

BidCommerce: Integrated Online Marketplace

1. Introduction

BidCommerce is an integrated online marketplace that combines the features of an e-commerce website and an auction platform. The platform offers dual functionality where products can be sold directly at a fixed price or put up for auction based on the seller's preference. It also includes a built-in bid system and a public chat during auctions.

2. User Roles

BidCommerce will have five types of users:

Customer: Buys products at a fixed price or participates in auctions.

Seller: Lists products for sale or auction.

Worker: Assists in maintaining the platform's operations.

Moderator: Creates worker accounts and verifies sellers.

Admin: Creates moderator accounts.

3. Features

a) E-commerce

Product Listing: Sellers can list their products with details like name, description, price, and images.

Shopping Cart: Customers can add products to their shopping cart and proceed to checkout.

b) Auction

Auction Listing: Sellers can list products for auction with a starting bid.

Bidding: Customers can place bids on auction items. The highest bid at the end of the auction wins.

Public Chat: A public chat feature is available during auctions for participants to communicate.

4. System Architecture

BidCommerce will be developed as a web application with a front-end user interface and a back-end server handling data management and business logic.

a) Front-End

The front-end will be developed using modern web technologies like Next.js, Material UI, and Tailwind CSS. It will be responsible for displaying the user interface and handling user interactions.

b) Back-End

The back-end will be developed using Node.js and Express.js. MongoDB will be used as the database for storing user data and product information.

5. Deployment

The application will be deployed on Netlify, a popular platform for deploying front-end applications. The back-end server will be deployed on a suitable platform that supports Node.js applications.

6. Future Enhancements

Future enhancements may include advanced search capabilities, seller ratings, and more.