

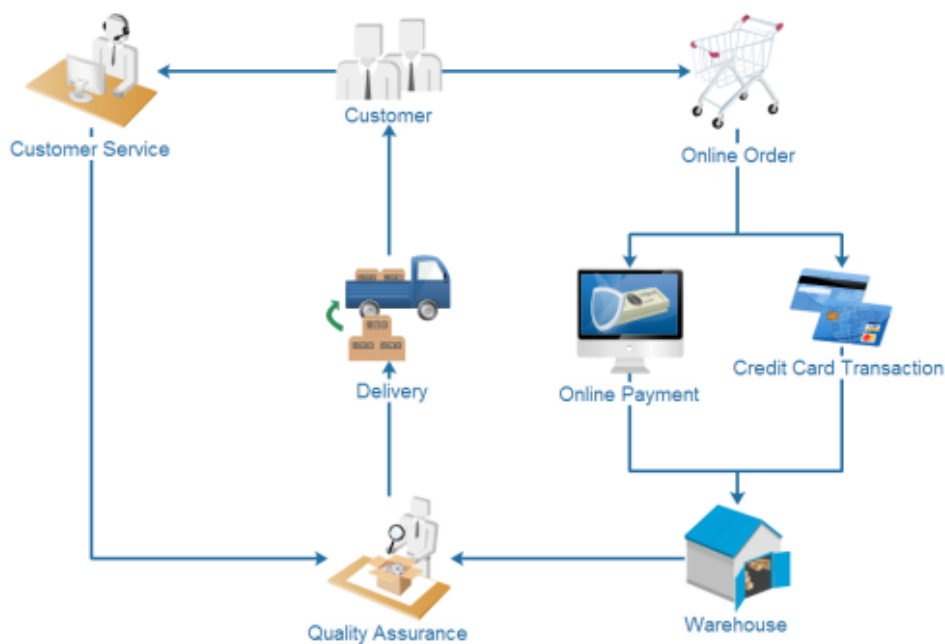
E-commerce Application on IBM Cloud Foundry

Project: Artisanal E-Commerce Platform

Introduction

This document will contain the details about the innovative aspects of our project, design thinking and creative problem-solving addressing the challenges faced during the implementation of the previous phase. The objective is to provide an innovative solution to resolve the problems and enhance the overall quality of the project.

E-Commerce Workflow Diagram



Problem Recap

Problem Statement:

The project aims to build an artisanal e-commerce platform using IBM Cloud Foundry. The primary objective is to connect skilled artisans with a global audience, allowing them to showcase their handmade products. The platform will offer features such as secure shopping carts, payment gateways, and an intuitive checkout process, ensuring a seamless user experience.

Significance:

The platform in action would ensure connection of buyers and the skilled artisans. Both the users and artisans will have separate login authentication. Features like product reviews, wish lists, and personalized recommendations will be incorporated, to fulfill the engagement and satisfaction of the user.

Innovative Solutions

Incorporating features like product reviews, wish lists, and personalized recommendations can significantly enhance user engagement and satisfaction in e-commerce websites.

1. Product Reviews:

Description:

Implementing a user-friendly product review system that allows customers to leave feedback and ratings for the products they have purchased.

Benefits:

- ❖ Authentic user reviews build trust and help potential buyers make informed decisions.
- ❖ Encourage users to interact with the platform by sharing their experiences.
- ❖ Gather valuable feedback for product improvements.

Implementation Plan:

- ❖ To Develop a user-friendly review interface.
- ❖ Implementing a star rating system going upto 5 Stars.
- ❖ Ensuring users to write their reviews.
- ❖ To Implement a system to filter inappropriate content.

2. Wish Lists:

Description:

A wishlist feature helps the users to save products they are interested in for future reference.

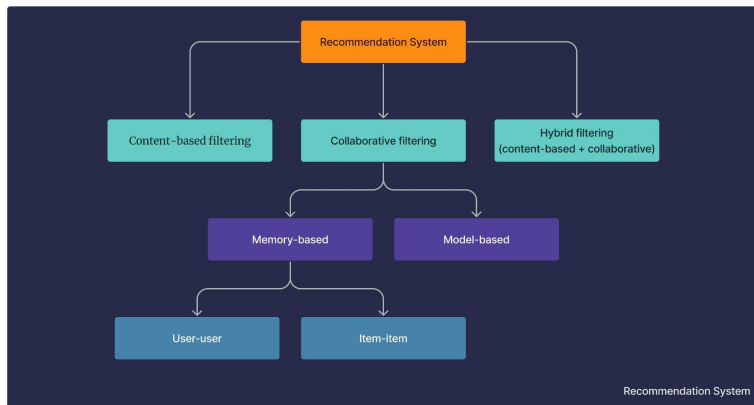
Benefits:

- ❖ Users can save products to revisit later, reducing the need to search for them again.
- ❖ Users can easily convert their wishlist items to purchases.
- ❖ Wishlists can be used to understand user preferences for personalized recommendations.

Implementation Plan:

- ❖ To Create user accounts to save wishlists.
- ❖ Enabling users to add and remove items from their wishlists.

3. Personalized Recommendations:



Description:

A recommendation engine that analyzes user behavior and preferences to provide adaptive product recommendations.

Benefits:

- ❖ Offer users relevant products, increasing the likelihood of conversion.
- ❖ Users are more likely to return to the platform if they find value in personalized suggestions.

Implementation Plan:

- ❖ User data such as user profiles, search history, and purchase history will be collected.
- ❖ To Implement machine learning algorithms for recommendation.
- ❖ Showing personalized product recommendations on the homepage, product pages, and in email notifications.

Feasibility Assessment

Development Resources:

- ❖ Ensuring the chosen technology stack supports the development of features. For instance, a modern web framework may be necessary for real-time product updates.
- ❖ Identifying the availability of APIs and third-party services that can streamline the development process, such as payment gateways or recommendation engines.

Data Storage:

- ❖ Determining the type of database system needed to store user data, product information, reviews, wish lists, and recommendation data.
- ❖ Addressing data security concerns to protect user data.
- ❖ The caching mechanisms to reduce server load and improve response times, especially for personalized recommendations.

Innovation Impact

- ❖ The introduction of product reviews, wish lists, and personalized recommendations is likely to lead to higher user engagement. Users will be more actively involved in interacting with the platform to leave reviews, add items to their wishlists, and explore recommended products.
- ❖ The availability of product reviews can boost user confidence, resulting in a higher likelihood of purchases. Wishlists make it easier for users to save products they are interested in, increasing the conversion rate as they return to complete their purchases.
- ❖ It includes the collection of valuable user data. Product reviews and user interactions with wishlists and personalized recommendations provide insights into user preferences and behavior, which can be useful for further improvements.
- ❖ The convenience of wishlists and the helpfulness of personalized recommendations.

Conclusion

The innovative solutions of implementing product reviews, wish lists, and personalized recommendations represent a significant step forward in addressing the problem at hand and enhancing the overall project's value. These features are intended to bring about several positive outcomes, impacting the project in meaningful ways.