

Blue Penguin – E-bidding Application For Bidding Subsystem

Version 1.0

Blue Penguin – E-bidding Application	Version: 1.0
Software Requirement Specification	Date: 10/10/24
Initial Draft	

Revision History

Date	Version	Description	Author
10/10/24	1.0	Added Title page, Revision History page, Table of Contents, and Introduction	Addina Rahaman
12/10/24	1.1	Added Overall Description & Specific Requirements	Addina Rahaman, Samiul Saimon & Lily Minchala
15/10/24	1.2	Added Supporting Information	Lily Minchala
16/10/24	1.3	Final Edits	Addina Rahaman

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Software Requirements Specification

1. Introduction

1.1 Purpose

The purpose of this Software Requirements Specification (SRS) is to outline and define the functionalities, nonfunctional requirements, design constraints, and behavior of the **Bidding System** of the BluePenguin application platform. This document will guide the development and design of the BluePenguin bidding module.

1.2 Scope

The scope of this SRS highlights the functional aspects of the bidding system; this includes granting access to account holders to sign in or register, placing bids, auctioning off items, commenting on items being listed, performing transactions, as well as ending or withdrawing from bids. The permission to do so is granted by account statuses (which will be mentioned in later sections). The bidding system also interfaces with a rating module, suspension system, and a search-filtering algorithm.

1.3 Definitions, Acronyms, and Abbreviations

- BluePenguin: name of platform
- Visitor, User, Superuser: different account statuses, each granted different permissions and privileges
- Owner U: The user in charge of bidding off an item in a transaction
- Bidder U: The winning bidder of an item auctioning
- Bidding system: The overall system which the platform runs with
- Rating module: A rating function that allows Bidder U to rate Owner U they have had past transactions with
- Suspension system: The system that allows S to suspend any U which fails to follow site guidelines (mentioned in **Supporting Information**)
- Search-filtering algorithm: A request-form function that allows users to input a search into a search bar and receive filtered response of items with the search listed in their metadata
- Request: Request model/object that Superusers receive when a Visitor applies to be a User, when a User applies to quit, or when a User applies to be reinstated (with monetary proof)

1.4 References

- Mini E-bidding system project requirements
- IEEE Standard for Software Requirement Specification (IEEE 830-1998)

1.5 Overview

This SRS outlines the use-case reports, assumptions, dependencies, design constraints, non functional dependencies, and supplementary requirements of the Bidding System of BluePenguin.

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2. Overall Description

2.1 Use-Case Model Survey

Actor:

- Visitors (V)
- Users (U)
 - VIP Users
- Super-users (S)

Actor & use-cases:

- Visitors
 - Browse listings
 - Comment on items
 - Can apply to become a user
- Users
 - Account Management
 - Listing
 - Bidding
 - Transactions
 - Ratings
 - Complaints
- VIP Users
 - Discount Privilege
 - One-time Suspension Immunity
- Super Users
 - Administrative Privileges

Description of Use-Cases:

- **Browse Listings:** All actors can browse listings of items or services currently offered. Visitors can strictly browse only.
- **Comment on Items:** All actors can leave general comments on items that aren't indicative of purchases made on said product.
- **Apply to become User:** Visitor Actors can apply to become a user and receive it upon superuser approval and passing a human verification question.

- **Account Management:** Users can deposit and withdraw money from their accounts.
- **Listing:** can list items/services for rent/sale and set an asking price or list a range
- **Bidding:** Users can bid on items/services as long as they have enough money in account.
- **Transactions:** After a bid is accepted, the item is removed from listing and the payment is transferred from buyer to seller.
- **Ratings:** After a transaction is made, the buyer and seller can rate each other anonymously. Ratings are from 1 to 5, worst to best respectively. Only buyer and seller can rate each other, no one else.
- **Complaints:** Users can complain about another user to a super user.
- **Discount Privilege:** VIP's get a 10% discount on all transactions.
- **One-time Suspension Immunity:** VIP's are not suspended the first time they break the suspension conditions; instead, they revert to user status.
- **Administrative Privileges:** Super users have access to validate/process complaints, and assist users with their problems, ensuring the system works smoothly.

2.2 Assumptions and Dependencies

2.2.1 Assumptions

- Users must be verified and authenticated by Superusers, and must have their legal name, address, and a valid amount of money deposited in their account (at least over 0.01 USD) to proceed with auctions and bidding.
- Visitors and Users must be signed in to comment on item listings.
- Users must be signed in to edit their account, save items to their cart, update deadlines of any items they have listed for auction, and complete biddings.
- When Bidder U wins an auction, the Owner U is compelled to proceed with the transaction.
- Superusers must be logged in in order to review requests and conduct administrative duties.
- Visitors, Users, and Superusers must be connected to the internet.

2.2.2 Dependencies and Design Constraints

- a. Client side:
 - The user interface must be developed using the React framework to ensure a modern, component-based architecture.
 - The frontend must be compatible with the Django REST API, allowing seamless communication for data retrieval, item management, and user authentication.
 - The frontend must securely handle user authentication tokens (e.g., JWT) when interacting with the server-side Django API, maintaining session security.
 - The client must support uploading item images to Google Cloud Storage by interacting with the Django backend for secure uploads.
 - The application must function across major web browsers (Chrome, Firefox, Safari, Edge), ensuring cross-browser compatibility.

- b. Server side:
 - The application server must be developed using the Django REST API framework and must be compatible with MySQL database.
 - The items must have associated metadata (generated from item images), using Google Cloud Vision API; this API must be compatible with the MySQL database and Django REST API framework, and all developers must have access to a key.
 - User-uploaded images of display icons and item images must be stored in Google Cloud Storage. The MySQL database must be compatible with storing and querying Google Cloud Storage links.
 - MySQL database must have a remote configuration.
- c. REACT must properly synthesize and make requests to the Django REST API framework.
- d. Compatibility with third-party APIs like Google Cloud Vision API for handling metadata of images uploaded by users.

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3. Specific Requirements

3.1 Use-Case Reports

1. Use Case Name: User Registration and Sign-In

Description: This use case allows new users to register for a Blue Penguin Account or an existing user to sign into their personal account

Preconditions:

- The user must have access to a computer, the internet, and can access the site with a compatible browser.
- New users must provide a unique email and password to register.

Postconditions:

- If the user inputs the correct credentials, the user can use the site with the associated account.
- The system will confirm their registration or sign in with an on-screen message.

Main Flow:

1. The user navigates to the “Sign in” drop-down.
2. The user is presented with input fields for their username and password.
3. If the user needs to be registered, they will navigate to the “Not a member? Register” drop-down to provide the required information, agree to the terms of service, and hit submit.
4. If a user is signing in, they would enter and submit their username and password.
5. The system will either validate their registration or alert the user of an error.
6. Upon a successful login or registration, the user is now able to use the website using their credentials.

Alternative Flows:

- Invalid Login: The system will prompt the user to re-enter correct login credentials.
- Forget Password: The system will send a recovery email to the user once they click “Forget Password” and submit the associated username.
- Registration error: The system flags an already-used username or email.

Non-functional requirements:

- The system should respond at an appropriate time after the login and registration attempt.

2. Use Case Name: My Account menu

Description: This use case provides users with a menu to access their profile, payments, addresses, make or view requests, pending bids, saved bids, as well as canceled, processed, or shipped bids.

Preconditions:

- The user must be signed in.

Postconditions:

- The user will be able to navigate the account menu to their desired location.

Main Flow:

1. The user is signed in and clicks on “My Account”.
2. The account drop-down menu is displayed on the screen to the user
3. The user is now able to choose from the menu

Alternative Flows:

- Unable to find My Account: “My Account” won't be displayed to the user until they sign in to their account
- Users will be able to browse Blue Penguin’s items but with limited action as a guest

Non-functional requirements:

- The “My Account” button will not be visible to unsigned users.

3. Use Case Name: Password Recovery

Description: Registered users who have forgotten their password will be able to send a request to reset it.

Preconditions:

- The user must click on “Forgot Password”
- The user must be a verified registered member of Blue Penguin
- User must have access to the email they have registered with
- Users must either provide the email or username they used to register with

Postconditions:

- User - Individuals will be able to reset their password with an automated email from the system that verifies they are looking to change their password.
- System: The Blue Penguin Platform

Main Flow:

1. The user clicks on “Forgot Password”
2. Users are presented with an input field for their email and submit it.
3. User enters their email inbox to find the “Recovery Password” email from Blue Penguin.
4. User flows steps listed on the email to reset the password
5. Password is reset
6. User is now able to log in using their username and new password

Alternative Flows:

- Does not receive recovery email on the first try: The user does not receive their recovery email in an appropriate time and requests another one
- Unable to reset password: User is unable to receive their recovery email and understands they had never properly registered with Blue Penguin so being the registration process.

Non-functional requirements:

- A registered user must receive their recovery email in an appropriate amount of time.
- The user's password must be kept safe and encrypted

4. Use Case Name: Browse Listings

Description: The user browses available items/listings for bidding with certain filters such as certain categories, price ranges, and locations.

Preconditions:

- The user has access to a computer, the internet, and a compatible browser to visit the Blue Penguin Platform.

Postconditions:

- The user will be able to view all available items for auction.

Main Flow:

1. The user opens the Blue Penguin platform on their computer
2. The user is directed to the homepage of the platform
3. The user can browse all the available items for auctions
4. If the user has a preferred item in mind, they can search for the item in the search bar.
5. If the user is looking for a particular category, they can use the category button to be directed to their desired category
6. If the user wishes to further filter out the variable items, they use the filters presented on the left-hand side of the search page

Alternative Flows:

- Unauthorized Bid: The user fails to place a bid on the item they browsed but aren't signed in. They will be asked to register and/or sign in to place a legitimate bid.

Non-functional requirements:

- Must be able to display items appropriately.
- Users should be able to easily navigate the interface and look for items fitting their search in some manner.

5. Use Case Name: Placing A Bid

Description: Allows for a user to place a bid (money) on their desired item.

Preconditions:

- The user cannot be a visitor
- The user must either be registered with the platform

- The user must have the appropriate funds in their balance to place the bid

Postconditions:

- The user has successfully entered their bid on the item in the chance of being the highest bidder at the end of the auction

Main Flow:

- The user is signed in
- The user browses the available items on the platform
- User finds an item they wish to place their bid on
- The user clicks on an item
- If users are bidding on the item for the first time, they will go to the item's page and click on "Start Bidding".
- If the user is increasing their bid, they will go to the item's page and click on "Increase Bid"
- The user inputs their bid amount
- If it is a new item, it will be added to their "Pending" list to be notified of their bid's status
- If a user increases their bid, it would be reflected in their "Pending" list that they are the highest bidder until they are not.

Alternative Flows:

- Inefficient Fund: The user does not have sufficient funds to place a bid and is unable to place their bid. They are advised to increase their balance to place said bid.

Non-functional requirements:

- Approved bids are appropriately entered into the auction to keep the status of the auction up to date.

6. Use Case Name: Adding an Item to a User's Saved List

Description: The user will be able to save an item for future bidding

Preconditions:

- User will have to be signed into their account
- The user is viewing the item they want to save
- Item has to be available

Postconditions:

- The item is added to the user's saved list

Main Flow

1. The user is signed into the platform
2. User has viewed an item they wish to save
3. The user goes to the item's page
4. The user clicks on "Save", the button will turn yellow
5. Item is added to the user's saved list

Alternative Flows:

- Already Saved Item: The item is already saved, therefore clicking “Save” removes the item from the user’s Saved list

Non-functional requirements:

- Change to the Saved list is updated in a timely manner.

7. Use Case Name: View Profile

Description: Users and visitors can view profiles and status of other users and visitors.

Preconditions:

- User/visitor must be signed in
- User/visitor must be viewing an item, comment, pending transaction, or pending shipment by the other user/visitors.
- User/visitor’s profile must be opened by its owner and authenticated by a Superuser

Postconditions:

- Users/visitors will be able to view a profile’s username, Legal Name, status (Visitor/User/Superuser/VIP), and join date
- If the profile belongs to a User, it will also display average rating, item listings, as well as recent anonymous reviews.

Main Flow:

1. User/visitor is signed in to their account
2. User/visitor must be performing one of the following:
 - a. Browsing an item
 - b. Viewing a comment under an item
 - c. Viewing a review
 - d. Viewing a pending transaction under their ‘Pending Transaction’ tab if they won a bid and are expecting the item to be shipped
 - e. Viewing a pending shipment under their ‘Next Actions’ tab if an item listing was successfully auctioned
3. User/visitor must click on the profile picture of the User/visitor listed
4. Profile is viewed

Alternative Flows:

- User is suspended: item listings, reviews, and average ratings are not visible; profile displays ‘This user has been suspended for not meeting BluePenguin’s guidelines.’
- User quit: username is displayed, however no other feature is displayed. Profile reads ‘This user no longer exists.’

Non-functional requirements:

- User profile must be viewed in 1-2 seconds

8. Use Case Name: Edit Profile

Description: The user edits their profile, such as username, description, legal name, and password.

Preconditions:

- The user must be signed in on the platform.
- Users must be viewing their profile.

Postconditions:

- The user's profile details will be updated

Main Flow:

1. User signs into their account
2. User clicks on "My Account" to get the account dropdown menu
3. User clicks on the "Profile" option on menu
4. User gets directed to their profile
5. User navigates the profile page and clicks on "Edit Profile"
6. The user is presented with inputs such as username, legal name, description, and password.
7. If the user wants to change their username, they would update the username input and click submit.
8. If the user wants to change their legal name, they would update the legal name section and click submit.
9. If the user wants to change their description, they would update the description section and click submit.
10. If the user wants to change their password, they would update the password section and click submit.
11. The appropriate sections are updated

Alternative Flows:

- Unable to Update Username: The user's new username is unavailable and therefore is not updated. The user would be asked to choose a different (unique) username.
- Unable to Change Password: The user's new password is not accepted and would be asked to come up with a stronger password.

Non-functional requirements:

- The user would need to easily update their profile since it was confirmed that the user is signed in.

9. Use Case Name: Add Funds to Balance

Description: The user adds money to their account using Zelle, PayPal or other proper payment method

Preconditions:

- User would have to be signed in

- User would need to have a proper payment method to transfer money into their Blue Penguin Account
- User would need to be on their transaction page to add money to their account

Postconditions:

- Money would be added to the user's account balance

Main Flow:

1. User signs into the platform
2. User navigates the homepage to the "My Account" button
3. User navigates the account menu to the "Transaction" option
4. User is directed to their transaction page
5. User navigate the page and clicks on the "Add Money" option
6. User is directed to a page with prompts of their preferred payment option and fills out the necessary information to transfer money into the account.
7. Money is added to user's account and is reflected in their balance

Alternative Flows:

- Unable to Add Money: The user is unable to transfer money into their account, therefore try other forms of payment methods that the platform supports.

Non-functional requirements:

- The system must adhere to relevant financial laws, regulations, and standards when dealing with the transaction of money between online platforms.
- The system security must repent for the risk of fraudulent transactions to occur.

10. Use Case Name: Listing an Item

Description: The user lists a new item to be auctioned off.

Preconditions:

- User must be signed in
- User must be viewing their own profile
- User must click on the '+' button under product listings
- User must have the item they wish to bid off

Postconditions:

- Item will be available for viewing, with a title, deadline, description, series of images, and starting price. Items must be able to be bidden off; users must be able to enter bid amounts and both users and visitors must be able to comment on items.

Main Flow:

1. User signs into their account
2. User views their profile and clicks on the '+' button under product listings
3. The User must enter the item's title, deadline, description, and starting price. The User must upload images in JPEG, PNG, or HEIC format.
 - a. User will be allowed to enter 4 images of the item.

- b. The first image added would be the thumbnail photo presented when browsing
4. The User clicks on the 'Start Listing' button to officially publish the item

Alternative Flows:

- Item is deleted from a listing: Item image displays 'This item is no longer up for auction.'
- Item is auctioned off: Item image displays 'This item has been auctioned off.'

Non-functional requirements:

- Item must be successfully listed within 1-2 seconds of clicking on 'Start Listing'

11. Use Case Name: Removing a Bid

Description: A user cancels or withdraws their bid from an ongoing auction

Preconditions:

- The user must be signed in
- The user must have participated in the auction
- The auction the user wishes to remove a bid from must be available
- The user must be viewing their cart

Postconditions:

- User's bid is removed from the auction

Main Flow:

1. User is signed in
2. User navigates their homepage to the cart button on the top right side of the screen
3. Once the cart is clicked, the user is directed to their cart page and is shown auctions they are currently participating in
4. User finds the specific item they wish to withdraw their bid from
5. User clicks on the "Remove Button" and confirms they wish to remove their bid from auction
6. User's bid is removed from the auction and a confirmation message appears indicating said action
7. User's item is removed from the pending list
8. Seller and auction are informed of the action and the highest bidder is updated

Alternative Flows:

- Closed Auction: The auction is closed and the system informs the user that their bid cannot be removed

Non-functional requirements:

- Only verified users can remove their bid.
- Bid removal is processed in real time occurring in one second.
- The system should properly recalculate the new highest bid after the bid is removed.

12. Use Case Name: Shipping an Item (Owner U)

Description: The user (Owner U) of an item that had been auctioned off has confirmed receiving payment from (Bidder U) and initiated the item's shipping process to the winner.

Preconditions:

- Owner U is signed into their account
- Owner U's item has been auctioned off and he is viewing said auction in his cart under the "Next Actions" section
- Owner U has said the auction item
- Bidder U had provided their correct shipping details on the platform under "Shipping Address"
- Owner U is willing a reputable shipping service that provides tracking information for their item

Postconditions:

- Owner U has received their payment and Bidder U is supplied with the tracking details of their item

Main Flow:

1. Owner U signs into their account
2. Owner U navigates the platform to access their cart
3. In their cart, Owner U finds the auctioned-off item under the "Next Actions" section
4. Owner U ensures they have the item prepared for shipping conditions.
5. Owner U is provided with the button to confirm they've received payment for the item
 - a. Owner U would be able to view if they have received a payment by navigating to their "Payments" page and looking under transactions
6. Owner U is provided Bidder's U shipping details and adds them to the package's shipping information.
7. Owners U drops off items to be shipped and updates the status of the shipment by going to their cart page
8. Under the item's "Next Action" Owner U will be asked to input the item's tracking information and submit
9. The status of the item will be changed to "Shipped"
10. Bidder U is notified of the shipment and provided their item's tracking number

Alternative Flows:

- No Payment: Owner U did not receive the payment in a timely manner and, at their discretion, canceled the bid of Bidder U, moving on to the next possible winner, or contacted Bidder U to demand payment.
- No Item: Owner U did receive payment but the item is not in a condition to be shipped therefore the owner is obligated to refund Bidder U's money and unlist the item.

Non-functional requirements:

- Ensure the tracking details are logged and recorded correctly.

- Bidder U can easily access the tracking details of their purchase

13. Use Case Name: Confirming Payment and Shipping Details

Description: Bidder U is allowed to confirm payment for the item and ensures that their ship details are correct.

Preconditions:

- Bidder (U) is signed into the platform
- Bidder (U) has participated and won an auction

Postconditions:

- A confirmation of payments and shipping details allows Owner U to start the shipping process of the item on their end

Main Flow:

1. Bidder U is signed in
2. Bidder U navigates the platform to enter their transaction page
3. Bidder U views and confirms the correct shipping details are provided
4. Bidder U navigates the platform to enter their cart
5. Bidder U is in the cart and confirms payment of the item they have won an auction for

Alternative Flows:

- Incorrect Shipping Details: before confirming payment, Bidder U updates their shipping details to reflect their correct shipping address
- Declines Payment: Bidder U declines the transaction and loses the auction. Owner U is notified and actions are taken to find the next highest bidder.

Non-functional requirements:

- Users must be able to access and change their shipping details with ease.
- Recorded information is updated in an appropriate amount of time on the platform.

14. Use Case Name: Rating Module - Leaving a Rating

Description: Users can leave an anonymous rating to whomever they had past transactions with.

Preconditions:

- Must be a verified User
- User must be signed in
- User must have already completed a transaction – whether it be bidding or auctioning off an item
- The User must be viewing the ‘shipped items’ or ‘next actions’ tab.
- User must be viewing the person's public profile

Postconditions:

- A review will be left on the intended party’s public profile page

Main Flow:

1. User signs in

2. User navigates to their “Shipped Item” or “Next Actions” page
3. If the user wishes to leave a review on Owner U of a won item, they navigate the page to find the username associated with the owner of the item
4. If the user wants to leave a review of a bidder, they navigate the page to find the username associated with the bidder of the item
5. Once the user clicks on the intended username, they will be redirected to the username’s profile page
6. User navigates the profile page to the review section and clicks on “Leave A Review”
7. A pop-up will appear, allowing the user to leave an anonymous review of the other user and submit
8. User’s review is posted on the other user’s page for others to view

Alternative Flows:

- **Unable to leave a review:** The user was able to access the other user's profile but couldn't leave a review through an alternate method. It's possible that the user hadn't logged in or never completed a transaction with the other user. They should double-check to ensure they have the correct profile for the intended review.
- **Report Review:** The user finds a review left to go against the terms of services of the platform and reports the review for its issues.

Non-functional requirements:

- The system should update the profile page with the newly left review promptly
- The system should make it accessible for users to leave a review.

15. Use Case Name: Viewing and Managing Bid Notifications

Description: User receives an email notification upon winning a bid, being outbid, passing the deadline of an item they have bid on, or successfully bidding off an item before its deadline in their email. Super User receives an email notification upon receiving a request.

Preconditions:

- The user has entered a bid, or listed an item to be bid off.

Postconditions:

- The User receives an email notification with a description of the notification and a link that redirects them to their cart once clicked. They must log in to view their cart.
- Superuser receives an email notification with a description of the notification and a link that redirects them to their make/view requests page.

Main Flow:

1. User enters a bid. Users can win a bid, pass a bid deadline, or be outbid. Superuser can receive a request/application.
2. User/Superuser receives an email notification.
3. User/Superuser presses the redirect link.

Alternative Flows:

- User/Superuser has requested to turn off notifications.

Non-functional requirements:

- Notification should arrive at most 5 seconds after an action has been confirmed.

16. Use Case Name: Outbidding Notification or Action

Description: The user, who is no longer the highest bidder of the item, is notified of the event and is allowed to increase their bid.

Preconditions:

- User is signed in
- The user has entered an auction with a bid
- The user has been outbid in an ongoing auction

Postconditions:

- The user is informed of the “Out-Bidder” notification and increase their bid or leave it as it is

Main Flow:

1. User signs in
2. On the top side of the platform, a yellow banner will be presented with the message of being outbid on said item
3. The user clicks on the banner to be redirected to the item’s page.
4. The user clicks on “Enter Bid” to enter a new higher bid on the item.
5. User becomes the new highest bidder.
6. Owner and other interested bidders are informed of the increased bid.

Alternative Flows:

- Unable to Place Bid: User fails to increase their bid due to a lack of funds. Will be given the option to increase their funds and try again.
- Doesn't Place a Bid: User is not interested in increasing their bid.
- Removes Bid: User sees the increase of bid

17. Use Case Name: Searching for an Item

Description: The user has an item in mind and wants to find so use the search bar to find it.

Preconditions:

- The user (does not have to be logged in) must be on the BluePenguin site.

Postconditions:

- The result page is displayed, with search results and the ‘filter-by’ option. The ‘search results’ show the first 25 results and there is an option to move through N pages of results.

Main Flow:

1. User searches up an item, or an item category/classification on the search bar and presses 'enter'
2. The result page presented with corresponding items based on title, description, category, and metadata.

Alternative Flows:

- Search is not found: If the search does not match any item's title, description, and metadata, then display an error message instead of results.

Non-functional requirements:

- Results should appear within 5 seconds.

18. Use Case Name: Filtering Search Results

Description: User can filter out their search based on the filters provided on the platform

Preconditions:

- The user must be on the platform and the filtering section
- User must be aware of the filters provided

Postconditions:

- A list of items is displayed based on the selected filters.

Main Flow:

1. Users can browse items based on categories and are redirected to a page of related results.
2. Users can type in the search bar for a certain item and are redirected to a page of related results.
3. Filters are shown and provided on the left-hand side of the page for the user to use.
4. Users can look through the list and select filters to search for what they want.
5. Desired filters are applied and the user is able to view the available items that correspond with their related search and filters.

Alternative Flows:

- Unable To Find Item: The user is unable to find the desired item with an applied filter so has to change their filter and/or category to better fit their search.

Non-functional requirements:

- Presented relevant items at an appropriate time and arrangement for easy access to the user

19. Use Case Name: Applying to be a User

Description: Visitor applies to be a User.

Preconditions:

- Visitor must be logged in with visitor status
- Visitor must not have applied to be a User yet

Postconditions:

- Visitor sends a request to be a User to a Superuser

Main Flow:

1. Visitor is logged in as a visitor
2. Visitor views their own profile or views the View/Make Requests page
3. Visitor presses 'Apply to be a User' button
4. Visitor is redirected to an application page
5. Visitor completes application; they enter their full legal name and complete a random-generated arithmetic question
6. Visitor presses 'submit' button
7. Submission is marked as 'Pending' in View/Make Requests page, and is sent to a Superuser

Alternative Flows:

- Visitor already applied to be a User and their application is marked 'Pending'; there is no longer an option to 'Apply to be a User'

Non-functional requirements:

- The platform opens View/Make Requests page within 1-2 seconds
- The application is sent to a Superuser within 5 seconds

20. Use Case Name: Managing applications and requests as a Superuser

Description: A Superuser receives a submission of an application/request in their 'View/Make Applications' tab and proceeds to manage them accordingly.

Preconditions:

- Superuser must be logged in to their account with a Superuser status.
- Superuser must press on their 'Make/View Requests' tab in the account menu.
- Superuser can view requests.

Postconditions:

- Upon a Superuser processing a request, a notification email must be sent to the applicant.

Main Flow:

1. Superuser is logged in and clicks on the 'Make/View Requests' tab to view requests sent to them.
2. If the request is a Visitor applying to be a User, then the Superuser can review the request and can either (a) reject or (b) accept the Visitor's application to become a User.
3. If the request is a User applying to be a Visitor, then the Superuser can review the request, the User's reasons for leaving, and can accept the User's application.
4. If the request is a User applying to be reinstated, then the Superuser can accept the \$50 fee provided by the User and allow the User to be reinstated to the platform, recovering their account information and past listings.

Non-functional requirements:

- The notification email must be sent to the applicant within 5 seconds.

21. Use Case Name: Viewing/Managing Complaints as a Superuser

Description: Superusers can view and manage complaints by other Users about other Users in their ‘View/Make Requests’ tab.

Preconditions:

- The Superuser is logged in to their account with a Superuser status.
- The Superuser is viewing their ‘View/Make Requests’ tab, specifically under the ‘complaints’ section; this contains complaints by Users about other Users whom they have performed transactions with.

Postconditions:

- An email notification is sent to the User who made the complaint with the Superuser’s response to the complaint.

Main Flow:

1. Superuser is logged in and clicks on the ‘Make/View Requests’ tab to view complaints sent to them.
2. Superuser clicks on a specific complaint to the User - the complaint includes the profile of the User being reported.
3. The Superuser can mark the complaint as being ‘Under Review.’
4. The Superuser can review the complaint and provide a response outlining any necessary actions that were taken/should be taken.
5. The response is emailed to the User who filed a complaint; Superuser can proceed with necessary courses of actions.

Alternative Flows:

- The Superuser can choose not to comply with a complaint made by a User.

Non-functional requirements:

- The email notification should be sent within 5 seconds.

22. Use Case Name: Requesting to Quit as a User

Description: The User applies to a Superuser to request to deactivate from the platform.

Preconditions:

- The User must be registered and logged in.

Postconditions:

- The User sends an application to quit. Should the application be processed, then either:
 - The User’s account is deactivated and all their history and past transactions are deleted.
 - The Superuser has decided to not deactivate the User, and the User remains with an active account.

Main Flow:

1. The User is logged in with user status and they go to their 'Make/View Requests' tab
2. The User presses 'Request to Quit'
3. The User is redirected to another page which asks them why they wish to quit using checkboxes. These reasons could be:
 - a. 'I no longer wish to use this service.'
 - b. 'I received too many email notifications.'
 - c. 'I found a better alternative.'
 - d. 'This platform is difficult to use.'
 - e. 'I created a duplicate account.'
 - f. 'Other (Please Specify)' - includes a text box
4. The User clicks on a button 'Send Deactivation Request'
5. A confirmation email is sent and the request is moved to 'Pending Requests.'

Non-functional requirements:

- The Superuser must review the request within 30 days

23. Use Case Name: Paying a suspension fine

Description: User reopens their account by paying the mandatory suspension fine.

Preconditions:

- User must be registered
- User must be suspended
- User must have the proper funds to pay off fine

Postconditions: User's account is no longer suspended.

Main Flow:

1. User signs in
2. User is aware their account is suspended
3. User is prompted to pay the fine amount to reinstate their account
4. Payment is received on the platform
5. Superuser sees their payment and reinstates user's account

Alternative Flows:

- Non-payment: The user does not pay the fine and the account stays suspended. User will have limited actions on the platform.

Non-functional requirements:

- User's actions towards suspension are diligently recorded to keep note of their actions on the platform.

24. Use Case Name: User Complaints

Description: User will be able to file an official complaint with a Super User about another user's actions (or lack of).

Preconditions:

- User must be signed in
- The user the original user wants to make a complaint about must exist in the system
- The user must provide proof of their complaint

Postconditions:

- An official complaint has been filed under the offending user's side and their account will be reviewed

Main Flow:

1. User signs in
2. User navigates the account menu and clicks on the "Make Requests" options
3. User is redirected to another page to fill in a complaint inquiry
4. Users are required to input their username, the username of the party they are filing a complaint against, and the reason for the complaint before submitting.
5. Complaint is sent to a Super User.
6. Super User follows through with the next actions based on the user's complaint.

Alternative Flows:

- Rejected: The user cannot file a complaint due to the offending user not being registered in the system.

Non-functional requirements:

- User's complaint is diligently recorded, shown, and processed in a timely manner.

3.2 Supplementary Requirements

- The BluePenguin platform must be accessible via a web interface.

Blue Penguin – E-bidding Application	Version: 1.2
Software Requirement Specification	Date: 14/10/24
Initial Draft	

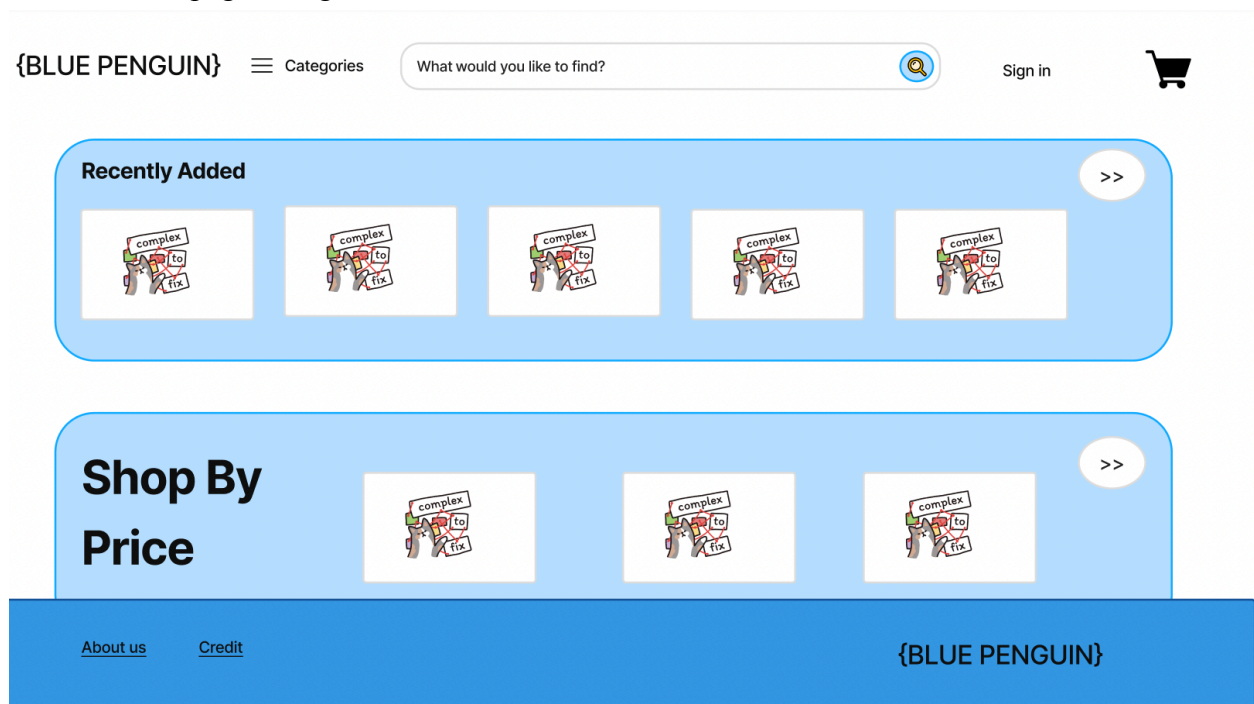
4. Supporting Information

4.1 BluePenguin Guidelines

- If a User has been evaluated by at least 3 other Users who have done transactions with them, and the User's average rating is either: 2 stars or less, or, 4 stars or greater, then that User will be suspended from the bidding system.
- Users can be reactivated by a Superuser or must pay a \$50 fine to be able to reactivate after being suspended.

4.2 Preliminary Designs

A. Homepage Design



B. Drop-down design for Sign-In and Registration

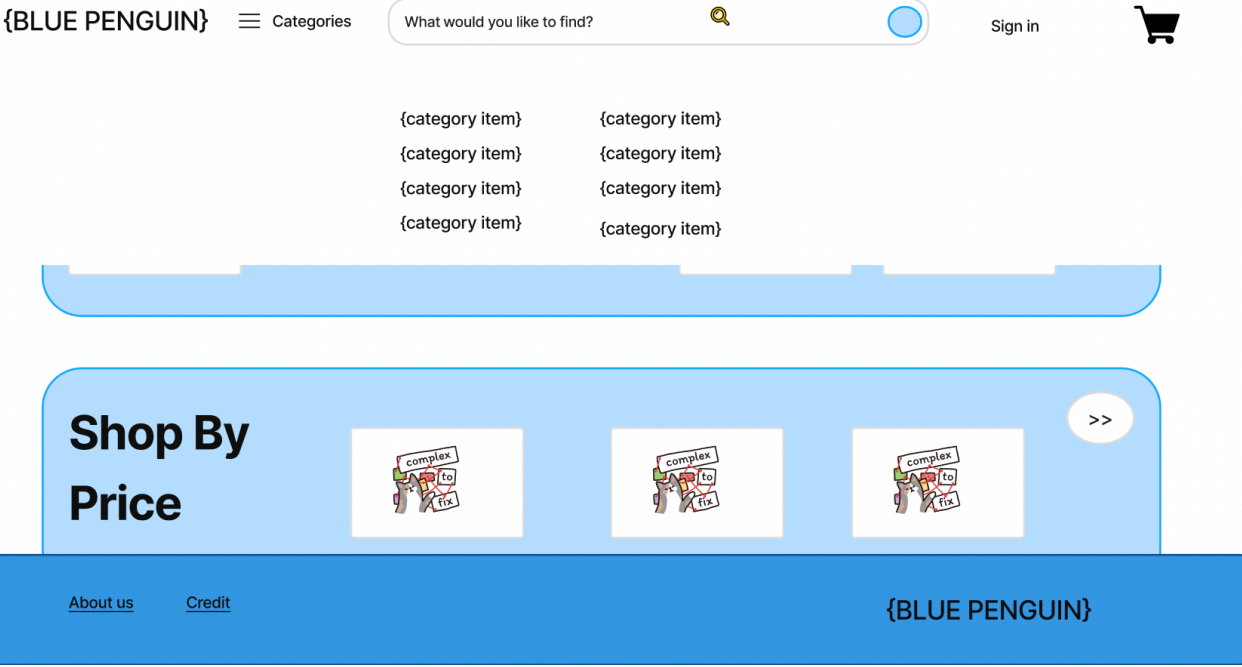
The image shows two side-by-side form panels. The left panel is titled 'Sign in !' and contains fields for 'Username *' and 'Password *'. Below these are links for 'Forgot Password' and 'Not a member? Register'. A blue 'Sign in' button is at the bottom. Below the button is an 'OR' separator, followed by two buttons: 'Continue with Google' and 'Continue with FaceBook'. The right panel is titled 'Register Today!' and contains fields for 'Username *', 'Enter password *', 'Re-enter password *', and 'Email *'. Below these is a checkbox for 'By clicking I acknowledge and agree with the terms of services'. A blue 'Register' button is at the bottom. Below the button is an 'OR' separator, followed by two buttons: 'Continue with Google' and 'Continue with FaceBook'. Both panels have a drop-down menu icon at the top.

C. Account menu drop-down design

The image shows a vertical drop-down menu. The menu items are: 'Profile', 'Payments', 'Addresses', 'Apply to Be a User', 'View Requests', a horizontal separator line, 'Pending', 'Saved', 'Canceled/proceessed', and 'Shipped'. The menu is enclosed in a rounded rectangle with a drop-down arrow at the top.

D. Category drop-down menu design

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E. User's view on the item's bidding page

{BLUE PENGUIN}Categories

What would you like to find?

My Account

<

>

Item Name

Time Ends

\$00.00

{username of Highest Bidder}

Description

140 characters max**

Seller : Username

Save

Start Bidding

Comments (#)

Start Commenting on this item

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

Load More

Bid Amount

☐ By Clicking I understand I am participating in this bid

BID

About us

Credit

{BLUE PENGUIN}

Confidential

Page 29

F. Search Results Page

{BLUE PENGUIN}

Categories

What would you like to find?

Sign in

Filters

Categories

☐ {title}

☐ {title}

☐ {title}

☐ {title}

>> More

Others

☐ Low to High (\$)

☐ High to Low (\$)


☐ Recently Added

☐ Colors


>> More

{result}


1 - 25 of (n_results)




Item Name
\${Price}
Closes : MM/DD/YYYY




Item Name
\${Price}
Closes : MM/DD/YYYY




Item Name
\${Price}
Closes : MM/DD/YYYY



Item Name
\${Price}
Closes : MM/DD/YYYY



Item Name
\${Price}
Closes : MM/DD/YYYY



Item Name
\${Price}
Closes : MM/DD/YYYY

1 2 ... N

G. Cart design

{BLUE PENGUIN}

Categories

What would you like to find?

My Account

Filters

Saved

Closed

Pending


Ongoing

...


Pops up when bid is won (either from user or of a listing)

Pending bids (#)

Date Added



Product



Product Name

Authors description of the item.

Purpose

Dimension

Color

Closes: MM/DD/YY

Status

Bid in lead


Outbid

Accept Item


Remove

Next Actions (#)

Product



Username



Product Name

Authors description of the item.

Purpose

Dimension

Color

Closes: MM/DD/YY

{username} won item!


Ship Item

OR

Return Money

Awaiting Arrival(#)

Product



Product Name

Authors description of the item.

Purpose

Dimension

Color

Closes: MM/DD/YY


Status

On route

Arrived

Rate the Product | Problems?


Saved Items (#)



Item Name

\$(Price)


Closes : MM/DD/YYYY



Item Name

\$(Price)


Closes : MM/DD/YYYY



Item Name

\$(Price)

Closes : MM/DD/YYYY



Item Name

\$(Price)

Closes : MM/DD/YYYY


H. Profile design

{BLUE PENGUIN}

Categories

What would you like to find?

My Account





Username


Legal Name | Status | Joined MM/DD/YYYY | Rating : *****


Description of the {username}

Product Listings (#)









Reviews (#)

MM/DD/YYYY

☆☆☆☆☆

Item: Descriptions Descriptions Descriptions

Descriptions Descriptions

Report

Leave a review

I. Design for an item whose auction has been closed for less than 24 hours

{BLUE PENGUIN}CategoriesWhat would you like to find?My Account

<

>

Item Name

Closed

\$00.00

{username of Highest Bidder}

Description

140 characters max**

Comments (#)

Start Commenting on this Item

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

Related Items

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

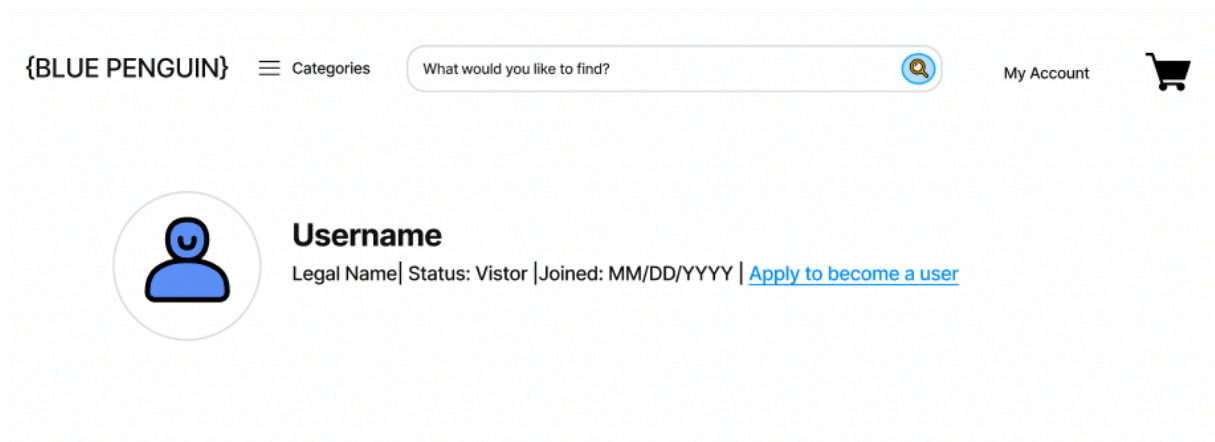
About usCredit

{BLUE PENGUIN}

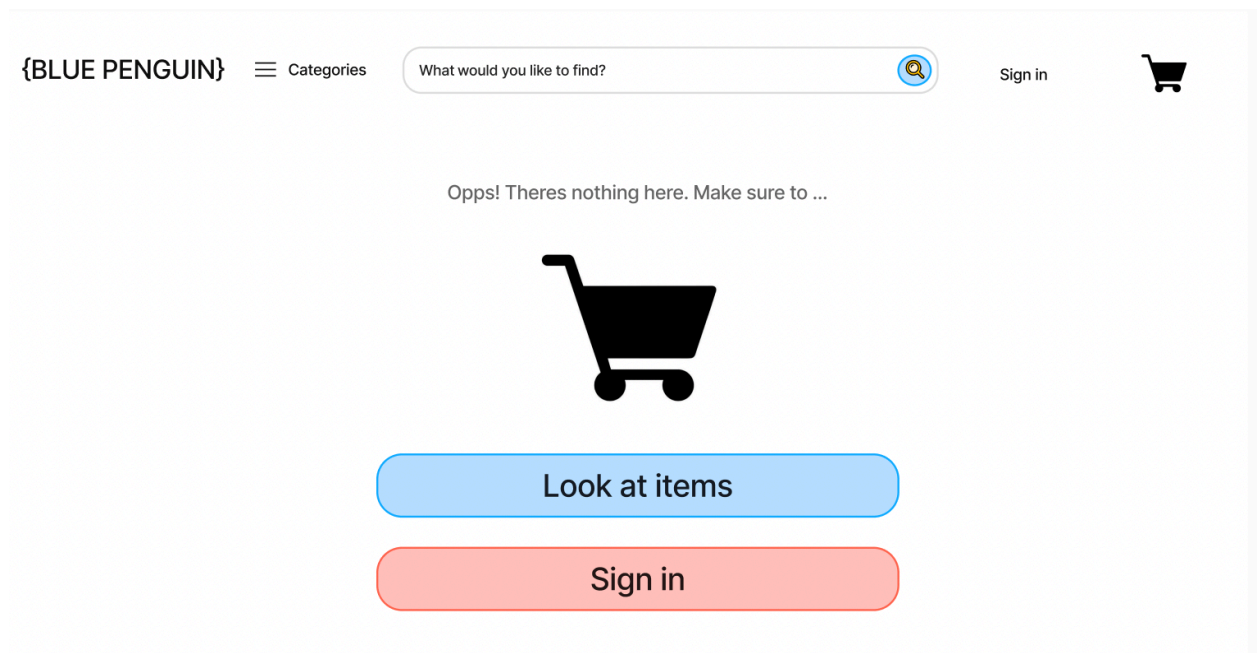
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Page 33

J. Profile design for a visitor profile



K. Design for a visitor's cart page



L. Sign of a listed item's page (Owner's point of view)

{BLUE PENGUIN}Categories

What would you like to find?

My Account

Item Name

Time Ends

\$00.00

{username of Highest Bidder}

Description

140 characters max**

Complete Bid

Comments (#)

Start Commenting on this item

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

MM/DD/YYYY

Report

Reply

Load More

Related Items

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

complex to fix

Item Name

\$(Price)

Closes: MM/DD/YYYY

Ensure the owner knows they unlisting the item

About us

Credit

{BLUE PENGUIN}

Confidential

Page 35

M. Design for the transaction/address page of a user

{BLUE PENGUIN} Categories

What would you like to find?

Sign in

Available Balance

\$ 00.00

Add Money Zelle | PayPal

Shipping Address

Street Address,
City, State (abbreviation), Zip code

Change Address

Transactions

#Account it came from

MM/DD/YYYY \$ 00.00

#Account it came from

MM/DD/YYYY \$ 00.00

#Account it came from

MM/DD/YYYY \$ 00.00

#Account it came from

N. Make Request - File Complaint against user

{BLUE PENGUIN} Categories

What would you like to find?

My Account

Requests

File Compliant
against User

Quit as
User

Pay
Suspension
fine

Your Username

Username of offender

Description

140 char max*

Submit Compliant

O. Make Request - Quit as User

{BLUE PENGUIN}

Categories

What would you like to find?

My Account

Requests

File Compliant against User

Quit as User

Pay Suspension fine

Your Username

Password

Reason

☐ "I no longer wish to use this service"

☐ "I received too many email notifications"

☐ "I found a better alternative."

☐ "This platform is difficult to use."

☐ "I created a duplicate account."

☐ Other

please specify

Submit

P. Make Request - Pay Suspension Fine

{BLUE PENGUIN}

Categories

What would you like to find?

My Account

Requests

File Compliant against User

Quit as User

Pay Suspension fine

Your account is currently suspended. A fee of \$50 and admins approval is required to reinstate your account

Username*

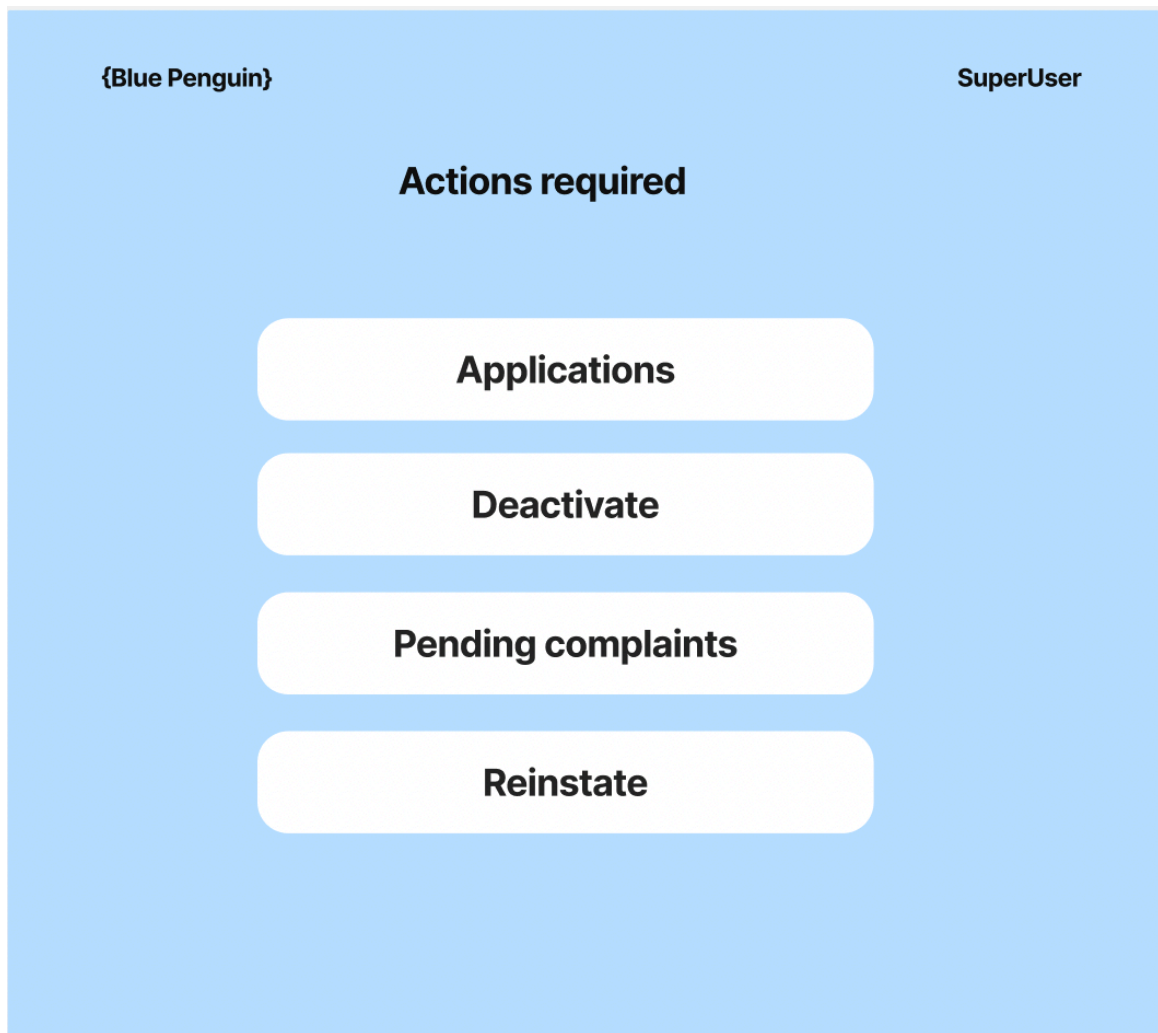
Password *

\$50.00

By clicking this amount, I'm agreeing to a withdrawal of \$50 to the Blue Penguin Platform to pay the suspension fee.

Submit

Q. Super User Homepage



















R. Super User - Applications

{Blue Penguin}

SuperUser

Applications (#)

<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>
<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>
<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>
<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>	<div><div>Legal Name Username</div><div>Reject</div><div>Accept</div></div>

S. Super User - Deactivate

{Blue Penguin}

SuperUser

Deactivate (#)



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username




Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username




Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept

Legal Name
Username



Accept






Legal Name
Username

T. Super User - Reinstates

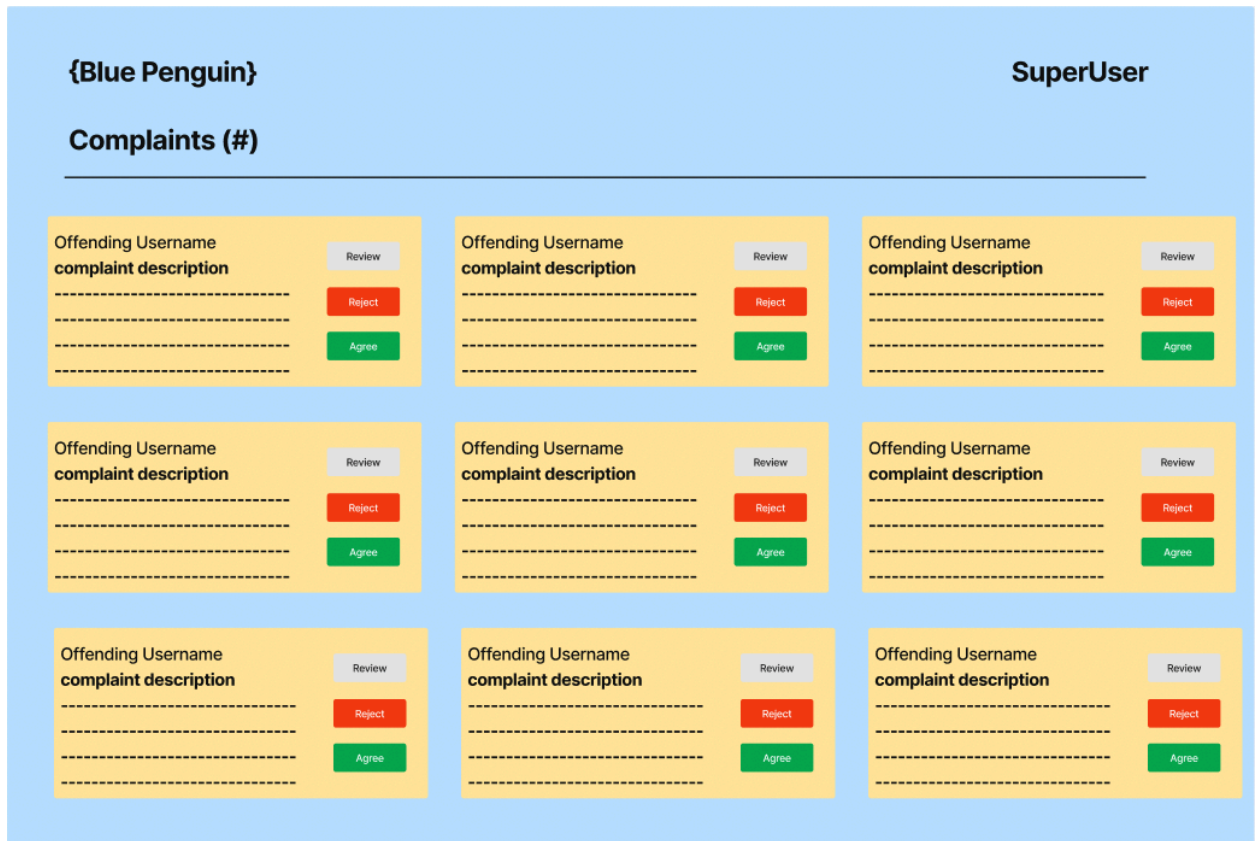
{Blue Penguin}

SuperUser

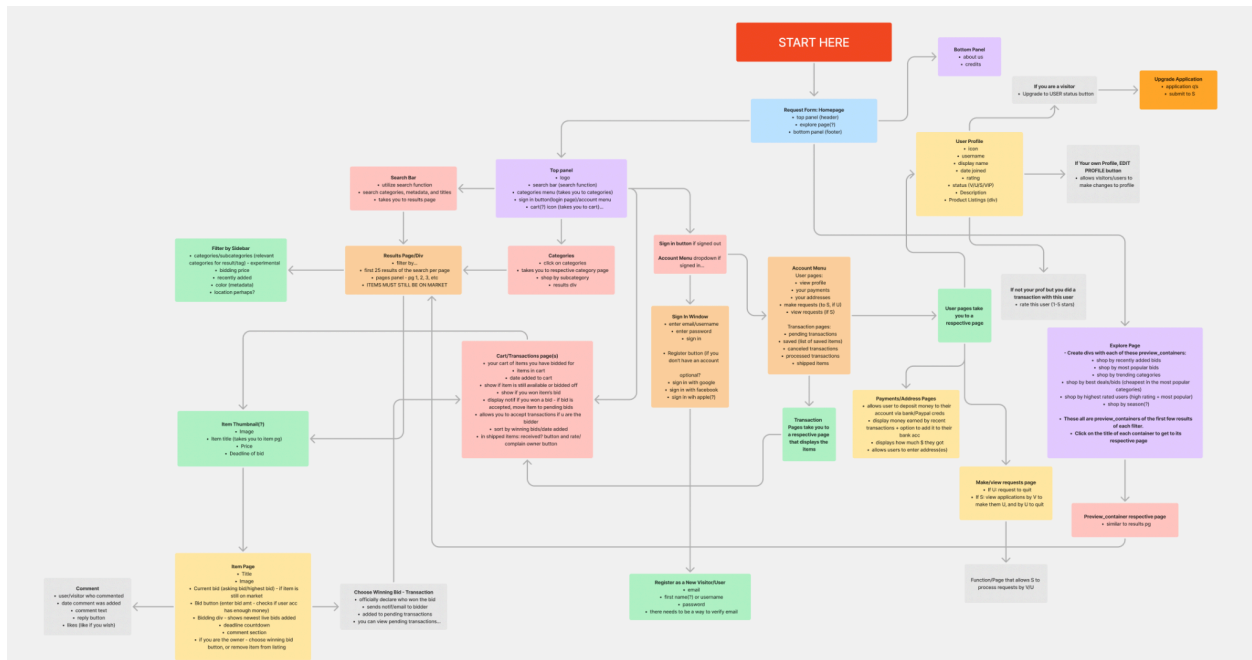
Reinstate (#)

<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>
<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>	<div><div><div>Reject</div><div>Accept</div></div><div>Legal Name Username</div></div>
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U. Super User - Complaints



4.3 Flow Chart Diagram



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