Quick Basket

More Suraj Manik[1] Tingle Gauri Kishor[2] Kale Anushka Somnath[3] Deore Shruti Pravin[4] Mr. Rahul S. Derle[5]
[1,2,3,4,5]Department of Computer Technology
[1,2,3,4,5]MVP's Rajashri Shau Maharaj Polytechnic, Nashik, India

Abstract — This paper introduces Quick Basket, a novel platform designed to revolutionize lost and found services. The platform integrates robust front-end technologies, advanced back-end infrastructure, and efficient dataset management, bridging the gap between traditional and digital services. Key features include a token system, chat functionality, and an admin interface for seamless management.

Keywords: Quick Basket

I. Introduction

In a fast-paced and digitally interconnected world, the need for efficient solutions to everyday challenges is paramount. One such challenge is managing lost and found services. Traditional systems for reporting and retrieving lost items are often inefficient, disorganized, and frustrating for users. Digital solutions, while better, still lack the innovation and structure needed to provide seamless experiences. The Quick Basket Project aims to address these shortcomings by developing a modern, user-friendly platform that leverages advanced technologies to streamline lost and found processes.

The Quick Basket platform is designed to bridge the gap between traditional and digital approaches by integrating intuitive design with robust functionality. It provides a centralized system for reporting lost items, tracking their status, and facilitating communication between users and administrators.

The platform's user-centric design ensures accessibility for individuals with varying technical expertise. Whether a user wants to report a lost item, search for a found one, or communicate with the administrator, Quick Basket simplifies the process.

II. Literature survey

A literature survey provides an analysis of existing systems and methodologies, highlighting the gaps and justifying the need for innovation in the Quick Basket project.

A. Traditional Lost and Found Services

Traditional lost and found systems have long been the primary method for handling misplaced items. These systems typically involve physical record-keeping or verbal reporting, where users register their lost items in person or through phone calls. While effective in smaller or less complex settings, such as schools or small offices, these methods often fail in large-scale scenarios like airports, shopping malls, or public transportation hubs.

B. Digital Lost and Found Services

The advent of digital technology introduced more structured systems for managing lost and found items. These include mobile apps, websites, and centralized databases, allowing users to report lost items and browse found items remotely. Notable advancements include:

- Searchable Databases: Platforms like LostMyStuff.net or institutional systems in universities provide categorized lists of items for easy searching.
- Automation: Digital services reduce the need for manual intervention by using automated matching and notifications.
- Scalability: Digital systems can handle a vast number of reports, making them suitable for large organizations.

C. The Need for Innovation

Despite advancements in digital services, the lost and found process remains riddled with inefficiencies and user dissatisfaction. These challenges underscore the need for a more comprehensive and innovative solution, such as the Quick Basket project. Identified Gaps:

1) Lack of Interactivity: Existing systems lack real-time communication features that allow users to directly engage with administrators or finders.

III. System architecture

The Quick Basket project features a robust and scalable system architecture that integrates front- end, back-end, and auxiliary components to provide a seamless user experience. The architecture is designed to handle diverse user requirements, ensure data security, and facilitate efficient communication and tracking of lost and found items.

A. Front-End Components

The front-end serves as the user interface, enabling individuals to interact with the system effortlessly. It is built using modern web technologies, ensuring responsiveness, interactivity, and accessibility. Key aspects include:

- Technologies Used: HTML, CSS, Bootstrap, JavaScript, and React are used to create dynamic and responsive interfaces.

B. Back-End Infrastructure

The back-end forms the core of the system, handling data storage, retrieval, and processing. It ensures the integrity and security of the platform while enabling real-time operations.

- Database Management
- Server Architecture
- Key Features:
  1) Real-time updates to the item list when new reports are added.
  2) Notifications for status changes (e.g., item claimed).

C. Chat and Communication System

To facilitate seamless communication, the platform integrates a real-time chat system, which connects users with administrators or other stakeholders.

- Features:

- Direct messaging between users and admins for quicker resolution.
- Notifications for new messages to ensure timely responses.

– Implementation: WebSocket or a similar protocol is used to enable real-time communication.

D. Token System

The token system is a unique feature of Quick Basket, ensuring efficient tracking and accountability.

– Functionality:
  - Each report is assigned a unique token or reference ID.
  - Users can use the token to track the status of their submission or claim items.

– Advantages:
  - Ensures transparency in the lost and found process.
  - Helps administrators quickly identify and address user concerns.

IV. DATA SET

The success of the Quick Basket project depends on the quality, organization, and processing of the data collected from users and administrators. This data includes information about lost and found items, user interactions, communication logs, and the status of reported items. Proper data collection, preprocessing, and composition are essential for ensuring accuracy, scalability, and efficient data retrieval.

A. Dataset Collection

The dataset for the Quick Basket platform is primarily collected through user interactions and administrative inputs. Key data sources include:

– User-Submitted Reports: When a user reports a lost or found item, they provide details such as item description, category, location, and contact information.

– Administrator Logs: Admins manage the reported items, track claims, and mark items as found or claimed. They also record administrative notes, comments, and status updates.

B. Data Preprocessing

Before the dataset can be effectively used for search, categorization, or analysis, it undergoes preprocessing to ensure it is clean, structured, and free from errors or duplicates. Key preprocessing steps include:

– Normalization: Data such as item descriptions, user names, and locations are standardized to avoid discrepancies (e.g., spelling variations in item types like "Phone" vs. "mobile").

– Data Cleansing: Duplicate records, incomplete entries, or irrelevant data are removed to maintain dataset quality.

4.3 Dataset Composition

The dataset consists of several types of data that are collected and stored in different tables or entities within the database. Key components of the dataset include:

– Item Information: Includes details such as item ID, description, category, location, and the status (lost, found, claimed).

– User Data: Includes user IDs, contact details, and submission history, enabling the system to track user activity and interactions.

– Event History: Includes actions taken on each reported item, such as when it was claimed, marked as found, or reported as lost.

C. Significance of the Dataset

The dataset plays a central role in the functionality of the Quick Basket system. Its primary significance lies in:

– Efficient Item Tracking: By maintaining a detailed record of all reported items, users and administrators can easily track and manage lost and found items.

– Accurate Matching: With a well-structured dataset, the system can better match lost items with found ones based on parameters like description, location, and category.

V. CONCLUSION

The Quick Basket project addresses critical challenges faced by traditional and digital lost and found systems, offering a more efficient, user- friendly, and scalable solution. By integrating modern technologies like web development frameworks (React, JavaScript), secure database management, real-time communication (chat systems), and tokenized tracking, Quick Basket transforms the way lost and found items are managed.

The front-end ensures a seamless user experience, while the back-end infrastructure guarantees data integrity and quick retrieval. The real-time chat and communication system improves interaction between users and administrators, reducing delays in the process. The unique token system enhances accountability and transparency. Moreover, the dataset is carefully curated to ensure high data quality, which is essential for efficient item matching and tracking.

REFERENCES

[1] Kerr, D. (2021). The Evolution of Lost and Found Systems. Journal of Digital Service Design, 15(3), 45-58.

[2] Johnson, A. & Reed, M. (2019). Improving User Interaction in Lost and Found Systems: A Case Study of Web-Based Solutions. International Journal of Web Technology, 32(2), 67-78.

[3] Tobias, L., Clark, S., & Avery, K. (2020). Building Scalable Digital Lost and Found Systems Using Real-Time Databases. Database Design and Architecture, 21(5), 112-126.

[4] Suresh, B. & Patel, D. (2018). Designing User-Centric Applications: A Guide to Building Front-End Components. Journal of Software Engineering, 11(4), 82-99