PART 2: Designing Alternatives

Project Description:

The Philippines jewelry market is projected to reach US$1.07 Billion by 2024 with a growth of 4.58% from 2024- 2028 (Statista, 2024). Around 17,421 pawnshops operate in the country, entertaining 300 citizens on average with some stating that they are equipped with poor technology and unclear strategic decision-making processes (Borres, 2020).

The researcher's application is designed to revolutionize the pawnshop industry in the Philippines. It offers a unique feature that uses camera technology for counterfeit detection, ensuring the authenticity of items. The app provides a comprehensive map and list of all local pawnshops, complete with their estimated pricing for various products. Users can conveniently filter results based on proximity or item value, allowing them to find the best deal.

Additionally, the app facilitates direct communication with pawnshops through a built-in messaging feature, enhancing the user experience and enabling real-time discussions. It also maintains a list of all transactions made by the user, providing a clear record of items pawned, prices, dates, and pawnshops involved. To ensure the integrity of transactions, the application implements a verification system for both ends - the user and the pawnshop. Once a transaction is successful, both parties should confirm it in the app. This feature helps prevent disputes and enhances trust in the platform.

These features aim to create a reliable, user-friendly, and comprehensive platform for the pawnshop industry in the Philippines.

Market Analysis:

- Total Available Market (TAM): Our service is accessible to all legal Filipinos looking to pawn items, which is approximately 100,921,000 individuals.
- Serviceable Available Market (SAM): We are primarily targeting the middle-class demographic in the Philippines, a substantial market of around 40,566,624 individuals.
- Serviceable Obtainable Market (SOM): With the anticipated growth in the market annually, we aim to capture a significant segment, estimated to be 1,857,951 potential users.

Requirements Summary:

1. **Counterfeit Detection:** The application should be able to use the device's camera to capture images or videos of items for counterfeit detection. It should be able to analyze the captured media and determine the authenticity of the item.

2. **Pawnshop Listings:** The application should provide a comprehensive list of local pawnshops. It should display information about each pawnshop, including their estimated pricing for the item.

3. **Location-Based Services:** The application should integrate with the device's GPS to provide a map of all available pawnshops. Users should be able to filter results based on proximity.

4. **Price Estimation:** The application should provide an estimated price for the items to be pawned. This estimation should be based on the item's details and the current market trends.

5. **Messaging Feature:** The application should include a messaging feature that allows direct communication between the user and the pawnshops. This feature should support real-time conversations, enabling users to ask questions, negotiate prices, or discuss other relevant details with the pawnshops.

6. **Transaction History:** The application should maintain a list of all transactions made by the user. This feature will allow users to track their past activities, providing a clear record of items pawned, prices, dates, and pawnshops involved.

7. **Transaction Verification:** To ensure the integrity of transactions, the application should implement a verification system for both ends - the user and the pawnshop. Once a transaction is successful, both parties should confirm it in the app. This feature will help prevent disputes and enhance trust in the platform.

8. **User Interface:** The application should have an intuitive and user-friendly interface. It should be easy for users to navigate through the various features and services offered by the application.

Design Space

The design space for our application encompasses the user interface (UI) and user experience (UX), focusing on the visual, interactive, and navigational aspects of the app.

Difficult Requirements to Realize

1. **Counterfeit Detection UI:** Creating an intuitive and user-friendly interface for the counterfeit detection feature could be challenging. It needs to guide users through the process of capturing images or videos of their items effectively.
2. **In-App Messaging UI:** Designing a seamless and efficient in-app messaging system that promotes real-time discussions between users and pawnshops can be complex.

Tradeoffs Explored

1. **Simplicity vs Functionality:** Striking a balance between a clean, uncluttered interface and the inclusion of all necessary features is a key consideration. Too many features can overwhelm users, while too few can limit the app's usefulness.
2. **Aesthetics vs Usability:** While a visually appealing interface can attract users, it should not compromise usability. The design should prioritize easy navigation and intuitive controls.

Easiest and Hardest Tasks to Support

1. **Easiest:** Implementing the pawnshop listings and location-based services would likely be the easiest tasks. These features rely on established design patterns such as maps and lists.
2. **Hardest:** The hardest task would probably be designing the UI for the counterfeit detection feature. It requires a clear and effective design to guide users through the process, which could involve complex interactions. Additionally, presenting the results in a comprehensible manner can be challenging.

Design Summary

During the design phase, we considered several alternatives before finalizing our approach.

1. **Augmented Reality (AR) for Counterfeit Detection:** We initially considered using AR technology for counterfeit detection. However, we realized that it might complicate the user interface and require significant computational resources. We decided to use a simpler image capture method that would be more accessible to users with different types of devices.

2. **Social Media Integration:** Another idea was to integrate social media platforms for user authentication and sharing of pawnshop reviews. However, we decided against it due to potential privacy concerns and the additional complexity it would add to the app.

3. **Live Video Chat with Pawnshops:** We thought about including a live video chat feature for real-time discussions with pawnshops. However, we discarded this idea due to potential bandwidth issues and the preference of most users for text-based communication.

4. **Advanced Filtering Options:** We explored the idea of providing advanced filtering options, such as sorting pawnshops based on ratings, service speed, or specialty. However, to keep the user interface simple and intuitive, we decided to stick with basic filters like proximity and item value.

The designs we pursued, such as the simple image capture for counterfeit detection and the basic filtering options, were chosen for their simplicity, ease of use, and broad accessibility. These choices align with our goal of creating an intuitive and user-friendly app that caters to a wide range of users.
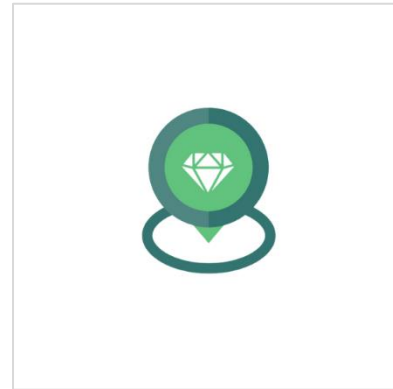
The Designs:

App Identity

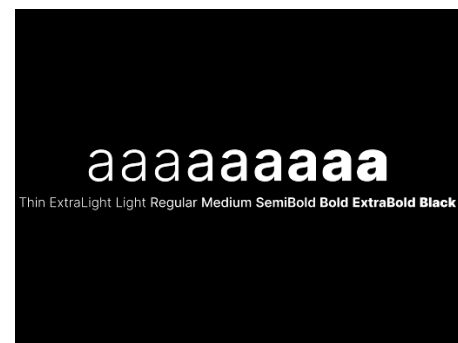### Logo Variation

Logo

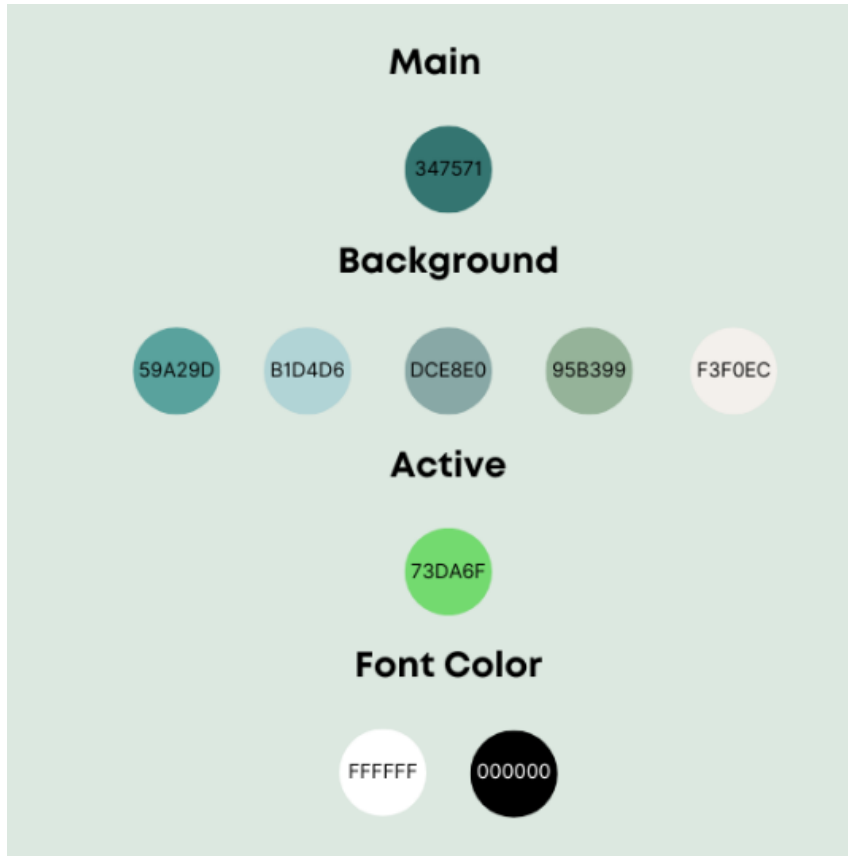Logo with text

Typeface

Mont is used as a font for the logo and text around it, it is a modern and versatile sans serif font family that adds sophistication to designs, combining clean lines and a polished look to enhance both digital and print media

Inter has been used as a font as a user explores and delves through pawnquest. It is also a sans serif typeface designed with a focus on high legibility for small-to-medium-sized text on computer screens.
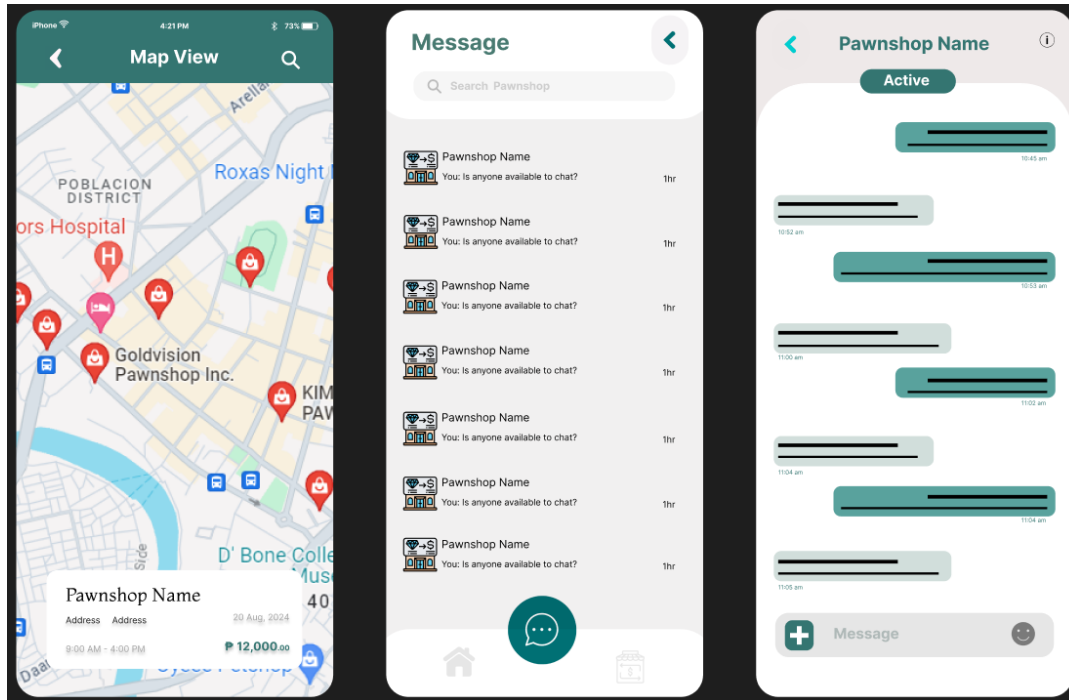
Color

The colors utilized vary from different pages but collectively gives an identity to Pawnquest. 1 color is predominant in varying pages and a subtle change to hue is applied ensuring a little change and not straying away from the main theme and 2 interchanging font color can be observed with one hue of the main color in one page.
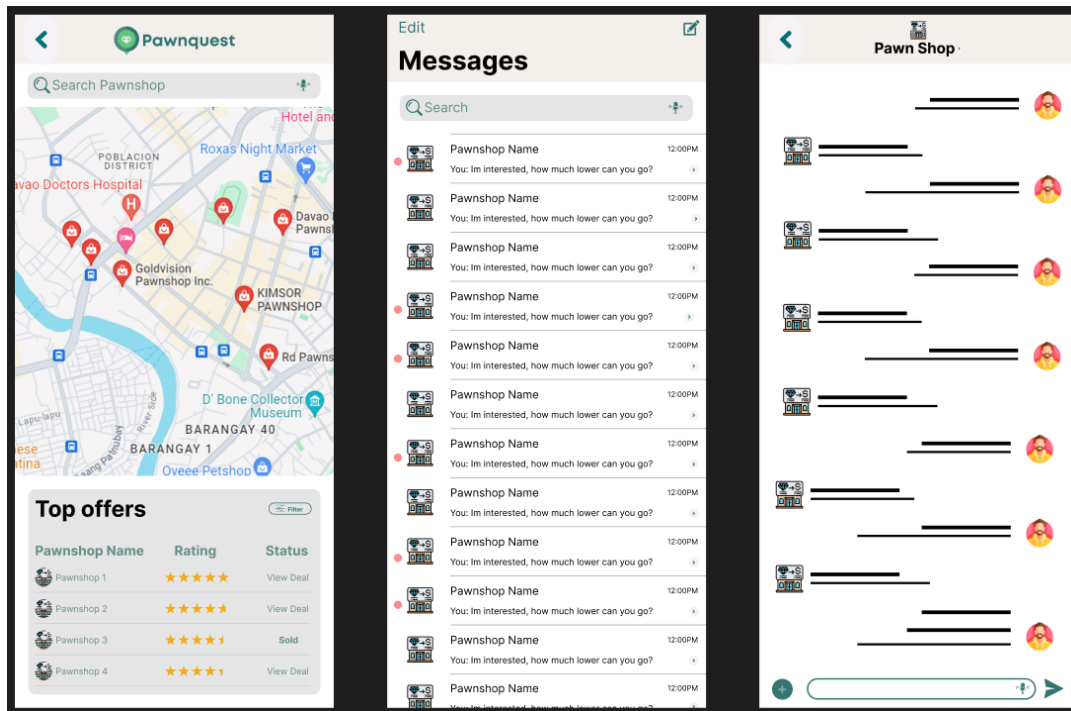
App Illustrations:

Design 1.1

Advantage:

The Map View explicitly says the store hours of the pawnshop ensuring no wasted time of consumers as they can now time the moment they plan to go to a pawnshop.

The active feature is an advantage to find the right time for users to message each other, however, making it visible inside the Chat view and not Messages View would be a disadvantage as a user must view all messages to view active users.

Disadvantage:

The Messages View icons are way to like the background making it hard to see as a user can have problems differentiating the background and foreground.

Across pages, there is no voice recognition feature that ultimately helps people whose hands are injured or visually impaired as they can now easily type their thought at ease.
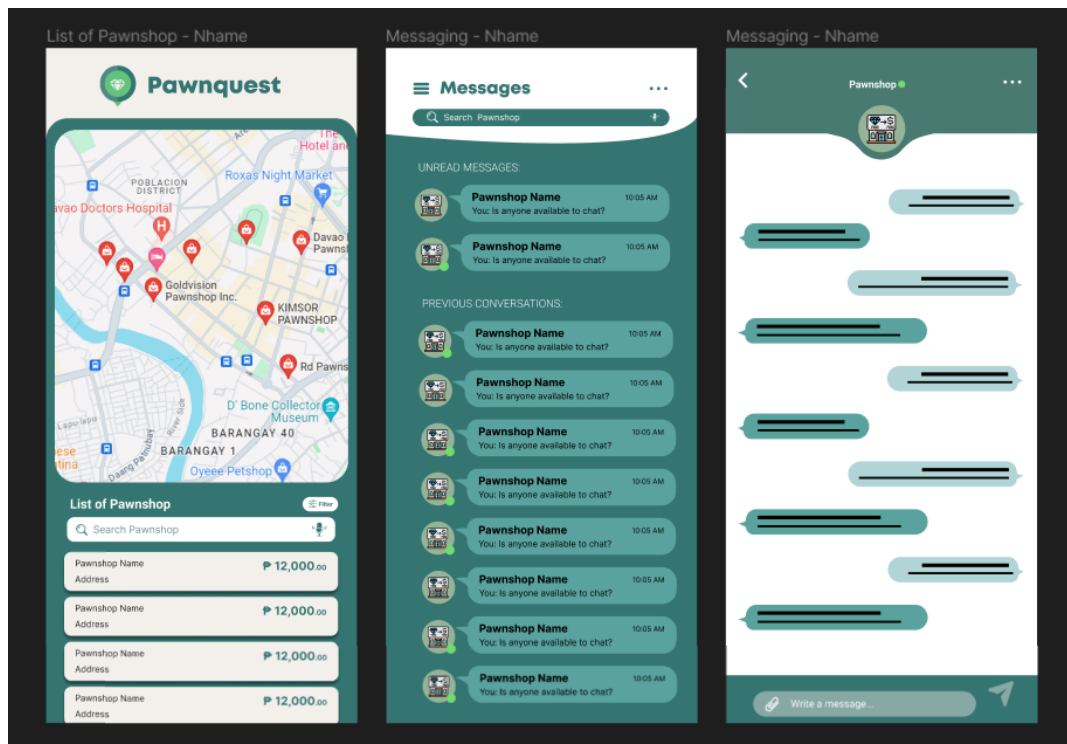
Design 1.2

Advantage:

The Map View explicitly says the rating of a pawnshop in return boosting a consumer's likelihood of buying from a pawnshop with a high rating, consequently, it motivates the pawnshops to provide an excellent service so their chances of being displayed on top the search results is higher. Additionally, it displays the status of the item a user is trying to pawn to a pawnshop, minimizing the efforts of going through other pages to check status of a certain object.

The unread feature in the Messages View is helpful as it easily piques the eyes of a user with a noticeable color differentiating it from the logo beside. This mitigates the chances of a user being unable or forgetting to read a message.

Across different pages, it has a voice recognition feature that helps users to easily chat whenever they have a problem in typing.

Disadvantage:

In the Chat View, the icon that displays more information about a pawnshop is too small, making it unrecognizable. As a result, users struggle to find detailed information about the pawnshop, leading to a frustrating experience and wasted time.

Design 1.3

Advantage:

Given the new smartphones having a larger screen, the Map View of this design enables lesser hand movement in navigating through the screen as the search bar is placed below.

In the Messages View, an active circle is in the bottom right of a pawnshop logo, this is a decent design as it enables to view all the active pawnshops rather than going through all of them individually. This active status can also be observed in the Chat View ensuring a user doesn't have to go back in message view to double check.

Additionally, in the Message View it separates the unread messages from the read messages ensuring that a user can read all of the messages.

Disadvantage:

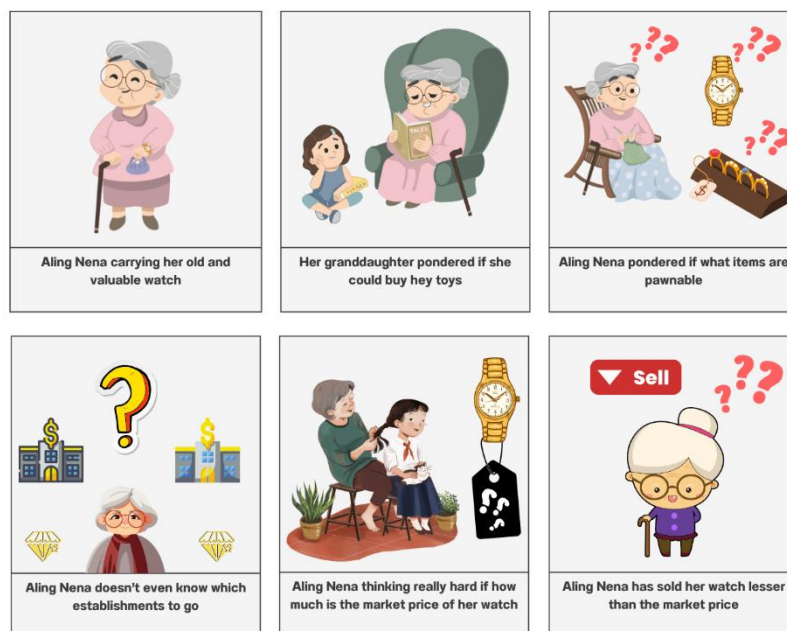The centering and alignment of icons might be noticeable and might cause irritation to some users.

From a user's perspective, the ability to detect fakeness and appraise an object is increasing awareness and avoidance of potential scams with others giving less than the market price. The design for the listing of pawnshops is designed to easily aid users by having the search bar below

as the average phone screen size nowadays is big, the approach aims to lessen the extremities of having to move fingers to the top making it easier to reach. To entice potential customers to transact in the application, the shop with the highest offer will be placed on the top, however, if a user would want to look for a shop near to them for convenience, the filter button is placed near the search bar for lesser movements of a user's finger.

Across varying design for Chat view, it has been designed that ensures users to be able to send images or files with one another to easily send more pictures of an object and files that may contain the authenticity of an object.

Through comprehensive research, the planned features can be effectively designed, leveraging existing industry solutions. By capitalizing on users' common familiarity with these features, researchers can then adapt and implement unique design elements to better address user needs.
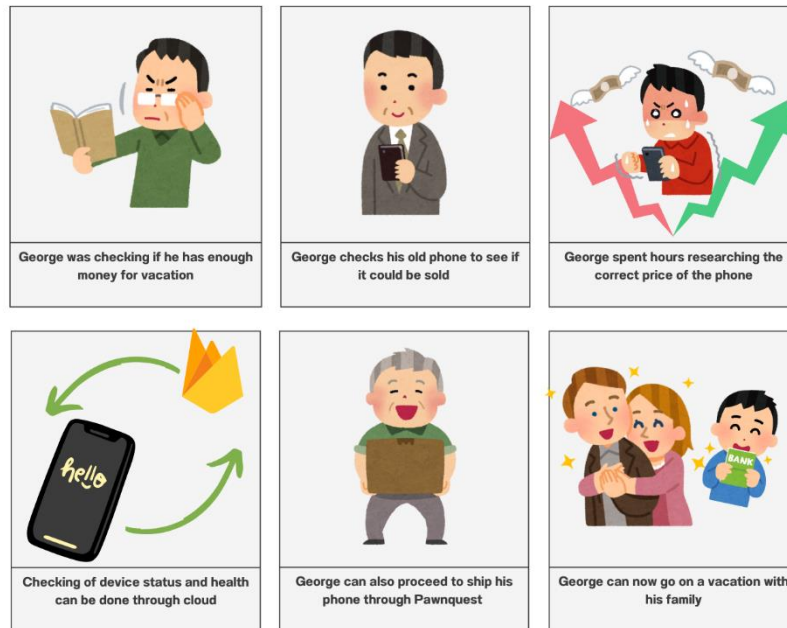
User: Aling Nena

Storyboard 1.1

Problem Statement: Aling Nena is elderly who'd like to sell her old luxury watch, however, she doesn't know the market value of her watch and she would like to know its price without going out and visiting different pawnshops to verify its authenticity and market value.

Goal Statement: Our app Pawnquest, allows users to verify the authenticity of an object such as luxuries like rings, watches, and earrings and the app provides a competitive pricing based on the market price of an object.

Flow: Homepage – Scan – View pawnshops and its offers – Message pawnshops

User: George

Storyboard 1.1

Problem Statement: George, a father would like to treat his family on a vacation and is in dire need of money, he would like to sell his extra phone but does not know how to price it based on the state of its hardware and software.

Goal Statement: Our app Pawnquest, allows users to send the conditions and authenticity of the parts of the phone like battery, LCD, speaker, and IMEI, and it has the feature to 3D capture an object that enables to spot dents or scratches to the electronics. These data will be sent to our trained model via cloud through an Application Programming Interface (API), subsequently, the model returns a marketable price of the device.

Flow: Homepage – Scan – View pawnshops and its offers – Message pawnshops

Requirements changes:

After thorough market research and development of designs, the developers have decided to add more features to provide a better user experience. The following will be added to our requirements:

1. **Personalization**: Allow users to select a theme based on their preference, save/favorite pawnshop options, and a notification system.

   After reviewing the designs, the developers discovered that users frequently return to specific pawnshops. To streamline this process, users can now save their preferred pawnshops and easily access their offerings and desired items without repetitive searches.

   Since users have different preferences for using the app during day or night, the developers plan to introduce a feature that allows users to choose between free or paid themes.

   Notifications play a crucial role in how users sell their products. To enhance this experience, users can now receive personalized notifications from different pawnshops. Additionally, they have the option to disable notifications from pawnshops they find unfavorable.

2. **Security and Transparency**: Integrate a system that displays pawnshop licensing and accreditation information within the app, fostering trust and transparency for users.

   The developers realized that since users may discover luxury items, real-time pawn item tracking, and two factor or multi-factor authentication should be enabled to track the status of their pawned items within the app and secure logins and account protection.

3. **Improved Functionality**: Features that the developers would have to add to improve ease of access for its users.

   Consider integrating an auction platform within the app where users can bid on unclaimed pawned items.

   Develop a loan calculator that allows users to estimate loan amounts, interest rates, and repayment schedules based on item value and chosen pawnshop.