

Pawnquest

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1. Overview of the Problem and the Need for an Interface/System

In the Philippines, many individuals who own valuable items, such as jewelry or electronics, often face significant challenges in determining the authenticity and value of their possessions. Additionally, they struggle to find suitable pawnshops that will offer the best price for their items.

The Philippines Jewelry market is projected to reach US\$1.07Billion by 2024 (Statista, 2024), with around 17, 421 pawnshops operating in the country, entertaining around 300 customers per day, leading to no strategic decision-making process and poor technology conversely tarnishing a pawnshops reputation. There are around 40,566,624 million Filipinos belonging in the middle-income class who are pawning items who are the most common customers of pawnshops in the Philippines (Borres, 2020). The process of pawning is time-consuming and inefficient. An interface or system like PawnQuest is necessary to streamline this process, providing users with a convenient, centralized platform to authenticate their items, receive estimated values, and compare offers from various pawnshops. This not only saves time but also ensures that users get the best possible price for their items.

2. Important Characteristics of the Users

The primary users of PawnQuest are individuals looking to pawn or sell valuable items. These users vary widely in terms of their familiarity with technology and the pawning process. Some may be tech-savvy and comfortable with using apps, while others may be less experienced. According to a 2022 report by the DATEREPORTAL, around 76 million Filipinos are internet users, with a significant portion using smartphones, suggesting a high potential user base for a mobile app. Ensuring accessibility and ease of use for a diverse user base is crucial for the system's success.

3. Task Analysis

Description of Important Characteristics of the Tasks Performed by Users

Users will perform several key tasks: logging into their account, capturing images and videos of their items, utilizing the fake detection feature, viewing estimated values, browsing a

list of pawnshops with their offers, filtering results based on proximity and price, messaging selected pawnshops, and completing the transaction verification process.

Description of Important Characteristics of the Task Environment

The task environment is primarily mobile-based, with users interacting with the app on their smartphones. According to DataReportal, mobile connections in the Philippines increased to 162.4 million in 2023, highlighting the importance of a mobile-friendly platform. Users might be at home, on the go, or even at a pawnshop, necessitating a responsive and intuitive interface that adapts to various lighting and noise conditions.

Simple Structured Task Analysis

1. Login/Sign-Up

- User accesses the app and logs in or creates an account.

2. Item Authentication

- User takes photos and videos of the item.
- System uses camera and sound analysis for fake detection.
- System displays authenticity percentage.

3. Value Estimation

- System provides an estimated value for the item.

4. Pawnshop Comparison

- User views a list of pawnshops with estimated offers.
- User filters pawnshops by proximity or highest offer or nearest pawnshop.

5. Communication

- User selects a pawnshop and initiates a message.

6. Final Verification and Transaction

- User visits the selected pawnshop.
- Pawnshop confirms item authenticity and final price.
- Both parties verify completion of the transaction through the app.

4. Analysis of the Existing System

Pawnshops serve as a quick source of cash for individuals who own valuable items. Unlike banks, pawnshops don't require extensive paperwork and are more convenient for small loans. The process involves the pawnbroker bringing a valuable item to the pawnshop. The pawnbroker then analyzes the item and offers a loan amount based on its value. The item is held by the pawnshop until the loan is repaid. Commonly pawned items include jewelry, gadgets, and select appliances. The item's condition and market value and the cost of storing it determine its value. The main requirements for pawning are a valid ID and the item to be pawned.

The manual system allows for direct interaction between the pawnbroker and the customer, which can build trust and rapport. Customers receive cash immediately after the pawnbroker assesses the item. Automated systems streamline the pawning process, making it more efficient. However, the manual system requires more manpower to operate, which can increase costs. Pawning can be time-consuming, especially when customers visit multiple pawnshops to get different offers. The existing system often involves a large volume of paperwork, which can be difficult to manage and store.

5. The Larger Social and Technical System

PawnQuest, from a social perspective, serves as a beacon of transparency and fairness in the pawning industry. It empowers users by equipping them with crucial information and a variety of choices, thereby enabling them to make well-informed decisions when it comes to pawning their valuable items.

On the technical front, PawnQuest is designed to seamlessly integrate with mobile devices. It leverages the capabilities of these devices, specifically their camera and GPS functionalities, to enhance user experience and efficiency. Furthermore, the system establishes connections with databases of various pawnshops, facilitating real-time price comparisons. This system could potentially intersect with financial institutions for transaction verifications and may need to adhere to specific regulations pertaining to pawning and second-hand sales.

In addition, PawnQuest addresses the escalating issue of counterfeit goods in the Philippines. In 2023 alone, counterfeit goods seized amounted to an estimated market value of P26.86 billion. This underscores the pressing need for an accurate detection system for fake items, a feature that is proudly incorporated into PawnQuest. This comprehensive approach positions PawnQuest as a potential game-changer in the pawning industry.

6. Initial Usability Criteria

- **User-Friendliness:** The interface should be intuitive and easy to navigate for users of all tech skill levels. Success can be measured through user feedback and completion rates of

tasks without assistance. Usability tests with a diverse group of users can help refine this criterion.

- **Accuracy:** The fake detection and price estimation features must be reliable. Testing with known real and fake items can measure this. For instance, a report by the Department of Trade and Industry (DTI) revealed that counterfeit goods are a growing issue, emphasizing the need for accurate detection.
- **Efficiency:** The app should save users time compared to traditional methods. Time spent from login to obtaining pawnshop offers can be a metric. User journey tracking can provide data on time savings.
- **Accessibility:** The app should be usable in various environments and lighting conditions. Accessibility testing for different demographics and conditions will be necessary. The Philippine Statistics Authority reported that 1.44 million Filipinos have disabilities, making accessibility crucial.
- **Security:** Protecting user data and ensuring secure transactions is vital. Regular security audits and user trust levels can be indicators. According to a 2020 Cybersecurity report by Kaspersky, the Philippines ranked 3rd in Southeast Asia for cyber threats, emphasizing the need for robust security measures.

7. Implications

Understanding the problem and the users' needs highlights the importance of a reliable, easy-to-use platform like PawnQuest. Beyond usability, it's clear that the system can significantly impact the pawning industry in the Philippines by introducing transparency and efficiency. Users will benefit from better pricing information and saved time, while pawnshops can reach a wider customer base. Moreover, the system can foster trust in the pawning process by providing accurate item authentication and secure transactions. The potential market size, indicated by the high number of pawnshops and mobile internet users, suggests substantial demand for such a service. Overall, PawnQuest has the potential to revolutionize how people pawn items, making it a fairer and more accessible process for everyone involved.

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