

ACROPOLIS INSTITUTE OF TECHNOLOGY AND RESEARCH

Department of IT

Synopsis

On

DealOye - “An online platform for buying and selling study materials using web development technologies”

1. Introduction

1.1 Overview

Dealoye is a web-based platform designed specifically for college students to facilitate buying, selling, and exchanging goods within their community. The platform simplifies the process of listing items for sale, searching for desired products, and managing requirements through a user-friendly interface. Key features include an OTP-based login/signup system for security, a dynamic home page displaying featured products, a dedicated buy page for browsing available items, and a sell page for users to manage their listings. Dealoye is an innovative platform designed to simplify the process of buying, selling, and exchanging products within the college community. This web-based application enables students to post their requirements, list products for sale, and browse items listed by others, focusing on academic resources, personal items, and campus-related needs. Additionally, the platform includes a wishlist, product availability updates, and personalized dashboards, making it a convenient and efficient solution for college students to trade items and meet their needs. Built using HTML, CSS, JavaScript, Node.js, Express.js, MongoDB, and APIs, Dealoye aims to create an eco-friendly and budget-conscious marketplace for students.

1.2 Purpose

The purpose of the Dealoye project is to create a dedicated platform for students to buy, sell, and exchange items within their college community. This marketplace addresses the need for an easy and reliable way to access second-hand products, allowing students to save money and reduce waste. By offering features like secure OTP-based authentication, a streamlined listing process, and personalized dashboards for managing items, the platform enhances user experience and promotes sustainability. Ultimately, Dealoye aims to foster a community-driven exchange system that benefits both buyers and sellers while encouraging resourcefulness and eco-consciousness.

The primary purpose of Dealoye is to offer students a streamlined marketplace where they can trade essential academic items like textbooks, notes, and electronics, as well as personal items like clothing and gadgets. The platform enhances the overall user experience by integrating features such as user authentication via OTP, a personalized dashboard, wishlist functionality, product availability tracking, and a direct contact feature. The platform not only serves as a convenient marketplace but also encourages recycling and sustainability within the college environment by promoting the reuse of products.

2. Literature Survey

2.1 Existing Problem

In our extensive survey of existing systems catering to college students, we encountered a diverse landscape of platforms, each with its own set of issues and benefits. College students in India face several challenges related to resource management, affordability, and environmental sustainability while living on campus. Current practices for buying and selling items often lack transparency and security. Additionally, students may struggle to access affordable educational resources, creating barriers to academic success.

Several platforms exist in the market for peer-to-peer selling, each offering unique features and catering to different niches. Here's how these platforms compare to Dealoye:

- **Mercari** stands out for its ease of use and the fact that it allows sellers to retain the full sale amount without deductions. However, it primarily caters to fashion-related items and lacks the versatility needed for academic resources or general college-related exchanges, limiting its relevance for Dealoye's target audience.
- **Poshmark**, known for its focus on clothing, provides a more professional user experience. Despite its clean interface, it charges fees on low-value sales, which could eat into the savings of students. Moreover, like Mercari, Poshmark is limited in scope when it comes to academic products, making it less ideal for Dealoye's vision of a broader marketplace for students.
- **Letgo** offers a wider range of products beyond fashion and electronics. While it is user-friendly and covers various product categories, it lacks the specialization and focus on academic resources that Dealoye provides. Students looking for textbooks, study materials, or campus-related products might find it too generalized.
- **Vinted**, another fashion-centric platform, also serves as a comparison. It has a smaller user base compared to larger competitors, making it less appealing for students seeking a dedicated and thriving marketplace. Additionally, it focuses almost entirely on clothing, leaving little room for academic or student-oriented products.
- **AllStudyX**, a more relevant comparison, focuses on college campus-based exchanges. It encourages students to share and sell used products within their community, which is in line with Dealoye's goals. However, AllStudyX lacks the advanced features and categories that Dealoye offers, such as dynamic listings, user dashboards, and real-time updates on product availability.

Overall, while these platforms offer valuable services, none of them cater specifically to the academic needs of college students as comprehensively as Dealoye does. Dealoye combines the best of these systems while addressing a niche audience, providing a specialized solution for students to buy, sell, and exchange academic and personal resources with ease.

2.2 Solution Proposed

The problem addressed by Dealoye is the lack of a dedicated platform for college students to buy, sell, and exchange academic resources, personal items, and other campus-related necessities. While there are existing platforms, none focus exclusively on the specific needs of students, particularly within the confines of a college or university. Dealoye is designed as a solution to this problem by providing a targeted, user-friendly marketplace specifically for the college community.

1. User Authentication with OTP

To ensure security and maintain a trustworthy environment, Dealoye includes a **Login/Signup feature using OTP authentication**. This process verifies each user's identity through their phone number, creating a safe environment where only genuine students can interact on the platform. This layer of security helps prevent fraud and ensures the authenticity of users.

2. Homepage with Featured Products

The homepage of Dealoye is designed to give users easy access to important listings. **Featured products** are displayed, which are either popular or highly relevant items like textbooks, electronics, or study materials. This ensures that students can quickly find useful items without navigating through multiple categories.

3. Buy and Sell Pages

The core functionality of Dealoye is facilitated through the **Buy** and **Sell** pages:

- The **Buy Page** lists products from various students. Each product is accompanied by a brief description, the expected price, availability, and two buttons: **Wishlist** and **Contact**. The wishlist feature allows students to bookmark items they may want to purchase later, while the contact button enables direct communication with the seller.
- The **Sell Page** allows students to manage their own listed items. Users can mark their products as unavailable, add them to a wishlist, or directly remove them from the database if they are no longer available for sale.

4. Requirement Posting

A unique feature of Dealoye is the ability for students to post their specific requirements on a dedicated **Requirements Page**. This feature allows students to describe the items they need, and other students can contact them if they have those items. This creates a two-way exchange dynamic, where students don't just browse listings but can actively post their needs.

5. User Dashboard

Each user is given a personalized **Dashboard** where they can view and manage their interactions on the platform. The dashboard displays the user's **wishlist**, the items they are selling, and any requirements they have posted. This gives users full control over their activity on the platform, making it easy to track what they are buying, selling, or searching for.

6. Search and Filtering

Dealoye integrates a powerful **search functionality** that allows users to find products based on categories like books, electronics, and personal items. If no relevant product is found, the system displays a “No search found” message, guiding users to either modify their search or explore other sections of the platform.

7. Dynamic Listings and Product Management

Users can easily manage their listings on the platform. They can:

- **List Products** for sale with relevant details.
- **Mark availability** to indicate whether an item is available or not.
- **Remove products** from the listing once they have been sold or are no longer available.

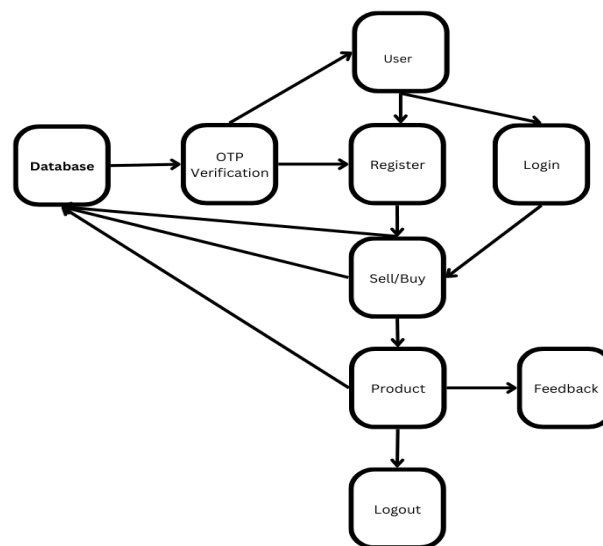
8. Recycling and Reusability Focus

Dealoye addresses sustainability by encouraging students to recycle and reuse products, reducing the need for new purchases. The platform promotes the exchange of used items, which is both cost-effective and environmentally friendly. Items like textbooks, electronics, and clothing can be reused within the student community, contributing to a culture of sharing and reducing waste.

The solution is built using HTML, CSS, JavaScript, Node.js, Express.js, MongoDB, and API integration, making it an efficient and scalable platform for student communities.

3. Theoretical Analysis

3.1 Block Diagram



3.2 Requirement Analysis

Hardware Requirements:

- Multi-core processor (like Intel core i3, platinum)
- At least 1 GB of RAM required.
- Standard monitor (1920x1080 resolution or higher).
- Mouse and keyboard.
- Storage with a minimum of 64GB (using any disk HDD,ssd).
- Stable and high-speed internet connection

Software Requirements:

- An operating system for the server – Windows 10
- Web development tools –HTML 5, CSS 3, Javascript ES12, Nodejs V18, Express js 4.18.1
- Database management system - Mysql 5.6 version
- Version control software - Git, Github
- Text Editor – Visual Studio Code 1.72 version.

4. Applications

1. Campus Marketplace for Academic Resources

One of the primary applications of Dealoye is as a marketplace for academic resources such as textbooks, notes, study materials, and stationery supplies. Students often find themselves needing specific books or notes for a semester, but these resources can be expensive when purchased new.

2. Platform for Personal Goods Exchange

In addition to academic materials, Dealoye allows students to buy and sell personal items such as electronics, clothing, and dorm accessories. Items such as laptops, mobile phones, headphones, calculators, and furniture can be exchanged at a more affordable price within the student community.

3. Sustainability and Recycling Initiative

The platform also functions as an eco-friendly solution, promoting the recycling and reuse of items. By allowing students to buy and sell used products, Dealoye supports sustainability by reducing the demand for new products, lowering waste generation, and minimizing the environmental impact.

4. Facilitation of Requirement-Based Exchanges

Dealoye includes a unique feature that allows students to post their specific requirements. This feature is useful for students looking for something that may not be listed in the general marketplace.

5. A Hub for Specialized, Targeted College Items

This application is particularly useful for: College-specific items such as lab coats, calculators, or student cards. Items like used sports equipment, musical instruments, or art supplies that may be needed for college activities or projects.

References

YouTube Playlists and Articles

- **Ecommerce Development:** [YouTube Playlist](#) - A comprehensive playlist on YouTube covering various aspects of ecommerce development.
- **Web Development Insights:** [Medium Articles](#) - A collection of articles on Medium related to web development trends and practices

E-commerce Platforms

- **Mercari:** Mercari is a selling app that facilitates the buying and selling of various items with no deductions from the sale. For more details, visit [Mercari](#).
- **Poshmark:** Poshmark is a platform focused on buying and selling fashion items. It features a professional environment but imposes fees on low-value sales. For more information, check out: [Poshmark](#).

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