

Online Auction System MVP (Must-Have for Launch)

Detailed Feature Specification

1. User Management & Authentication

1.1 User Registration & Login (Email, Google, Facebook)

DESC: Implementation of secure user registration and authentication system supporting multiple login methods (email/password, Google OAuth, Facebook OAuth). Include email verification, password recovery, and session management.

PRIO: Highest

DEP: None

1.2 User Profile Management

DESC: Functionality for users to create and edit profiles including basic information (name, contact details), profile picture upload and cropping, and notification preferences. Should include privacy settings for profile visibility.

PRIO: High

DEP: 1.1 User Registration & Login

1.3 User Roles (Buyer, Seller, Admin)

DESC: Role-based access control system with three primary roles: Buyer (can bid on items), Seller (can create auctions), and Admin (full system access). Each role has specific permissions and access levels to platform features.

PRIO: High

DEP: 1.1 User Registration & Login

1.4 Multi-language & Multi-currency Support

DESC: Base infrastructure for supporting multiple languages in the UI (minimum English + one additional language) and displaying prices in various currencies with real-time conversion rates. Include language selection in user settings.

PRIO: Medium

DEP: 1.1 User Registration & Login, 4.1 Multiple Payment Methods

2. Item & Auction Management

2.1 Create Auctions

DESC: Form-based interface for sellers to create auction listings with fields for title, detailed description, multiple image uploads (with preview and reordering), starting price, reserve price (optional), and duration settings. Include draft saving functionality.

PRIO: Highest

DEP: 1.3 User Roles

2.2 Auction Categories & Filters

DESC: Hierarchical category system for organizing auction listings (min. 2 levels deep). Implementation of search filters by category, price range, auction status, and other relevant attributes. Include a featured/popular categories section.

PRIO: High

DEP: 2.1 Create Auctions

2.3 Auction Types

DESC: Support for standard auction format (highest bidder wins) and reserve price auctions (item only sells if reserve price is met). Each type should have appropriate rules, notifications, and user interfaces.

PRIO: High

DEP: 2.1 Create Auctions, 3.1 Live Bidding

2.4 Auction Duration & Ending Rules

DESC: Functionality to set auction duration (hours, days, weeks) with automated ending process. Include countdown timers on auction pages and clear indication of auction status (active, ending soon, ended).

PRIO: High

DEP: 2.1 Create Auctions

2.5 Item Condition & Details

DESC: Standardized fields for item condition description (New, Like New, Good, Fair, etc.) and detailed item specifications. Include template-based approach for different item categories with relevant fields.

PRIO: Medium

DEP: 2.1 Create Auctions, 2.2 Auction Categories & Filters

3. Bidding System

3.1 Live Bidding

DESC: Real-time bidding mechanism allowing users to place bids with instant validation and feedback. Include minimum bid increments based on current price, current bid status indicator, and bidding history display.

PRIO: Highest

DEP: 1.1 User Registration & Login, 2.1 Create Auctions

3.2 Auto Bidding

DESC: Proxy bidding system where users can set maximum bid amount and system automatically increases bid incrementally as needed to maintain leading position until maximum is reached. Include clear UI for setting and managing auto-bids.

PRIO: High

DEP: 3.1 Live Bidding

3.3 Bid Notifications

DESC: Automated notification system alerting users when outbid, when auction is ending soon, or when they've won an auction. Deliver via multiple channels: in-app notifications, email, and browser push notifications with user-configurable preferences.

PRIO: High

DEP: 3.1 Live Bidding, 1.2 User Profile Management

3.4 Winning Bid Announcement

DESC: Automated process for determining and announcing auction winners at end of auction period. Include notification to winner and seller, auction status update, and next steps guidance for transaction completion.

PRIO: High

DEP: 3.1 Live Bidding, 3.3 Bid Notifications, 2.4 Auction Duration & Ending Rules

4. Payment & Transaction Management

4.1 Multiple Payment Methods

DESC: Integration with payment gateways supporting credit cards, PayPal, and bank transfers. Include PCI-compliant payment processing, transaction fee calculation, and payment receipt generation.

PRIO: Highest

DEP: 3.4 Winning Bid Announcement

4.2 Escrow System

DESC: Secure holding system for buyer funds until transaction is verified as complete. Include clear status tracking of escrow funds, release conditions, and dispute handling mechanism.

PRIO: Highest

DEP: 4.1 Multiple Payment Methods

4.3 Automatic Invoicing

DESC: Generation and delivery of detailed invoices for both buyers and sellers, including item details, final price, platform fees, shipping costs, taxes, and payment instructions. Provide downloadable PDF format.

PRIO: High

DEP: 4.1 Multiple Payment Methods, 4.4 Buyer's Fee Calculation

4.4 Buyer's Fee Calculation

DESC: Automated system for calculating and displaying buyer's premium fees based on configurable rules (percentage of final bid, tiered structure, etc.). Include transparent fee disclosure before bidding and in final invoice.

PRIO: High

DEP: 3.1 Live Bidding, 4.1 Multiple Payment Methods

5. Shipping & Logistics

5.1 Seller-Arranged Shipping

DESC: Interface for sellers to input shipping options, costs, restrictions, and handling times during auction creation. After auction, provide functionality for seller to update shipping status and details.

PRIO: High

DEP: 2.1 Create Auctions, 3.4 Winning Bid Announcement

5.2 Tracking Number Input

DESC: Functionality for sellers to input shipping tracking numbers and carrier information, which is then shared with buyers. Include validation of tracking number formats for major carriers and delivery status updates.

PRIO: Medium

DEP: 5.1 Seller-Arranged Shipping

6. Seller Dashboard & Tools

6.1 Auction Performance Overview

DESC: Dashboard displaying key metrics for seller's active and past auctions including number of bids, watchers, page views, and bid history. Include visual charts and exportable data.

PRIO: High

DEP: 2.1 Create Auctions, 3.1 Live Bidding, 7.1 Watchlist & Favorites

6.2 Scheduled Auctions

DESC: Functionality for sellers to create and schedule auctions to go live at a future date/time. Include draft management, editing capabilities, and scheduling calendar view.

PRIO: Medium

DEP: 2.1 Create Auctions

7. Buyer Dashboard & Experience

7.1 Watchlist & Favorites

DESC: System allowing users to save auctions to a watchlist for easy monitoring without bidding. Include one-click add/remove functionality, notification options for watched items, and organization features.

PRIO: High

DEP: 2.1 Create Auctions, 1.1 User Registration & Login

7.2 Bid History & Tracking

DESC: Comprehensive view of user's bidding activity across all auctions, showing current bid status (winning, outbid, etc.), auction end times, and bid amounts. Include filtering and sorting options.

PRIO: High

DEP: 3.1 Live Bidding

8. Admin Features

8.1 Auction Moderation & Approval System

DESC: Admin interface for reviewing and approving new auction listings before they go live. Include flagging system for prohibited items, content guidelines enforcement, and automated detection of policy violations.

PRIO: High

DEP: 2.1 Create Auctions, 1.3 User Roles

8.2 User Management

DESC: Administrative tools for managing user accounts including abilities to ban users, restrict seller privileges, approve seller applications, and manage user reports. Include audit log of admin actions.

PRIO: High

DEP: 1.1 User Registration & Login, 1.3 User Roles

8.3 Reporting & Analytics

DESC: Basic reporting dashboard showing key platform metrics: total auctions, bid volumes, transaction values, user registrations, and conversion rates. Include data export functionality and date range filtering.

PRIO: Medium

DEP: 2.1 Create Auctions, 3.1 Live Bidding, 4.1 Multiple Payment Methods

9. Security & Fraud Prevention

9.1 Basic Fraud Detection

DESC: Algorithms to detect suspicious activities such as duplicate accounts, unusually rapid bid patterns, and bid shilling. Include alert system for admins and automated temporary holds on suspicious transactions.

PRIO: High

DEP: 1.1 User Registration & Login, 3.1 Live Bidding

9.2 Secure Payment Gateway

DESC: PCI-compliant payment processing with encryption, tokenization, and fraud screening. Include SSL/TLS for all payment pages, 3D Secure implementation, and address verification system (AVS).

PRIO: Highest

DEP: 4.1 Multiple Payment Methods

Suggested Additional MVP Features

10. Basic Communication System

10.1 Auction Questions & Answers

DESC: Public Q&A functionality for each auction listing allowing potential bidders to ask questions and sellers to respond. All users can view these exchanges to reduce duplicate questions.

PRIO: Medium

DEP: 2.1 Create Auctions, 1.1 User Registration & Login

10.2 Transaction Messaging

DESC: Private messaging system between buyer and seller that activates after auction completion to facilitate shipping details, special instructions, and issue resolution.

PRIO: Medium

DEP: 3.4 Winning Bid Announcement

11. Basic Mobile Responsiveness

11.1 Responsive Web Design

DESC: Mobile-optimized web interface ensuring critical functions (browsing, bidding, notifications) work seamlessly on smartphones and tablets without requiring native apps.

PRIO: High

DEP: None (should be implemented across all features)

12. Essential Legal Framework

12.1 Terms of Service & Policies

DESC: Comprehensive legal documents including Terms of Service, Privacy Policy, Bidding Policy, and Prohibited Items Policy. Include user acceptance tracking and version management.

PRIO: Highest

DEP: None (required before launch)

12.2 Cookie Consent & Privacy Controls

DESC: GDPR and CCPA compliant cookie consent system and privacy controls allowing users to manage their data and consent preferences.

PRIO: High

DEP: None (required before launch)

Online Auction System Phase 2

Important for Efficiency & Better Experience

1. User Management & Authentication

1.1 User Verification

DESC: Enhanced identity verification system for sellers and high-value bidders to reduce fraud risk. Includes document verification (ID, business registration), address verification, and manual approval workflow. Support for tiered verification levels with corresponding bidding/selling privileges.

PRIO: High

DEP: MVP 1.1 User Registration & Login, MVP 1.3 User Roles

1.2 Two-Factor Authentication (2FA)

DESC: Implementation of multi-factor authentication options including SMS verification, email codes, authenticator apps (Google Authenticator, Authy), and recovery codes. Include mandatory 2FA for admin accounts and optional settings for users with configurable enforcement for high-value transactions.

PRIO: High

DEP: MVP 1.1 User Registration & Login

2. Item & Auction Management

2.1 Auction Promotion

DESC: Premium listing options allowing sellers to boost visibility of their auctions through featured placements (homepage, category tops, search results), highlight styling, and extended duration. Include self-service promotion purchase system with tiered pricing and analytics on promotion performance.

PRIO: Medium

DEP: MVP 2.1 Create Auctions, MVP 4.1 Multiple Payment Methods

2.2 Bulk Listing Support

DESC: Tools for power sellers to create and manage multiple auction listings simultaneously. Include CSV/Excel import templates, bulk editing capabilities, inventory management integration, and scheduled publishing. Provide batch image processing and duplicate listing detection.

PRIO: High

DEP: MVP 2.1 Create Auctions, MVP 6.1 Auction Performance Overview

3. Bidding System

3.1 Anti-Sniping Protection

DESC: Auction extension mechanism that automatically adds time (typically 5-10 minutes) to auctions receiving bids in the final minutes. Include configurable extension rules, clear visual indicators of extensions, and customizable settings for sellers to enable/disable this feature per auction.

PRIO: High

DEP: MVP 3.1 Live Bidding, MVP 2.4 Auction Duration & Ending Rules

3.2 Bid Retraction Rules

DESC: Structured system for bid retraction with strict rules to prevent auction manipulation. Include legitimate retraction reasons (verifiable error in bid amount), admin approval workflow for retractions, bid history notation for retracted bids, and penalties for pattern abuse.

PRIO: Medium

DEP: MVP 3.1 Live Bidding, MVP 8.1 Auction Moderation & Approval System

4. Payment & Transaction Management

4.1 Currency Conversion

DESC: Advanced multi-currency support with real-time exchange rates, support for 20+ major currencies, and transparent conversion fee disclosure. Include user preference for display currency, settlement currency options for sellers, and historical rate tracking for accounting purposes.

PRIO: Medium

DEP: MVP 4.1 Multiple Payment Methods, MVP 1.4 Multi-language & Multi-currency Support

4.2 Refund & Dispute Handling

DESC: Structured workflow for handling transaction disputes and processing refunds. Include case creation interface, documentation upload, standardized resolution timeframes, mediation process, and integration with payment gateway refund APIs. Provide status tracking and communication tools for all parties.

PRIO: High

DEP: MVP 4.1 Multiple Payment Methods, MVP 4.2 Escrow System

5. Shipping & Logistics

5.1 Platform-Arranged Shipping

DESC: Integrated shipping service offering with major carriers (FedEx, DHL, UPS) allowing sellers to purchase and print shipping labels directly within the platform. Include real-time shipping rate calculation based on item dimensions/weight, address validation, bulk label printing, and tracking integration.

PRIO: High

DEP: MVP 5.1 Seller-Arranged Shipping, MVP 5.2 Tracking Number Input

5.2 Insurance & Protection

DESC: Insurance options for high-value shipments with streamlined claims process for items damaged in transit or lost. Include tiered coverage levels based on item value, premium calculation during checkout, policy documentation, and step-by-step claims filing workflow with supporting evidence upload.

PRIO: Medium

DEP: MVP 5.1 Seller-Arranged Shipping, 5.1 Platform-Arranged Shipping

6. Seller Dashboard & Tools

6.1 Auction Performance Analytics

DESC: Enhanced analytics dashboard providing detailed insights on auction performance with visual graphs and exportable data. Include metrics on viewer-to-bidder conversion, price progression curves, traffic sources, comparable auction analysis, seasonal trends, and optimization recommendations.

PRIO: Medium

DEP: MVP 6.1 Auction Performance Overview, MVP 8.3 Reporting & Analytics

6.2 Seller Ratings & Reviews

DESC: Buyer feedback system for rating seller performance with standardized criteria (item accuracy, communication, shipping speed, packaging quality). Include dispute resolution for unfair reviews, seller response capability, aggregated rating display on seller profiles, and performance benchmarking against platform averages.

PRIO: High

DEP: MVP 3.4 Winning Bid Announcement, MVP 1.2 User Profile Management

7. Buyer Dashboard & Experience

7.1 Saved Searches & Alerts

DESC: Functionality allowing buyers to save search criteria and receive notifications when matching items are listed. Include fine-grained search parameter saving, notification frequency settings (instant, daily digest), search management interface, and one-click bidding from alerts.

PRIO: Medium

DEP: MVP 2.2 Auction Categories & Filters, MVP 3.3 Bid Notifications

7.2 Secure Communication with Sellers

DESC: Enhanced messaging system between buyers and sellers with built-in templates for common questions, attachment support for additional item photos/documentation, message history tracking, and automated translation for cross-border communications. Include spam prevention measures and reporting tools.

PRIO: High

DEP: Suggested MVP 10.1 Auction Questions & Answers, Suggested MVP 10.2 Transaction Messaging

8. Admin Features

8.1 User Role Customization

DESC: Advanced role management allowing creation of custom roles with granular permission settings (e.g., auctioneer, support staff, finance team, content moderator). Include role assignment, permission inheritance, temporary access grants, and activity logging for compliance and security audits.

PRIO: Medium

DEP: MVP 1.3 User Roles, MVP 8.2 User Management

8.2 Manual Bidding Adjustments

DESC: Administrative tools for correcting bid errors, handling confirmed system malfunctions, and addressing fraud cases. Include strict workflow approval process, detailed audit logging, automatic notification to affected parties, and documentation requirements for each adjustment.

PRIO: Medium

DEP: MVP 3.1 Live Bidding, MVP 8.1 Auction Moderation & Approval System

9. Security & Fraud Prevention

9.1 AI-based Fraud Detection

DESC: Advanced fraud prevention system using machine learning algorithms to identify suspicious patterns in user behavior, bidding activity, and payment transactions. Include risk scoring for users and transactions, customizable rule settings, manual review queues for flagged activities, and continuous model improvement based on confirmed fraud cases.

PRIO: High

DEP: MVP 9.1 Basic Fraud Detection

9.2 KYC (Know Your Customer) Verification

DESC: Comprehensive identity verification system compliant with AML regulations for higher-value transactions. Include automated ID document scanning and verification, liveness detection, address verification, PEP (Politically Exposed Person) screening, and risk-based verification levels triggered by transaction thresholds.

PRIO: High

DEP: 1.1 User Verification, MVP 9.1 Basic Fraud Detection

10. Marketing & Growth Features

10.1 Social Media Sharing

DESC: Integrated social sharing capabilities allowing users to post auctions to popular platforms (Facebook, Twitter, Instagram, Pinterest) with customizable templates, rich previews, and tracking parameters. Include seller promotion tools, buyer sharing incentives, and performance analytics for shared content.

PRIO: Medium

DEP: MVP 2.1 Create Auctions

10.2 Email & Push Notifications

DESC: Comprehensive notification system with customizable templates for different event types, personalization tokens, scheduling options, and delivery channel preferences. Include campaign management for promotional messages, A/B testing capabilities, engagement analytics, and compliance with anti-spam regulations.

PRIO: High

DEP: MVP 3.3 Bid Notifications, MVP 1.2 User Profile Management

11. Mobile App & Cross-Platform Features

11.1 iOS & Android Apps (Basic version)

DESC: Native mobile applications providing core platform functionality (browsing, bidding, notifications) optimized for mobile experience. Include biometric authentication, camera integration for image capture, push notifications, offline browsing capability, and synchronized watch lists across devices.

PRIO: Medium

DEP: Suggested MVP 11.1 Responsive Web Design

11.2 Push Notifications for Bids & Auctions

DESC: Mobile push notification system delivering real-time alerts for critical events (outbid, auction ending, winning notification). Include rich notification support with action buttons, quiet hours settings, notification grouping for multiple events, and deep linking to relevant app screens.

PRIO: High

DEP: 11.1 iOS & Android Apps, MVP 3.3 Bid Notifications

Suggested Additional Phase 2 Features

12. Enhanced User Experience

12.1 Personalized Homepage

DESC: Customized user landing experience showing relevant auctions based on browsing history, past purchases, and stated interests. Include recommendation algorithms, recently viewed items, followed sellers, and saved search results with manual customization options.

PRIO: Medium

DEP: MVP 7.1 Watchlist & Favorites, 7.1 Saved Searches & Alerts

12.2 Advanced Search Capabilities

DESC: Enhanced search functionality with faceted filtering, typo tolerance, contextual awareness, and natural language processing. Include auto-suggest, recent/popular searches, search analytics for trend identification, and seller-specific search within their inventory.

PRIO: High

DEP: MVP 2.2 Auction Categories & Filters

13. Trust & Reputation System

13.1 Buyer Ratings & Reputation

DESC: Feedback system allowing sellers to rate buyers on payment promptness, communication quality, and overall transaction experience. Include dispute resolution mechanism for unfair ratings, aggregated score display, and incentives for maintaining good standing.

PRIO: Medium

DEP: 6.2 Seller Ratings & Reviews, MVP 3.4 Winning Bid Announcement

13.2 Trust Badges & Certifications

DESC: Visual indicators of seller trust levels based on verification status, transaction history, and customer satisfaction. Include progressive achievement system with clearly defined requirements, verification display for authentic/guaranteed items, and specialized badges for professional sellers.

PRIO: Medium

DEP: 1.1 User Verification, 6.2 Seller Ratings & Reviews

14. Financial Management Tools

14.1 Seller Payout Options

DESC: Expanded payment disbursement options for sellers including automated scheduled transfers, multiple bank account management, split payments, and international wire transfers. Include payment history, tax document generation, and configurable thresholds for automatic payouts.

PRIO: High

DEP: MVP 4.1 Multiple Payment Methods, MVP 4.3 Automatic Invoicing

14.2 Tax Calculation & Reporting

DESC: Automated sales tax calculation based on jurisdiction requirements with support for VAT, GST, and state/local taxes. Include seller tax profile settings, tax exemption certificate management, tax reporting dashboard, and year-end tax document generation for platform compliance reporting.

PRIO: High

DEP: MVP 4.1 Multiple Payment Methods, MVP 4.3 Automatic Invoicing

15. Platform Integration Capabilities

15.1 API Access for Power Sellers

DESC: REST API access for qualified sellers to integrate their inventory management systems, CRM, and accounting software with the auction platform. Include authentication, rate limiting, webhook support for real-time events, comprehensive documentation, and sandbox environment for testing.

PRIO: Medium

DEP: 2.2 Bulk Listing Support, 6.1 Auction Performance Analytics

15.2 Third-party Service Integrations

DESC: Pre-built integrations with popular e-commerce tools, accounting software, shipping services, and marketing platforms. Include OAuth-based connection flows, data synchronization settings, error handling and notifications, and centralized management dashboard for all connected services.

PRIO: Medium

DEP: 5.1 Platform-Arranged Shipping, 10.2 Email & Push Notifications