

Alcohol Delivery System – Sam Schaefer

Problem Statement:

An alcohol delivery system will be used to order alcoholic beverages from an online website catalog or App and deliver them straight from the store to a customer's address. The opportunity for increased sales and growth of customer base by providing convenient, legal, and safe way of delivering alcoholic beverages to adults over the age of 21. The delivery of alcohol to adults could provide a more hassle-free shopping experience for those who are too busy to pick drinks up for the party or if you simply forget to pick up the wine for a special occasion. It also allows for a safe and legal way to get more beverages if you are running low and have already indulged. This delivery system draws in a wider range of customers based on its ease of use and convenience.

Objectives of the System:

The objectives of the system are to provide increased sales, an expanded customer base for the business, and an easy way to do inventory. Also, it should provide insight into what customers buy and how they purchase to inform purchases in the future. There will be a need to be able to scan a customers' driver's license online to verify they are 21 and have the delivery drivers verify it in person upon delivery. The system will need to provide other customer data that will be useful as well, but more essentially the address and information on the purchaser and make sure the ID of the purchaser and who is signing for it are the same. For customers it will provide a convenient opportunity for customers to peruse the current inventory of the store, check prices, maybe offer suggestions based on past orders and what other items are popular, and have items delivered to their homes with ease. Customers should be able to browse, order, and pay all through our system.

The system will provide:

- **User Registration & Authentication:** Users can create accounts, log in, manage their profiles, and scan drivers' license to verify their age.
- **Product Catalog Browsing:** Users can search, filter, and view available groceries.
- **Cart Management:** Customers can add products to their shopping carts, edit quantities, or remove items.
- **Order Placement & Payment:** Users can place an order, choose delivery options, and make payments via credit cards, digital wallets, or cash on delivery.

- **Real-time Delivery Tracking:** Customers can track their orders in real-time, receiving updates on delivery time estimates.
- **Admin Panel:** For grocery store managers to manage product listings, inventory, orders, and customer data.

Typical Customers:

- Liquor Store owners and employees
- Delivery Drivers
- Liquor Store Customers
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Project planning and development approach:

- Software: (Front-end: Node.js, Back-end: Java, Database: MySQL)
- Hardware: (PC, phone or tablet, hardware to deal with servers)
- Network: (fast and reliable internet connection for all ends)

Development plan:

w1 - 2: determine the framework and establish the structure of the system, connect front-end to back-end, connecting back end to database and inventory. Establish user authentication system.

w3 - 4: build the system login, registration for managers, inventory catalog with searching, order placement and payment, and user registration.

w5 - 7: implement the basic features for managers: add, edit, and products; add, edit, and customers. Order tracking with GPS. Start testing the basic aspects of the system.

w8: test the main features accomplished, record the demo for the mid-term. Start on delivery driver functions.

w9 - 11: improve the current features based on customers' feedback if there are any and testing, or continue working on implementing the basic features for drivers: the system will update inventory based on purchased, verify customers ID, the system will record the arrival time of the driver; the system will record the leave time of the driver and calculate the delivery fee based on how far away the customers house is; the board will give updated information for the availability certain products.

w12 - 14: writing test cases for the implemented features or continuing building possible features you'd like to implement. Fix bugs and make use easier and more efficient and effective. Document code.

w15: record the demo for the final presentation