

**RUP Vision Document for the
Auction Management System:
Defining Stakeholders, Features and Constraints**

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Auction Management System

Version 1.0

Vision Version

Date	Version	Description	Author
22/2/2024	1.0	Preliminary version of the Auction Management System; includes supposed stakeholders.	Usman Toseef, Ali Hasan Aleem, Hassaan Ejaz

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1. Introduction

1.1 Purpose

The motivation behind our upgraded web-based closeout stage is to change the customary sale industry by giving a cutting edge, productive, and straightforward commercial center for venders, purchasers, and sale houses. We intend to separate geological boundaries, upgrade availability, and smooth out the bartering system, enabling clients to trade with certainty and comfort.

1.2 Scope

This Vision Document applies to the Home Appliance Control System (HACS), which will be developed by the UTD CARE Development team. The UTD CARE team will develop this client-server system to interface with existing alarm monitoring systems. The (HACS) monitors, controls, and coordinates a wide variety of home appliances such as the air conditioner, microwave oven, radios, televisions, CD players, indoor and outdoor lighting, water sprinkler, and home security and safety systems. The system supports local access through a keypad and remote access through land-line phones, cell phones or handheld computers (e.g., palm-top, personal digital assistant).

1.3 AMS – Auction Management System

Bid Herald/Auctioneer – Auctioneer, Bid Herald (the person who calls out bids)

Vender – Sellers, people who

Barter – The activity of auction, where a product is sold or bought by placing and rising bids

Auction Houses – Place where auctions take place

Stakeholders – Buyers, Sellers, Customers, Investors, Tax Authorities, Legal Firms

Spectators – Guests, people who watch/spectate auctions

Platform – Web

1.4 References

TBD

2. Positioning

2.1 Business Opportunity

Creating and upgrading a web-based sell off stage to address the weaknesses of customary sales presents a huge business opportunity. By utilizing innovation and imaginative arrangements, the point is to make an easy to use, effective, and straightforward internet based commercial center that takes special care of the requirements of dealers, purchasers, and closeout houses the same.

2.2 Targeted Audience

The Auction Management System (AMS) vision document caters to a diverse audience, providing strategic insights for executive leadership, operational efficiencies for managers, technical specifications for developers, user experience enhancements for end users, and growth opportunities for investors and partners. Whether it's traditional auctions, online auctions, charity events, or specialty sales, the AMS offers tailored solutions to meet the needs of various auction types, ensuring alignment and support across the board.

2.2 Problem Statement

The problem of	Traditional Auction Limitations of transparency, convenience, market reach, pricing uncertainty and overhead costs.
affects	Sellers, Buyers, and auction houses/auctioneers
the impact of which is	Sellers face challenges in reaching a wide audience and maximizing sales, buyers encounter inconvenience, budget constraints and limited recourse in case of disputes, the auction houses and auctioneers struggle to attract diverse participants and manage overhead

a successful solution would be	Implementing modern online auction platforms and solutions to address geographical limitations, enhance market reach, improve convenience, transparency, and accessibility for all stakeholders involved
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2.3 Product Position Statement

For	Sellers, Buyers, Auction Houses and Auctioneers
Who	Who need a platform that allows them to expand their market reach and maximize sales opportunities. Who require a convenient and transparent marketplace to access a diverse range of products and participate in fair auctions. Who seek efficient tools to attract participants and manage auction operations effectively.
Auction Management System (AMS)	Is an online auction conducting and management system
That	provides sellers with a modern, efficient, and transparent marketplace to showcase their products and reach a global audience. Buyers benefit from a user-friendly platform that offers convenient access to diverse products and transparent auction processes. Auction houses gain access to streamlined tools and features to attract participants and manage auctions seamlessly.
Unlike	the customary of leading closeouts, AMS offers straightforward sale processes, it kills geological hindrances, permitting clients to take an interest from anyplace whenever. Clients can get to our foundation from different gadgets, offering unmatched comfort contrasted with actual sale occasions. Our foundation gives dealers admittance to a worldwide crowd, growing their market arrive at past conventional sale limits

Our product	<p>accomplishes straightforwardness by giving nitty gritty item postings, profluent offering cycles, and client evaluations, encouraging trust among members. It guarantees availability through both web and versatile connection points, empowering clients to participate in barter no matter what their area or gadget. Accommodation is</p> <p>surefire through cutting edge search channels, computerized offering choices, and secure installment entryways. Besides, to broaden market reach, we utilize computerized promoting methodologies and designated publicizing, drawing in a different crowd of purchasers and merchants.</p>
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3. Stakeholder and User Descriptions

3.1 Market Demographics

The objective market fragment incorporates center pay property holders living in medium and huge urban communities. The clients are expected to be customers who as of now use PDAs consistently for individual as well as business use. Most homes with alerts are above \$275,000 in market esteem. We are new around here however we will line up with at least one caution equipment organizations that will assist us with entering the market with this new innovation.

3.2 Stakeholder Summary

Non-User Stakeholders

Name	Description	Responsibilities
System Analyst	This is a stakeholder that works with the stakeholders to gather their needs.	Leads and organizes necessities elicitation and use-case displaying by framing the framework's usefulness and delimiting the framework; for instance, distinguishing what entertainers exist and what use cases they will require while associating with the framework.
Requirements Engineer	This is a stakeholder that works with the Analysts to correctly translate requests/needs into	Determines the subtleties of at least one a piece of the framework's usefulness by portraying one or the parts of the prerequisites, this will incorporate utilitarian and non-practical.

	requirements to be used for design.	
Technical Reviewer	This is a stakeholder that must be involved regularly to maintain the development cycle.	Responsible for contributing feedback to the review process. This role is involved in the category of review that deals with the technical review of project artifacts. This role is responsible for providing timely, appropriate feedback on the project artifacts being reviewed.
Software Architect	This is a stakeholder that is primary for leading the system development, specifies the architecture to be implemented for the system.	Answerable for the product engineering, which incorporates the key specialized choices that compel the general plan and execution for the venture. Guarantees that the framework will be viable and the design arrangement upholds the practical and non-prerequisites. Plans, supervises and circulates resources, shapes needs, organizes collaborations with clients and clients, and keeps the endeavor bunch focused. Similarly spreads out a lot of practices that ensure the reliability and nature of undertaking trinkets.
Project Manager	This is a stakeholder that is primary for leading the system development.	Designs, oversees and distributes assets, shapes needs, arranges cooperations with clients and clients, and keeps the undertaking group centered. Likewise lays out a bunch of practices that guarantee the trustworthiness and nature of undertaking curios.
Market Analyst	This is a stakeholder that will assist our abilities to position our product successfully.	Ensures that there is going to be a market demand for the product's features and for the new service.

User Stakeholders

Name	Description	Responsibilities
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Seller	Sells the items by marking it as sellable on the Auction Management System.	<ul style="list-style-type: none"> • Make postings for the things they need to sell. • Plan barter for explicit date and time. • Screen the advancement of their bartering continuously. • Set hold cost for their things. • Handle questions connected with their postings
Buyer	Purchases the bid-able items from the AMS system if they are available in the biddings.	<ul style="list-style-type: none"> • Put offers up for sale things. • Pull out or alter offers depending on the situation. • Get refreshes on the situation with barter they are taking part in. • Complete installments for fruitful closeout exchanges. • Give criticism and evaluations up for sale encounters.
Administrator	Maintains the environment in the biddings and controls the bids and previous history of bidders and the sellers involved in the bidding activities.	<ul style="list-style-type: none"> • Deal with the sale inventory, including adding, refreshing, and eliminating postings. • Produce covers sell off execution, deals, and different measurements. • Oversee client enrollments for barter. • Make and oversee classifications available to be purchased things. • Resolve questions among purchasers and dealers. • Oversee commission rates for vendors. • Guarantee consistence with sell off agreements. • Ceaselessly advance the framework for execution and client experience.

Payment Processor	Confirms the payments done in order for the bids and manages and controls the pay-order.	<ul style="list-style-type: none"> • Work with secure installment handling for fruitful closeout exchanges. • Handle installment debates and discounts, if important. • Guarantee consistence with installment guidelines and security principles. • Offer help for different installment strategies and monetary standards.
Legal Team	Confirms the legal affirmation of the biddings and maintains a secure flow of activities in the AMS.	<ul style="list-style-type: none"> • Configuration, create, and keep up with the closeout the executive's framework. • Carry out new elements and functionalities as per partner prerequisites. • Guarantee framework security, adaptability, and execution. • Direct testing and investigating to guarantee the framework work accurately. • Offer specialized help and investigating help.
Customer Support Team	Helps users to resolve any ambiguities and help in understanding the flow of the system.	<ul style="list-style-type: none"> • Give help to clients in regards to enlistment, posting things, offering, and installments. • Address requests, grievances, and input from clients. • Resolve issues connected with sell off cooperation, installments, and debates.

Tax Analyst	Analyses the tax inductions from the system and makes sure that the revenue is being taxed according to set domain rules (by the government or other taxing firms)	<ul style="list-style-type: none"> • Maintains a record of the taxes generated by the system • Records the revenue generated by the activities • Checks the tax percentages according to market trends and domain rules.
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3.3 User Summary

Name	Description	Responsibilities	Stakeholder
Seller	End User	Make and manage postings for things they wish to sell in trades. Give low down portrayals, pictures, and starting proposals for everything. Screen auction activity, including new offers	External

		<p>Change posting nuances relying upon the circumstance, such as assessing or thing openness.</p> <p>Finish bargains, coordinate transportation or pickup blueprints, and supervise trades.</p>	
Bidder	End User	<p>View open deal postings and thing nuances.</p> <p>Put offers on things they wish to purchase.</p> <p>Screen offering activity and get admonitions on bid status.</p> <p>Manage their record information, including enlistment nuances and portion strategies.</p> <p>Review auction results and settle purchases.</p>	External
System Administrator	Admin, End User	<p>Plan system settings, including client approvals and access controls.</p> <p>Screen system execution and resource usage.</p> <p>Perform standard help endeavors, for instance, programming updates and data base fortifications.</p> <p>Address specific issues, examine mix-ups, and give client support. Execute safety efforts to safeguard against unapproved access and information breaks.</p>	Internal
Shipping and Logistics Partners	End User, Admin	<p>Get, put together, and keep up with precise records of approaching stock things.</p> <p>Guarantee things are safely put away and effectively available inside the stockroom.</p> <p>Coordinate with transportation transporters to organize convenient pickup and conveyance of things.</p> <p>Track shipments on the way and give notices to purchasers on a case-by-case basis.</p> <p>Answer purchaser requests in regards to transportation choices, conveyance status, and returns/trades.</p> <p>Address delivering related concerns and give help to guarantee consumer loyalty.</p>	External

Marketing Team	User (not directly using the system) Perform marketing duties such as promoting auctions, attracting bidders	Get, set up, and stay aware of exact records of moving toward stock things. Ensure things are securely taken care of and successfully accessible inside the stockroom. Coordinate with transportation carriers to sort out advantageous pickup and movement of things. Track shipments on the way and give notification to buyer dependent upon the situation. Answer buyer demands concerning transportation decisions, movement status, and returns/exchanges. Address conveying related concerns and give assistance to ensure customer faithfulness.	Internal
Tax Analysts	Critical, observes and ensures the compliance with tax regulations	Extracting relevant financial data from the AMS for tax reporting purposes. Analyzing transaction records and sales data to determine tax liabilities. Collaborating with other internal stakeholders to ensure accurate documentation and reporting.	Internal

3.4 User Environment

The users access the AMS using their cellphones, personal computers and by using the remote helplines in order to contact the stakeholders and users of the Auction Management System. The systems having internet connection of both 2.4 GHz and 5.0 GHz wireless and ethernet or any means to connect to the World Wide Web (WWW) can access the system. At least systems supporting operating systems greater than those present in iPhone 6 and Android 8 smartphones for cellphones.

The AMS interfaces to the following security monitoring companies: Securitas, G4S.

4. Product Overview

4.1 Product Perspective

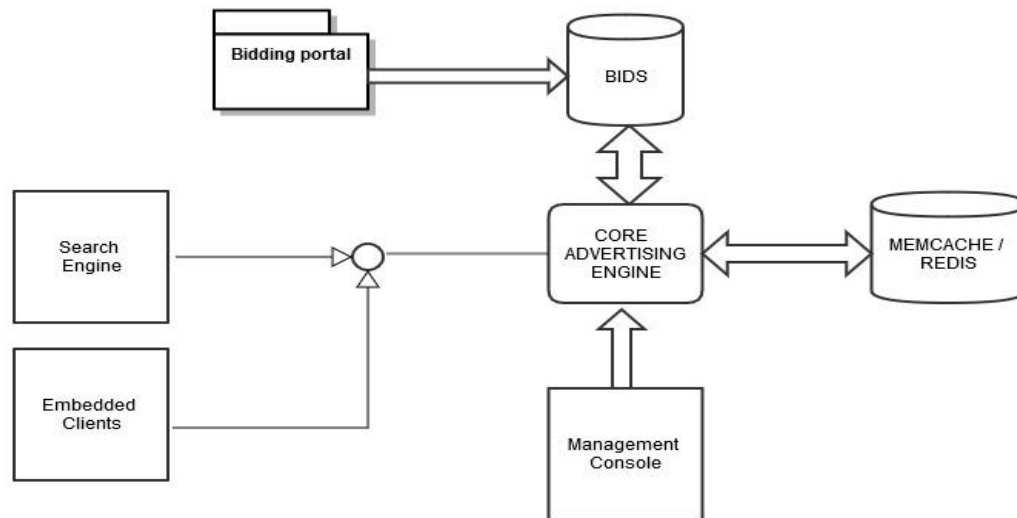


Figure 1 Overview of the AMS Architecture

4.2 Assumptions and Dependencies

The AMS will be developed using Microservices architecture (MVC). It should utilize the popular and effective frameworks (e.g. Springboot with Java)

4.3 Cost and Pricing

TBD

4.4 Licensing and Installation

The product requires professional installation. It must be installed by licensed personnel only.

5. Product Features

5.1 Auction Listing Creation

Dealers can make postings for things they need to sell.

5.2 Auction Scheduling

Venders can plan barter for explicit dates and times.

5.3 Bid Management

Purchasers can put, pull out, and adjust offers up for sale things.

5.4 Auction Monitoring

Merchants can screen the advancement of their bartering continuously.

5.5 Auction Status Updates

Clients get refreshes on the situation with barter they are taking part in.

5.6 Reserve Price Setting

Venders can set a hold cost for their things, guaranteeing they don't sell under a specific limit.

5.7 Automatic Bid Increment

The framework naturally increases offers in light of predefined rules.

5.8 Auction Result Notifications

Clients get notices about the aftereffects of sell-offs they partook in.

5.9 Auction Catalog Management

Heads can deal with the inventory of things accessible available to be purchased.

5.10 Auctioneer Tools

Barkers approach apparatuses for overseeing and directing closeouts.

5.11 User Registration and Authentication

Clients should enroll and validate to take part in barter.

5.12 Payment Processing

The framework works with secure installment handling for effective closeout exchanges.

5.13 Dispute Resolution Mechanism

A system is set up for settling debates among purchasers and venders.

5.14 Auction Reporting

The system will report the users and related actors to be notified by the activities performed in the barter. The records are maintained to prevent future legal issues and maintain security of transactions and auctions.

5.15 Auction Analytics

The framework gives examination on offering designs, thing fame, and other sale related information.

5.16 Multicurrency Support

Clients can take part in sell-offs and make installments in various monetary forms.

5.17 Auction House Management

Highlights available to be purchased houses to deal with their tasks, postings, and closeouts. System administrators or Bid Authorities can create covers closeout execution, deals, and different measurements.

5.18 Mobile Auction App

A portable application permits clients to partake in barter in a hurry.

5.19 Auction Inventory Tracking

Dealers can follow the status and area of things available to be purchased.

5.20 Auction Reminders

Clients get updates for impending sales they are keen on.

5.21 Auction Feedback and Ratings

Clients can give criticism and evaluations on their sale encounters.

5.22 Auction Terms and Conditions

Dealers can indicate agreements for their sales.

5.23 Auction Watchlist

Clients can add things to a watchlist to follow and get refreshes on their status.

5.24 Auction Registration Management

Chairmen can oversee client enlistments for barters.

5.25 Auction Category Management

Chairmen can make and oversee classes available to be purchased things.

5.26 Auction Commission Management

Sale houses can set and oversee commission rates for merchants.

5.27 Auction Messaging System

Clients can speak with one another and with closeout directors inside the framework.

5.28 Auction Inventory Import/Export

Venders can import/trade stock records for mass posting the executives.

5.29 Auction Performance Optimization

Consistent improvement of the framework to upgrade sells off execution and client experience.

5.30 Auction Accessibility Features

Elements to guarantee the stage is available to clients with incapacities.

6. Constraints

6.1 Security

Security for the AMS includes authentication using Google OAuth services, access control using authentication layer, data integrity using database rules and constraints, and data privacy and encryption.

Authentication of the user is by identifier and password for the first time. Then, the user can utilize OTP log-ins.

Can monitor and change the state of the system.

Customer Care users can only monitor the system and manually place a medical alert 911 emergency request for an ambulance.

Transmissions should be encrypted for privacy.

6.2 Usability

Easy to use (OTP log-in enabled for security purposes)

Easy to use and understand bid system with no extensive or unnecessary steps to achieve core tasks. Bidding on tasks should not take more than 3 clicks. Raising a bid should be done with a single click. Selling items should be done using a user-friendly UI.

6.3 Responsiveness

System responds quickly to user requests or changes in the bidding environment.

System responds within 2 seconds on average to local user requests and changes in the environment.

System responds within 4 seconds on average to remote user requests and changes in the environment.

6.4 Capacity

Maximum concurrent users during peak hours are 1, 000.

Maximum active auction listings simultaneously are 250.

Minimum bids processed per minute to accommodate high-volume bidding is 100.

Minimum registered users for account management are 10, 000.

Maximum items listed across all auctions is 40, 000.

Database capacity is a minimum of 1 million records.

7. Dependencies and Constraints

7.1 Stable Connectivity

The AMS relies on stable internet connectivity to ensure seamless access for users, data transfer, and communication with external services such as payment gateways and shipping providers.

7.2 Payment Gateway Integration

Integration with third-party payment gateways is necessary to facilitate secure transactions between buyers and sellers. The AMS considers local solutions such as Easypaisa and JazzCash APIs to facilitate secure payments in the system.

7.3 Shipping and Logistics Integration

Integration with shipping and logistics providers is essential for fulfilling orders and delivering items to buyers. FedEx is integrated into the AMS environment to facilitate the users with transport services.

7.4 APIs and Services

The AMS will utilize Google OAuth service to ensure seamlessly secure authentication in its environment. Utilization of such an API would guarantee a good amount of security for the AMS users.

7.5 Technology

The AMS should be built on the Spring framework of Java, utilizing the JDK 17 for its running. The system should be utilizing several microservices for its functioning.

8. Cost Pricing Table

Cost Category	Description	Estimated Cost (PKR)
Development	Software development and coding	50,000
Infrastructure	Cloud hosting, server maintenance	20,000
Personnel	Salaries for development team	80,000
Marketing	Promotional materials, advertising	15,000
Training and Support	User training, customer support	10,000
Contingency	Unexpected expenses or additional needs	5,000
Testing	Quality assurance testing and tools	15,000
Documentation	Technical documentation and user manuals	10,000
Legal and Compliance	Legal consultation, compliance auditing	8,000
Equipment	Hardware, software licenses, and peripherals	12,000
Total		225,000

9. Licensing and Installation

9.1 Software Licensing

The AMS operates under a subscription-based licensing model. Users must agree to the End User License Agreement (EULA) before installation.

9.2 Installation Requirements

Ensure your system meets the minimum requirements in terms of operating system, hardware, software dependencies, and network connectivity.

9.3 Installation Process

Download and install the AMS software, activate your license key, configure system settings, conduct testing, provide user training, and deploy the system for live use.

9.4 Installation Requirements

Our team offers technical support, software updates, and comprehensive documentation to ensure smooth operation of the AMS.

For support, contact any of the provided contact mails:

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