

University: Jinan University Title: Cartify (shopping application)

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# Versions

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| Version number | Authors | Date | Notes |
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# Abstract

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**1. Introduction**

Shopping, a timeless recreational pursuit, has found new dimensions with the advent of online platforms. In this digital landscape, the goal of our expansive application is to craft a dynamic and versatile application interface dedicated to the realm of online retailing. By prioritizing usability and seamlessness, our system aspires to redefine the online shopping experience, transforming it into a journey of convenience, delight, and boundless exploration for users across the virtual marketplace.

* 1. ***Goal******s***
* Enhanced User Experience: Develop a seamless and enjoyable online shopping experience for users, prioritizing ease of navigation and intuitive interface design.
* Advanced Search Functionality: Implement a sophisticated search engine that utilizes machine learning and natural language processing techniques to provide accurate and relevant search results. Users should be able to filter products based on various criteria and preferences.
* Responsive and Interactive Design: Create a responsive application with modern frontend frameworks like Flutter, ensuring smooth and interactive user interactions. Utilize asynchronous data loading techniques to prevent page reloads and enhance performance.
* Streamlined Cart Management: Simplify the shopping cart management process by providing intuitive controls for adding, removing, and updating items. While drag-and-drop functionality can be considered, prioritize mobile-friendly and touch-based interactions.
* Comprehensive Product Information: Offer detailed product descriptions, high-quality images, and user-generated reviews to help customers make informed purchasing decisions. Implement social proof elements like ratings and testimonials to enhance trust and credibility.
* Personalized Recommendations: Leverage data analytics and machine learning algorithms to deliver personalized product recommendations based on user preferences, browsing history, and purchase behavior. Implement features like "You May Also Like" or "Recommended for You" to encourage upselling and cross-selling.
* Seamless Checkout Process: Optimize the checkout process for simplicity and convenience, minimizing friction points and distractions. To accommodate diverse customer preferences, offer multiple payment options, including digital wallets and mobile payment solutions.
  1. ***Need of the application***

There are large numbers of commercial Online Shopping websites offering many products tailored to meet the shopping interests of many customers. These online marketplaces have thousands of products listed under various categories.

**Problem:**

* Lack of Interactivity: Existing systems suffer from a lack of interactivity, hindering user engagement and satisfaction.
* Traditional User Interfaces with Postbacks: The use of traditional user interfaces results in continuous postbacks to the server, causing delays in displaying results and frustrating user experiences.
* Limited Search Engine Functionality: Current search engines often fail to provide users with the ability to refine search results based on specific parameters, limiting their ability to find relevant products efficiently.
* Non-User-Friendly Interfaces: Many platforms still rely on outdated and non-intuitive interfaces, making it difficult for users to navigate and interact effectively.

**Solution:**

* Enhanced Search Tool: The Online Shopping Web Application aims to empower users with a flexible and robust search tool, allowing them to create various search criteria combinations for a more exhaustive search experience.
* Adoption of Asynchronous Techniques: By leveraging AJAX technology, the application eliminates unnecessary delays, enabling users to perform searches and interact with the platform seamlessly. Users will appreciate the responsiveness and fluidity of the interface compared to traditional systems.
* Interactive Interface Design: Implement an interactive interface that facilitates easy interaction across different areas of the application. Utilize modern design principles and user experience (UX) patterns to create a visually appealing and intuitive interface that enhances user engagement.
* Advanced Search Engine: Develop a search engine that not only retrieves relevant products based on user queries but also allows users to refine search results using various filters and parameters. This functionality enables users to find exactly what they're looking for quickly and efficiently.
* Drag and Drop Functionality: Introduce intuitive drag and drop features that enable users to seamlessly manage their shopping carts. This modern interface element enhances user experience by simplifying the process of adding and removing products from the cart, improving overall usability and convenience.

# CHAPTER 2

## UML modeling

## Static modeling

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#### Use cases

#### The use case diagram

#### Description

### Class Diagram

#### Classes

#### The class diagram

#### Description

## Dynamic modeling

### Sequence diagram

### Activity diagram

# CHAPTER 3

## Modeling

# Conclusion

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