Journal Homepage: www. ijarpr.com ISSN: 3049-0103 (Online)

International Journal of Advance Research Publication and Reviews

Vol 02, Issue 10, pp 135-138, October 2025

Government Lost and Found Portal

Heet Gokani [1], Ambrish Patel [2]

[1.] (B Tech in Computer Science Engineering, Atmiya University, Rajkot, India Email: heetgokanistudy999@gmail.com)
[2.] (Faculty of Engineering and Technology (CE), Atmiya University, Rajkot, India Email: ambrish.patel@atmiyauni.ac.in)

ABSTRACT –

The Lost and Found Portal is a web-based application designed to digitize and simplify the process of reporting, tracking, and claiming lost items. Traditional methods of handling lost property are often time-consuming, paper-based, and inconvenient for both citizens and government offices. This portal overcomes such challenges by providing a secure and user-friendly digital interface where citizens can conveniently report missing belongings, browse through recovered items online, and later collect them physically from designated government offices after proper verification.

1. INTRODUCTION

Lost and found management has traditionally been a manual and labor-intensive process, relying on handwritten records, physical registers, and limited communication channels. Such methods are not only inefficient but also lack transparency, often resulting in misplaced records, duplication of efforts, and significant delays in the retrieval of lost property. Citizens, in particular, face difficulties in accessing timely information about their belongings, while government officials struggle with the administrative burden of maintaining and verifying records manually. The Lost and Found Portal addresses these challenges by introducing a digital platform where lost items can be recorded, displayed, and tracked in real time. Citizens can securely log in to check reported items, while administrators can manage entries using a streamlined backend system.

Lost and Found Portal has been developed to address these challenges by introducing a comprehensive digital platform that records, displays, and tracks lost items in real time. Through this system, citizens can securely log in to report their missing items or browse through recovered belongings, while administrators are provided with a structured backend interface to verify, manage, and update entries efficiently. This approach reflects the broader shift toward e-governance solutions, which aim to enhance service delivery, promote accountability.

2. OBJECTIVES OF THE PORTAL

1. Password Centralized Digital Platform

The portal provides a single, unified digital platform for managing lost and found items. By replacing traditional handwritten records and physical registers, it ensures that all data is stored systematically and can be accessed easily by both citizens and administrators. This centralization eliminates duplication of efforts and reduces the chances of misplaced records.

2. Secure User Authentication

Ensuring the security of users' personal information and reported data is a fundamental goal of the portal. To achieve this, the system incorporates secure authentication mechanisms for both citizens and administrators. Citizens can log in using

verified credentials to report or check the status of their lost items, while administrators have separate access privileges to manage and validate records. Role-based access control ensures that only authorized personnel can approve or update sensitive information. Additionally, encryption techniques and secure data transmission protocols protect the system from unauthorized access and malicious activities. This strong focus on authentication and data protection builds trust among users and assures them that their personal details and item-related information remain safe.

3. Real-Time Updates through APIs

Another critical objective of the portal is to provide real-time updates on reported and recovered items through the use of custom APIs. In manual systems, delays in updating records often result in confusion and inefficiency, making it difficult for citizens to know whether their belongings have been recovered. The integration of APIs ensures that once an item is reported or found, the information is instantly updated across the system and made visible to all relevant users.

4. Transparency and Accessibility

Improving transparency and accessibility in government services is one of the central aims of the portal. By digitizing the lost and found process, the system allows citizens to view and track the status of reported items without relying solely on manual communication with government offices. This openness minimizes the chances of mismanagement or misuse of records, as every entry and update is visible within the system.

5. Reduction of Manual Paperwork

The portal also seeks to reduce reliance on manual paperwork, which has traditionally been a time-consuming and error-prone process.

Maintaining physical registers requires significant administrative effort and storage space, while also being vulnerable to loss or damage. By digitizing the entire workflow, the system minimizes repetitive tasks, reduces the risk of human error, and frees up government staff to focus on verification and service delivery. The elimination of bulky paperwork not only streamlines operations but also supports environmental sustainability by reducing paper usage. This objective contributes directly to improved efficiency, faster processing, and a more eco-friendly approach to governance. This digital approach supports faster processing of lost item reports, ensures that information is easily accessible and retrievable, and creates a more organized and accountable system. Ultimately, this objective reinforces a modern, eco-friendly, and efficient model of governance, demonstrating how technology can streamline traditional administrative processes while benefiting both citizens and government agencies.

3. SYSTEM DESIGN - ARCHITECTURE

The *Lost and Found Portal* is developed using the **MERN stack**—a modern and widely adopted combination of **MongoDB, Express.js, React.js, and Node.js**. This technology stack is selected due to its **flexibility, scalability, and high performance**, enabling the system to deliver real-time responsiveness while maintaining data integrity and security. The architecture is designed to ensure seamless interaction between frontend and backend components, providing an efficient and reliable platform for lost and found management while supporting future growth and technological integration.

1. **Frontend (React.js)**:

The portal's frontend is implemented using React.js to provide a dynamic, responsive, and user-friendly interface. React's component-based architecture allows for the creation of reusable and modular UI elements, which simplifies development and maintenance. The virtual DOM ensures rapid rendering of changes, allowing users to view real-time updates without page reloads. Features such as interactive search, filter options, item categorization, and responsive layouts make the portal accessible across desktops, tablets, and mobile devices. By prioritizing usability, the frontend enhances user engagement and ensures a smooth experience for citizens accessing lost item information.

2. **Backend (Node.js with Express.js)**: The backend system is powered by Node.js in conjunction with Express.js. Node.js offers an event-driven, non-blocking I/O model, enabling the server to handle multiple concurrent requests efficiently. Express.js simplifies the creation of APIs, middleware integration, routing, and error handling, providing a robust environment for server-side logic.

3. **Database (MongoDB):**

MongoDB serves as the primary database for the portal, storing user profiles, lost item records, metadata, and administrative logs. As a NoSQL database, MongoDB offers a flexible schema design, which allows for easy adaptation to evolving requirements and future enhancements. Its document-oriented storage model ensures efficient querying and indexing, enabling rapid retrieval of records even as the database grows. This capability is crucial for real-time tracking of items, generating reports, and providing administrators with analytics to monitor system usage and efficiency.

4. **API Integration:**

The portal relies on custom APIs to facilitate communication between the frontend and backend. These APIs handle all operations related to creating, updating, retrieving, and deleting records. They enable real-time synchronization of data, ensuring that any new lost item report or recovery update is immediately visible across the system. Additionally, API-driven architecture allows for future integration with external services. One of the most significant advantages of this API-driven approach is the **real-time synchronization of data**, which guarantees that any newly reported lost item, recovery update, or administrative modification is immediately reflected in the system and visible to all relevant users. This feature not only improves responsiveness and efficiency but also enhances user trust, as citizens and administrators can be confident that the information they see is accurate and up to date. Examples of such potential integrations include mobile applications, third-party government databases, automated notification systems via SMS or email, QR code-based item tracking, and even AI-powered recommendation engines for matching lost items. By adopting a robust API-driven structure, the portal ensures long-term scalability, adaptability, and maintainability.

4. FUTURE PLANS

Future plans for the Lost and Found Portal include the development of a dedicated mobile application, which will enhance accessibility and convenience for users. The graphical user interface (GUI) will also be improved to provide a more modern, intuitive, and user experience.

Additionally, features such as a QR code system for item identification, notification alerts for new entries, and regional language support will be integrated. These enhancements will ensure inclusivity and make the portal a truly comprehensive digital solution for lost and found management.

5. CONCLUSION

The Lost and Found Portal is a secure, efficient, and user-friendly digital platform that simplifies the reporting, tracking, and claiming of lost items.

Overall, the portal represents a step forward in e-governance, providing a reliable and scalable solution that benefits both citizens and administrators by making the lost and found process faster, organized, and accessible.

Beyond improving operational efficiency, the portal also emphasizes **data security, accuracy, and transparency**. Role-based access control, encrypted storage, and activity logs ensure that sensitive information remains protected, while real-time synchronization guarantees that the latest updates are always accessible to users. The system's modular and scalable architecture allows for seamless integration of future enhancements, such as mobile application support, AI-assisted item matching, multilingual interfaces, and automated notifications, making it adaptable to evolving technological needs.

6. REFERNCES

[1] Ministry of Electronics and Information Technology (MeitY). (2022). Digital India and the future of e-governance. Government of India Publications.

[2] National Crime Records Bureau (NCRB). (2021). *Citizen Services and Online Complaint Systems*. Government of India Press.

[3] Sharma, R., & Gupta, S. (2021). E-Governance portals and their role in citizen services. *International Journal of Computer Applications, 183*(30), 15–20.

[4] Singh, A., & Verma, K. (2020). Design and development of an online lost and found management system. *International Journal of Emerging Technologies in Engineering Research, 8*(6), 105–110.