category

Online pay

Payment

Wish

list

buy

Review

Logout

Order placed

COD

View item

Report

Add product

Check feedback

Manage order

Manage payment

stop