HIGH LEVEL DESIGN(HLD)

idharBidder

Version : 1.0

Abstract

Online auction however is a different business model where the items are sold through price bidding. Usually bidding have start price and ending time. Potential buyers in auction and the winner is the one who bids the item for highest price. We treat the fraud detection with a binary classification. For buying product online user have to provide his personal details like email address, license number, PAN number etc. and will be matching face of the bidder at the time he/she login in the web-app and only the valid user will have authority to bid. This prevents various frauds according in online shopping.

1. Why this HLD Documentation?

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

2. General Description

2.1 Product Perspective

idharBidder is a ML based Secured Multi-Products Online Auction System that enables auctioneers and bidders to host and attend online auction securely .

2.2 Tools Used

Python programming language along with Django , HTML , CSS , JS , Bootstrap and frameworks such as NumPy, Pandas, Scikit-learn, TensorFlow, Keras and OpenCv are used to build the whole project.

- VS Code and PyCharm is used as IDE
- MySQL/MongoDB is used to retrieve, insert, delete, and update the database.
- Frontend is developed using HTML,CSS,JS and Bootstrap .
- Python Django is used for backend development.
- Github is used as a Version control system.
- Numpy , Pandas , Keras , Sickit learn ,OpenCv for Face Detection.

2.3 Data Requirements

2.3.1 Login Page

- **Username -** User has to fill email or mobile number used by them at time of registration
- **Password -** User has to fill password created by them at time of registration
- **OTP Verification -** OTP will be sent by server to registered mobile number of user
- **Face Verification** - Face registered by the user at time of registration will be verified with the help of openCV .

2.3.2 Registration Page

2.3.2.1 Bidder Registration

- **Name** - Name of the Bidder same as that on ID issued by government.
- **Password -** To be created by bidder to keep account secure
- **Email** - Valid email address of the Bidder.
- **Mobile Number** - Valid mobile number of Bidder for OTP verification(Number should be same as that of aadhar card).
- **Authorised ID with Share code** - Aadhar Card zip file (In Case Offline AADHAR BASED Kyc) else PDF of any other government authorised ID along with last 4 digits of aadhar card
- **Pan Number** - Pan Number is mandatory and if kyc is online upload PDF of it.
- **Past 6 Month Bank account statement** - 6 months bank account statement to check whether the bidder is able to participate in auction or not , there should be a monthly average account balance equal to 50% of the Auction base price .
- **Face Registration** - Bidder has to register his/her face which will be done by using openCv.
- **OTP Verification -** A OTP will be sent on the given mobile number to verify the mobile number.
- **Video** - In case the kyc is online bidder has to upload his video holding his pan card and authorised government ID.
- **Accept terms and conditions checkbox** - Digital acceptance of the terms and conditions for the bidder to participate in auction.

2.3.2.2 Auctioneer Registration

2.3.2.2.1 Individual Registration

- **Name** - Name of the Auctioneer same as that on ID issued by the government.
- **Password -** To be created by auctioneer to keep account secure
- **Email** - Valid email address of the Auctioneer.
- **Mobile Number** - Valid mobile number of Auctioneer for OTP verification(Number should be same as that of aadhar card).
- **Authorised ID with Share code** - Aadhar Card zip file (In Case Offline AADHAR BASED Kyc) else PDF of any other government authorised ID along with last 4 digits of aadhar card
- **Pan Number** - Pan Number is mandatory and if kyc is online upload PDF of it.
- **Face Registration** - Auctioneer has to register his/her face which will be done by using openCv.
- **OTP Verification -** A OTP will be sent on the given mobile number to verify the mobile number.
- **Video** - In case the kyc is online, the bidder has to upload his video holding his pan card and authorised government ID.
- **Accept terms and conditions checkbox** - Digital acceptance of the terms and conditions for the auctioneer to auction his/her product/tender.

2.3.2.2.2 Company Registration

- **Name** - Name of the authorised signatory of the company/host for the auction at company's end.
- **Email** - Valid email address of the authorised signatory of company .
- **Password -** To be created by authorised signatory of the company/host for the auction at company's end to keep account secure
- **Mobile Number** - Valid mobile number for OTP verification(Number should be the same as that of aadhar card).
- **Authorised ID** - AADHAR CARD or Any other government authorised ID PDF of authorised signatory of the company/host for the auction at company's end.
- **Pan Card** - Pan Card of Company issued by Government of India.
- **GSTIN Number** - GSTIN Number of company along with PDF(if company has a GST Number.)
- **MCA Registration Page** - Company Registration proof in form of PDF.

- **Board Resolution Letter -** Board resolution letter in name of the host for the auction at company's end.
- **Face Registration** - Authorised signatory of the company/host for the auction at company's end has to register his/her face which will be done by using openCv.
- **OTP Verification -** A OTP will be sent on the given mobile number to verify the mobile number.
- **Accept terms and conditions checkbox** - Digital acceptance of the terms and conditions for the company to auction his/her product/tender.

2.3.3 Product Module

2.3.3.1 Product Registration Module

- **Photograph's** :- The seller has to upload a minimum of 4 images in the format JPEG and size should be max 10MB for product to be added in auction.
- **Product Name** :- Name of the product which will be displayed on screen during auction.
- **Base Price** :- Minimum price of the product.
- **Product Dimension** :- Real measurements of your product(if applicable).
- **Product Category** :- Category in which product belongs(e.g. Electronics, Arts, Sports etc.).
- **Product Type** :- Subcategory to which product belongs(e.g. Paintings etc)(not compulsory).
- **About Product** :- Brief detail of the product, it should be within 80 - 100 words.
- **Product Document** :- Supporting documents of your product which are available(if applicable).
- **Auction Date** :- Date on which you have to conduct an auction(subject to availability).
- **Auction Slot** :- one hour Time slot in which you want to conduct auction(subject to availability).
- **Seller Photograph** :- it will be used to admit the seller at the time of auction as an audience(he/she cannot take part in the auction).
- **Terms and Condition CheckBox** :- List of all rules and regulations that should be followed by the seller.

2.3.3.2 Product List View Module

- In this module all the upcoming product auction list will be displayed in which time and date of the Product to be auctioned will also be displayed with the Product mentioned there.
- On clicking the product which the buyer wants, a detailed view of the product will be opened which consists of Photographs, detailed description of product and some useful information.
- If Buyer has some interest, he/she can register for that auction by clicking on the button- "register" and this will redirect to the registration form.

2.3.4 Tender Module

2.3.4.1 Tender Registration Module

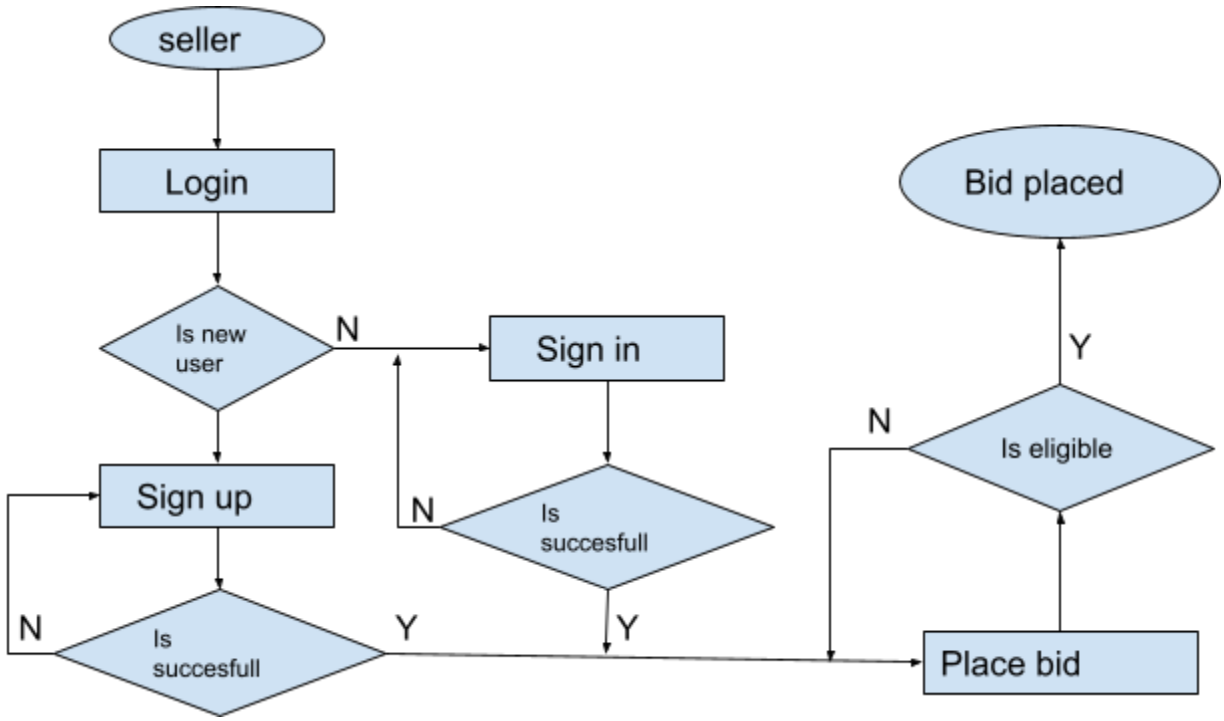
- **Digitally Verified Tender Pdf** :- The seller has to upload a digitally verified tender(By Digital Signature of authorised officer) pdf and size should be max 10MB.
- **Product Name** :- Name of the tender which will be displayed on screen during auction.
- **Base Price** :- Maximum price of the tender.
- **Tender Category** :- Category in which Tender belongs(e.g. Electronics, Arts, Sports,Construction etc.).
- **Tender Type** :- Subcategory to which Tender belongs.
- **About Tender** :- Brief detail of the Tender, it should be within 80 - 100 words.
- **Auction Date** :- Date on which you have to conduct an auction(subject to availability).
- **Auction Slot** :- one hour Time slot in which you want to conduct auction(subject to availability).
- **Seller Photograph** :- it will be used to admit the seller at the time of auction as an audience(he/she cannot take part in the auction) (if applicable).
- **Terms and Condition CheckBox** :- List of all rules and regulations that should be followed by the seller.

2.3.4.2 TenderList View Module

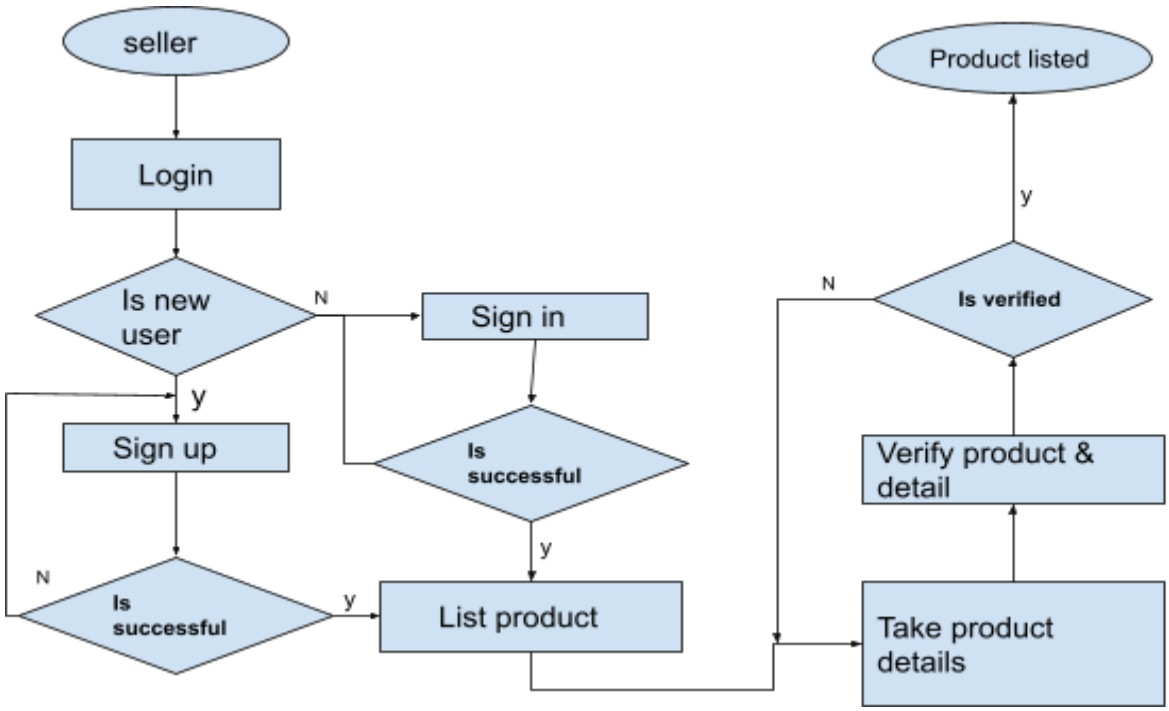
- In this module all the upcoming tender auction list will be displayed in which time and date of the tender to be auctioned will also be displayed with the tender mentioned there.
- On clicking the tender which the buyer wants, a detailed view of the tender will be opened which consists of Photographs, detailed description of tender and some useful information.
- If Buyer has some interest, he/she can register for that auction by clicking on the button- ”register” and this will redirect to the registration form.

2.4. Design Details

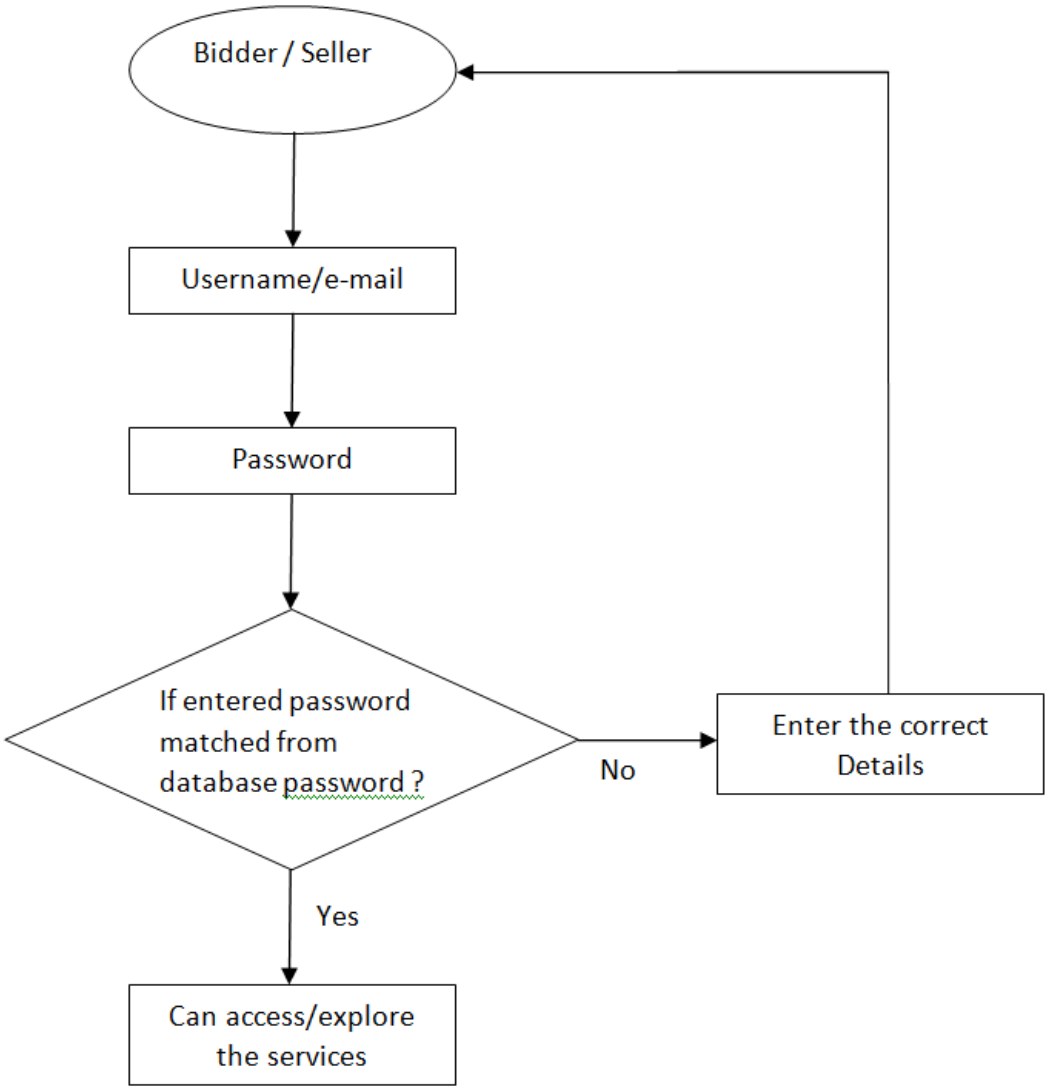
2.4.1 place bid on item /product



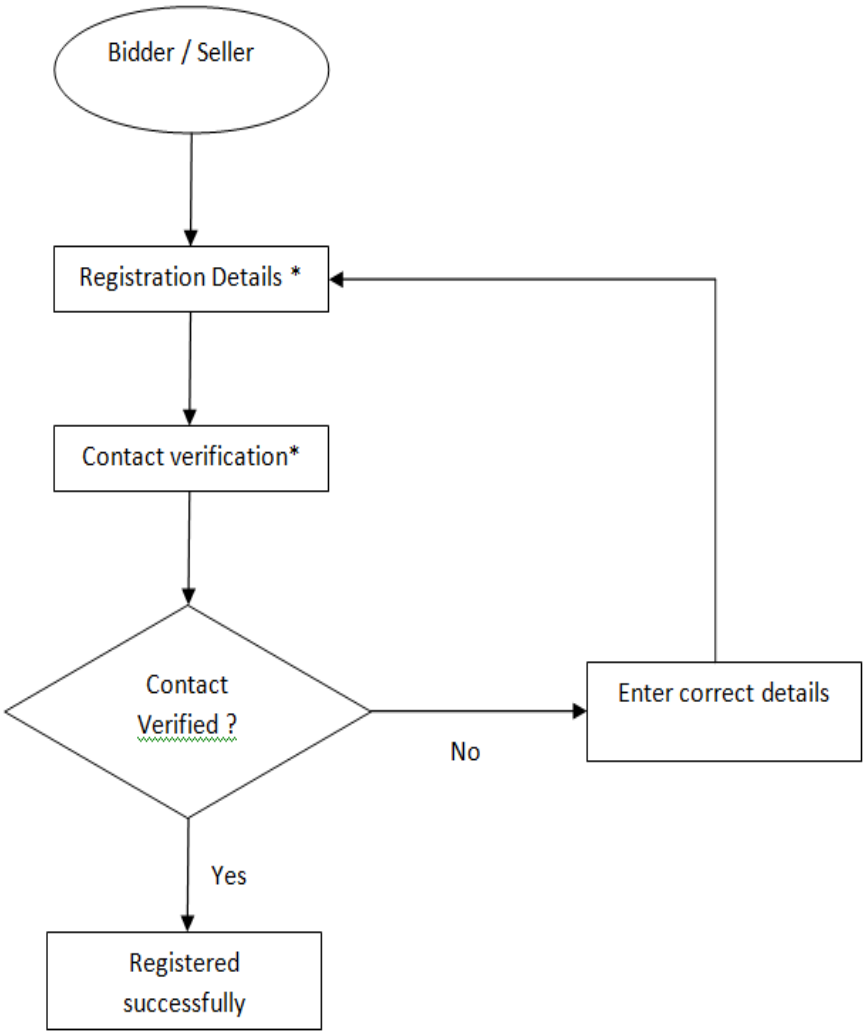
2.4.2 list product for auction



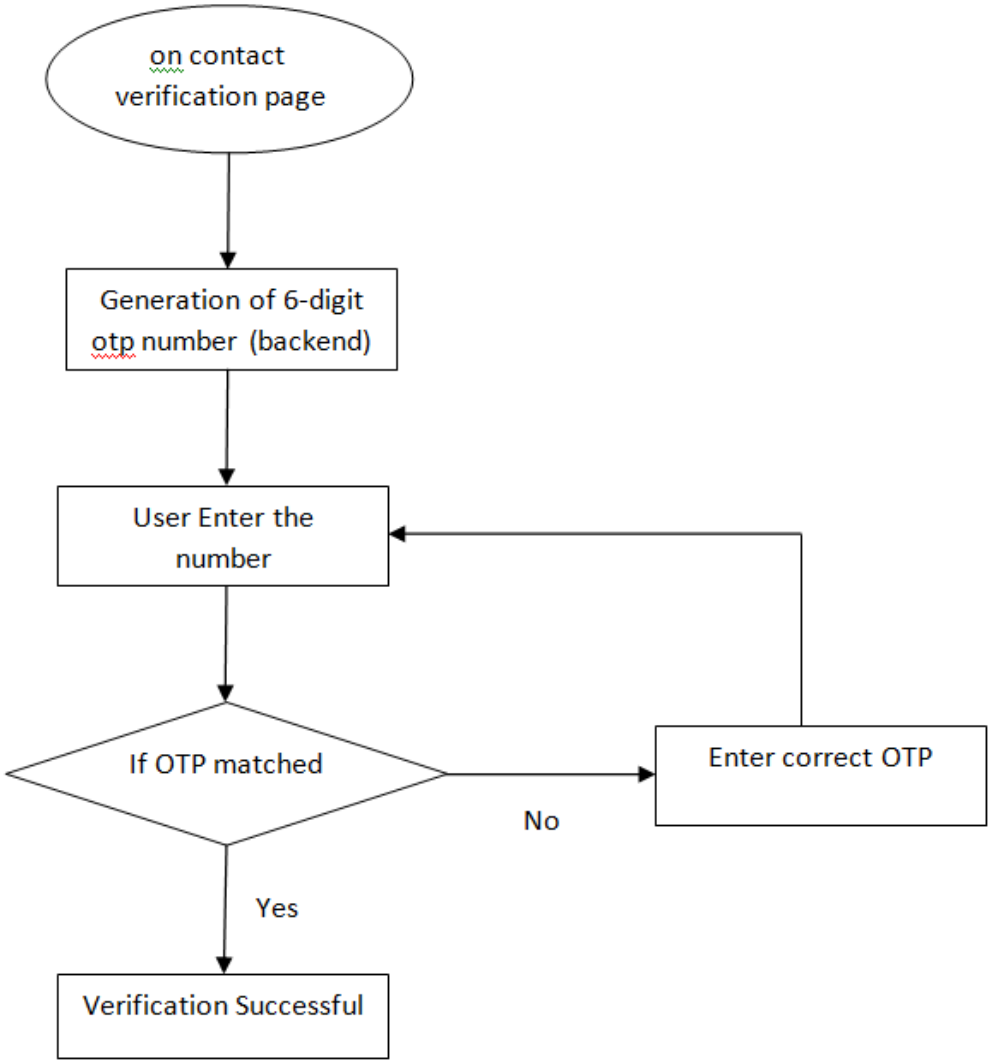
2.4.3 Sign-in


Bidder / Seller
Username/e-mail
Password
If entered password matched from database password ?
No
Enter the correct Details
Yes
Can access/explore the services

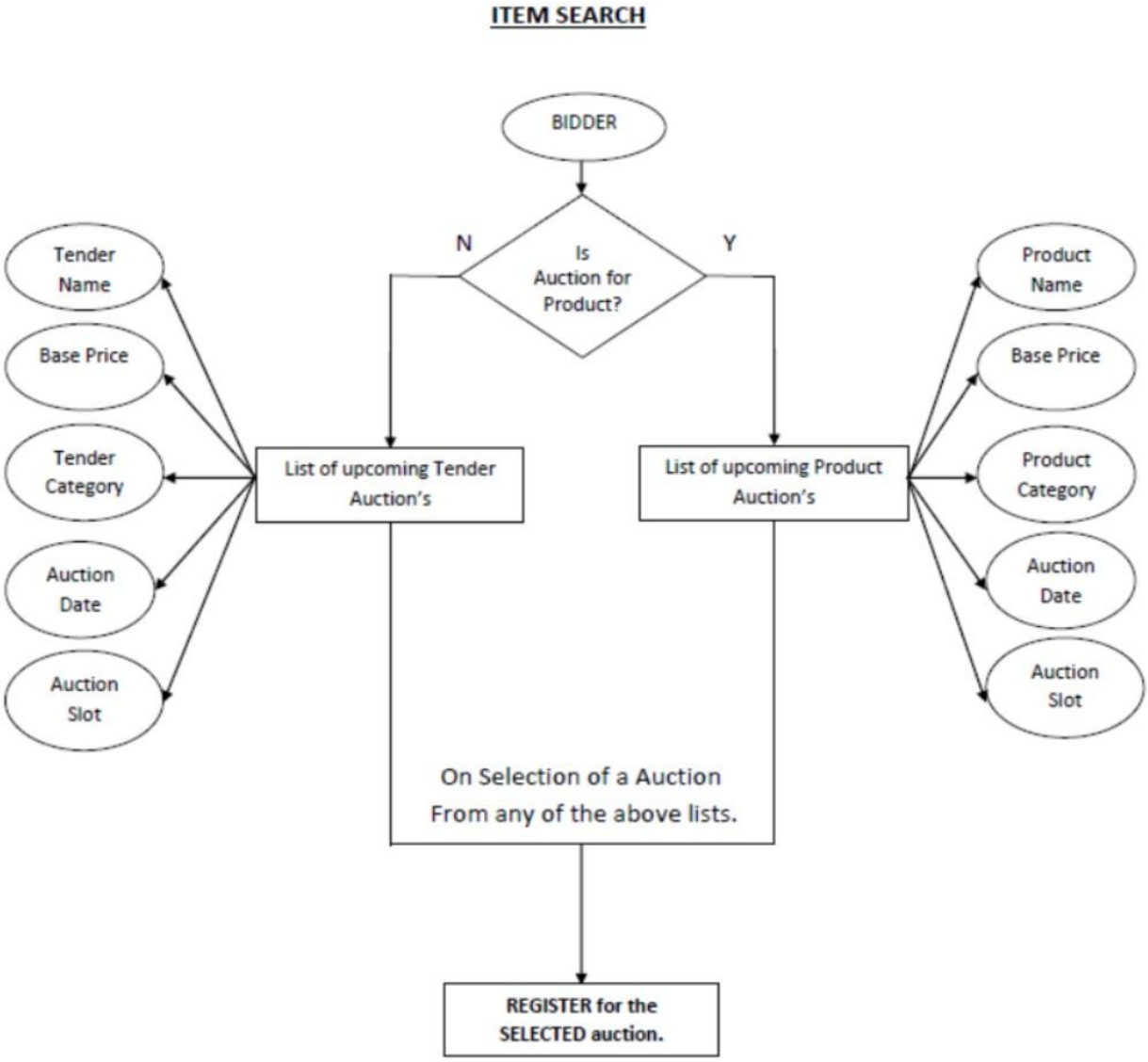
2.4.4 Registration



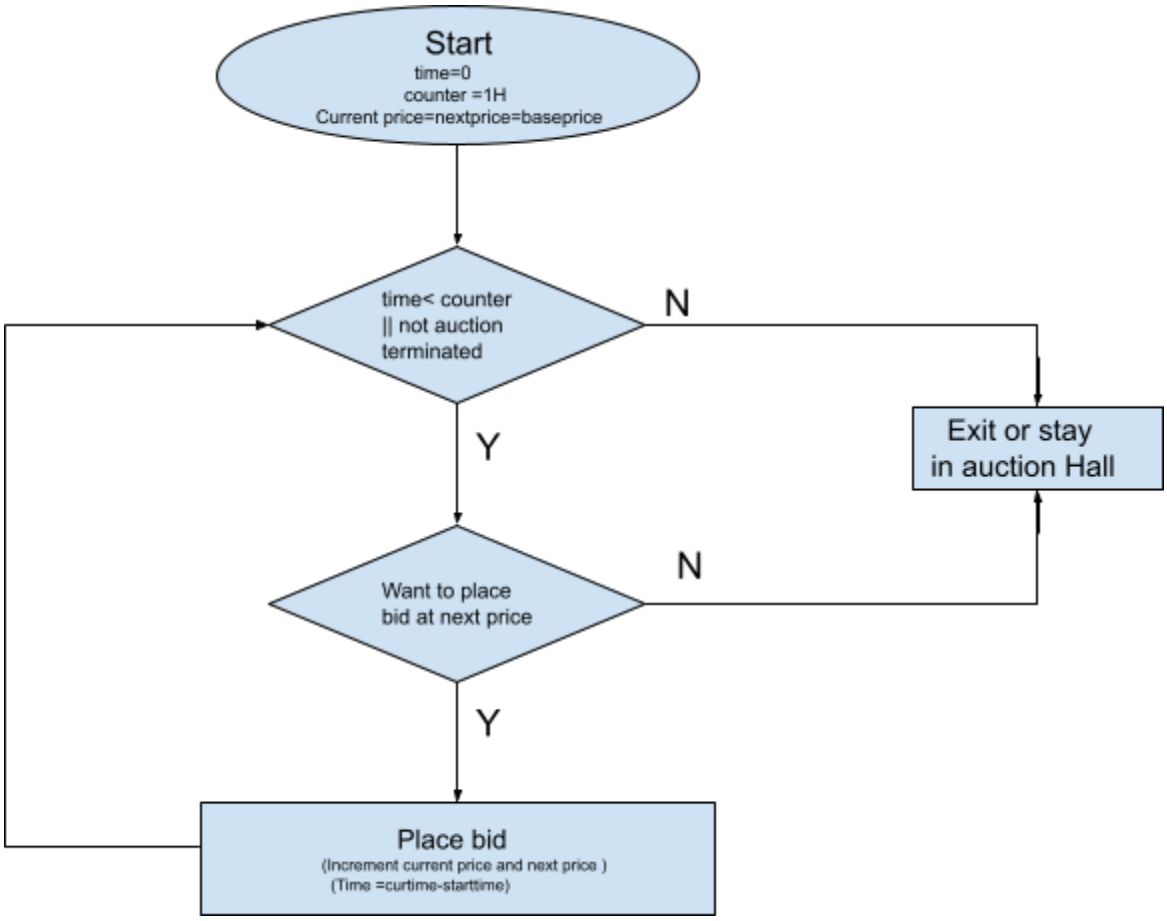
2.4.5 Contact Verification



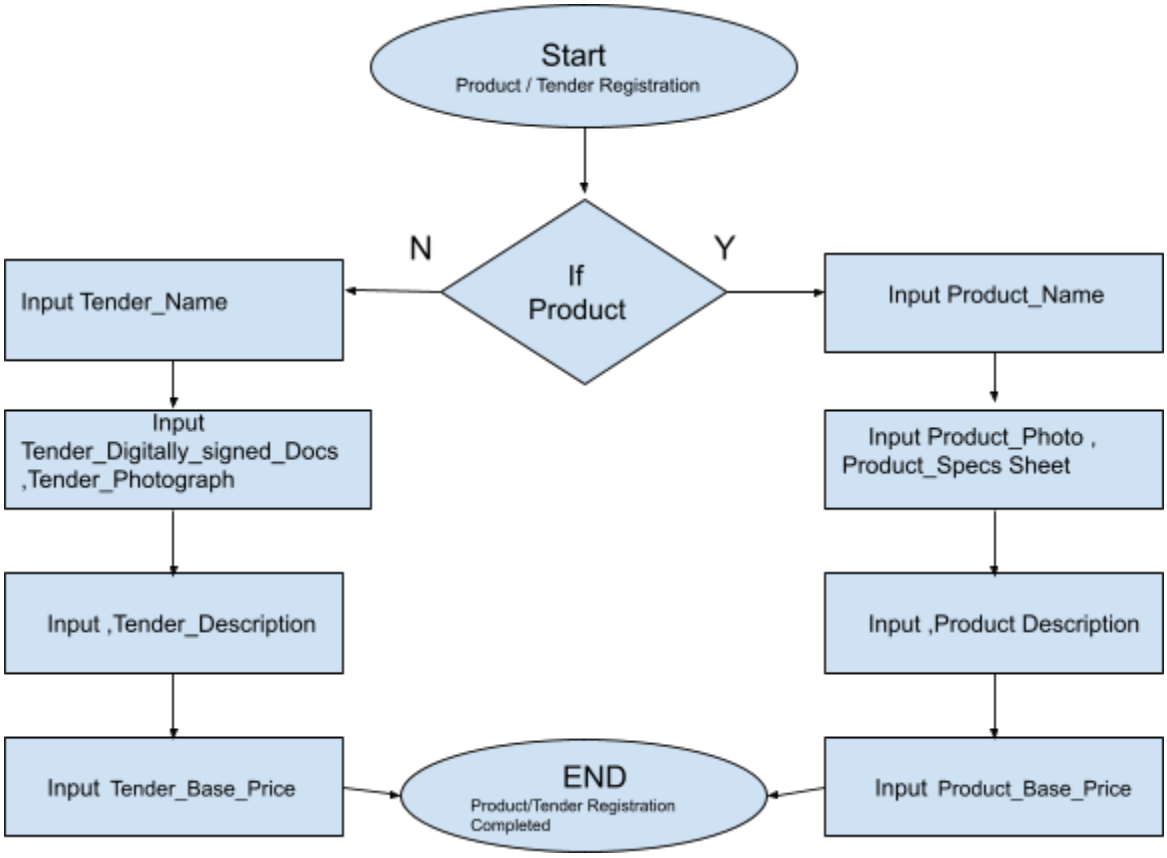
2.4.6 Item Search



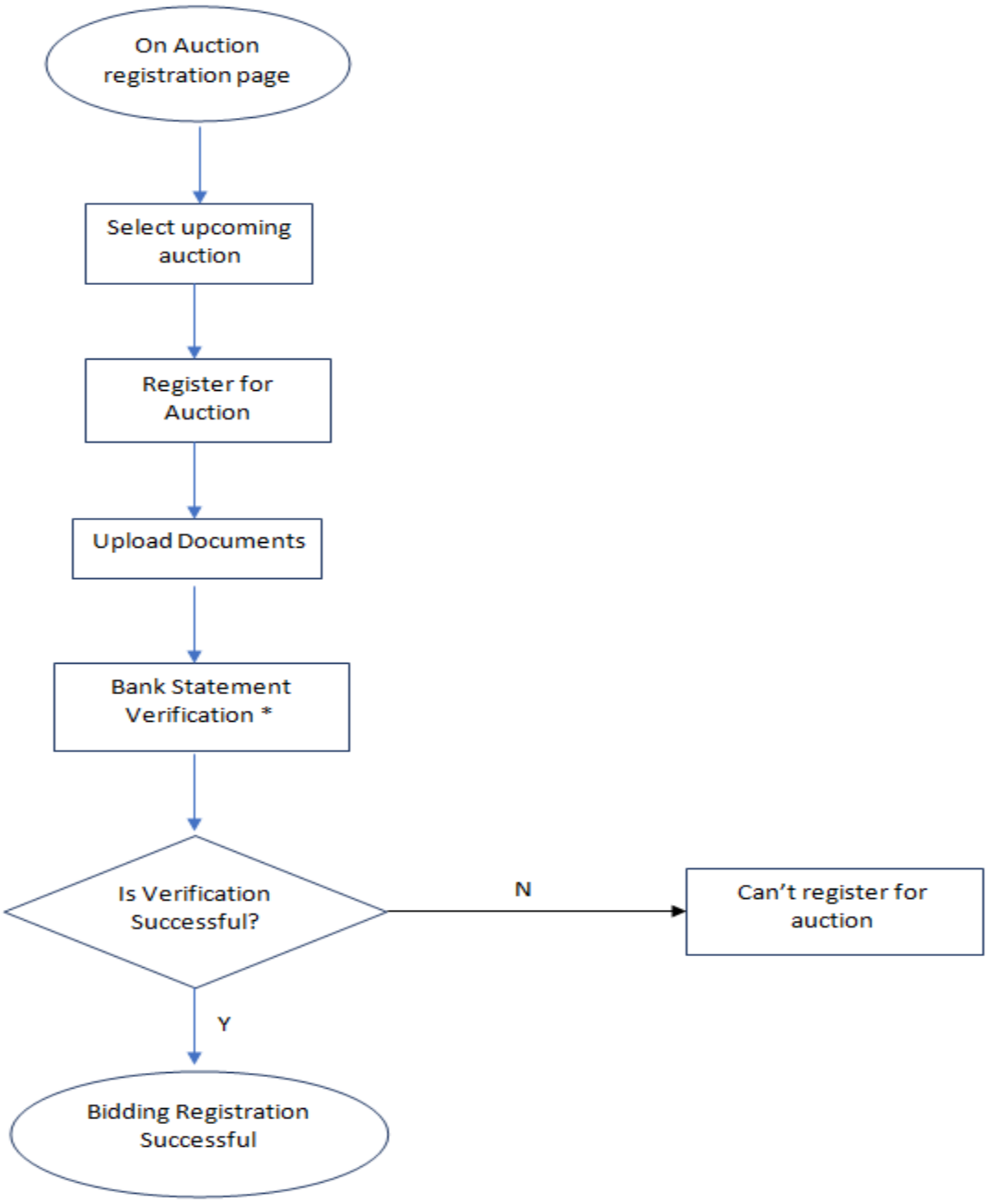
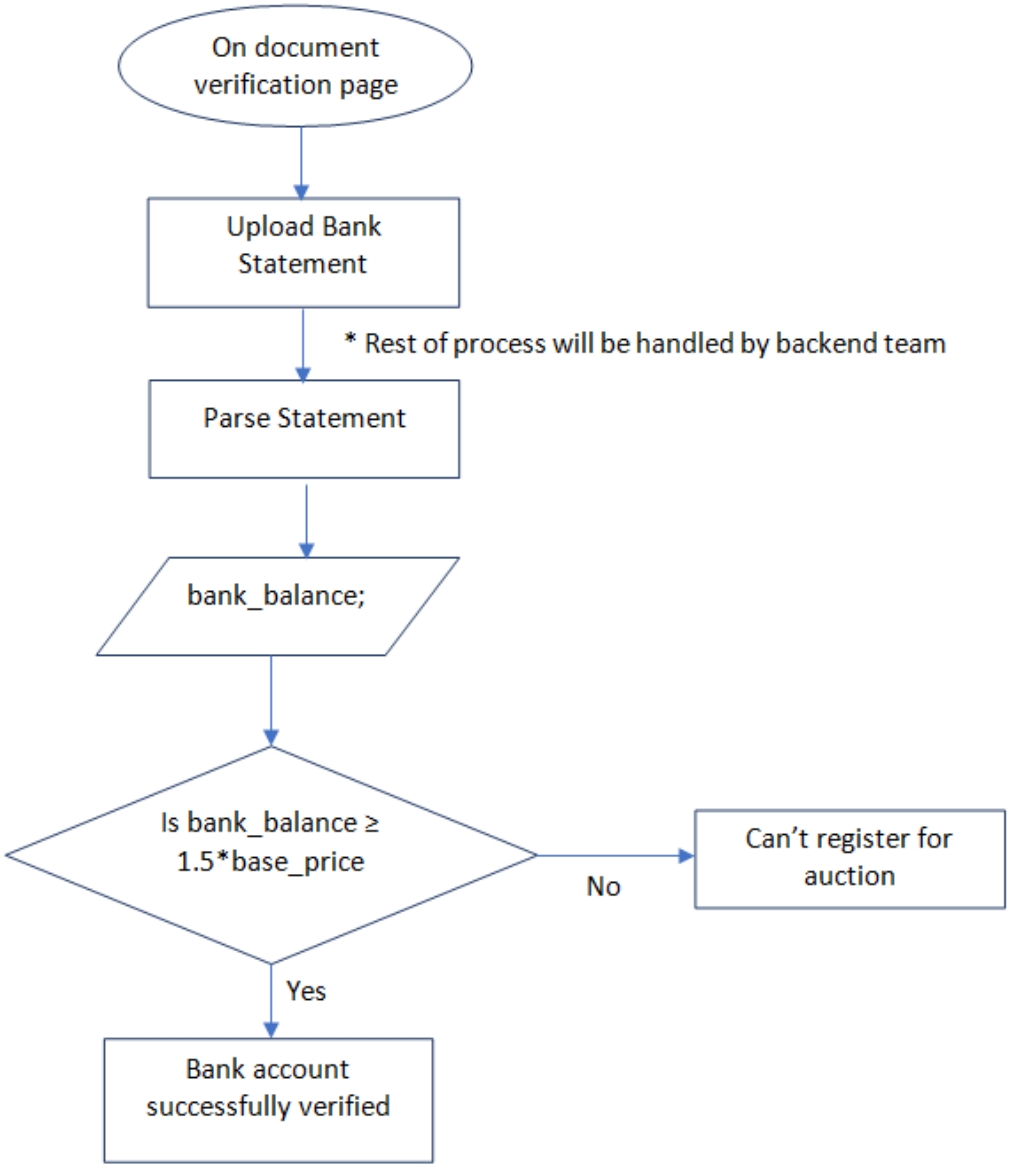
2.4.7 place bid



2.4.8 Product Registration



2.4.9 Register for Auction



2.4.10 Bank statement Verification