International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 09 Issue: 12 | Dec - 2025 SJIF Rating: 8.586 ISSN: 2582-3930

Community Based Lost and Found Portal

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Abstract: In today's fast-paced world, misplacing personal belongings is a common occurrence, yet recovering them often proves challenging due to the absence of a centralized and trustworthy system. The proposed **Community-Based Lost and Found Portal** aims to bridge this gap by creating a digital platform where individuals can report, search, and reclaim lost items within their local community.

The portal functions as a collaborative hub, enabling users to post detailed descriptions and images of lost or found items, categorize them by type (e.g., electronics, documents, accessories, pets), and tag them with location and time information. A robust search engine and filtering system ensures quick retrieval of relevant posts, while geolocation features help match items to nearby users. To enhance credibility, the portal integrates user verification, community ratings, and secure communication channels between item owners and finders.

Beyond individual use, the portal fosters **community engagement** by encouraging responsible participation and trust-building. Local institutions such as schools, offices, and public transport services can partner with the platform to streamline recovery processes. The system also incorporates notification alerts, ensuring that users are promptly informed when items matching their description are reported.

The expected outcomes include reduced stress and financial loss for individuals, strengthened community bonds, and improved efficiency in handling lost property. By leveraging technology and collective goodwill, the Community-Based Lost and Found Portal transforms the traditional, fragmented approach into a **modern, accessible, and reliable solution** for everyday life.

Keywords:
Community-Based Lost and Found Portal, Web-Based Application, Lost Item Reporting, Found Item Management, Centralized Database, User Authentication, Item Categorization, Image Upload, Location Tagging, Search and Filter System, Notification Alerts, Admin Verification, Item Matching System, Community Collaboration, Secure Communication, Database Management System.

1 INTRODUCTION

Losing personal belongings is a common issue in everyday life, especially in shared environments such as colleges, offices, and public spaces. Traditional approaches like notice boards, word-of-mouth communication, posters, and informal social media groups are often ineffective, slow, and unorganized. These methods lack proper tracking, verification, and accessibility, leading to delays and reduced chances of item recovery.

With the rapid growth of digital technologies, there is a need for a more efficient,centralized, and user-friendly system to connect individuals who have lost items with those who have found them. To address this gap, the Community-Based Lost and Found Portal is developed as a web application that provides an organized platform for reporting, tracking, and recovering lost and found items. The system allows users to register, log in, and post details of lost or found items, including descriptions, categories, images, and location tags. Features like advanced search, filters, database management, and notification alerts help users easily identify items and increase the chances of successful recovery. The portal is designed to be scalable, easy to use, and capable of serving small

communities as well as larger institutions.

2 IMPLEMENTATION

The Community-Based Lost and Found Portal was implemented as a web-based application to provide a centralized platform for reporting and recovering lost items. The system was developed using a three-tier architecture consisting of the user interface, application logic, and database layers. Users can register, log in, and submit details of lost or found items along with images and location information.The backend processes user requests, stores item details in a centralized database, and enables searching and matching of items based on category, description, and location. An admin module was implemented to verify reports, manage users, and ensure data authenticity**.** Notification mechanisms were integrated to alert users when potential matches are found. The system was tested for functionality and usability to ensure reliable performance and efficient item recovery within the community.

The implementation of the **Community Based Lost and Found Portal** was carried out in the following steps:

1. Requirement Analysis

- Collected functional requirements such as user registration, lost/found item posting, item search, notifications, and admin verification.
- Identified non-functional requirements like usability, reliability, security, and performance.

2. Technology and Environment Setup

- Selected web technologies for the three-tier architecture: HTML, CSS, JavaScript and Bootstrap for the presentation layer, and MySQL for the database layer.
- Installed required tools (code editor, browser, local server and MySQL).

3. Database Design and Creation

- Designed relational tables: **Users**, **LostItems**, **FoundItems**, **Categories**, and **Notifications** with appropriate primary and foreign keys.
- Implemented the schema in MySQL and tested basic insert, update, delete and select operations.

4. User Interface Design

- Designed the UI screens: Home page, User Registration/Login, Report Lost Item, Report Found Item, Lost Items List and Found Items List.
- Implemented responsive layouts using HTML, CSS, JavaScript and Bootstrap.

5. Backend / Application Logic Development

- Implemented modules for user registration and login (authentication).
- Developed functionality to post lost and found items, including form validation and file (image) upload handling.
- Implemented search and filter operations on items based on category, keywords and location.

6. Admin Module Implementation

- Created admin interfaces to view all reports, verify item posts, manage user accounts and moderate content.

7. Item Matching and Notification Mechanism

- Implemented logic to match lost and found items using category, description and location.
- It generated notifications/alerts to users when a potential match was found and updated item status accordingly.

8. Integration of Frontend, Backend and Database

- Connected UI forms with backend logic and database operations.
- Ensured smooth data flow between the presentation layer, application layer and database layer as per the system architecture.

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9. Testing and Validation

- Performed functional testing for each feature (login, posting items, search, notifications).
- Conducted integration testing to verify interaction between modules.
- Performed user acceptance testing with sample users to evaluate usability and reliability.

10. Deployment and Demonstration

- Deployed the portal on a local server environment.
- It Populated the database with sample data and demonstrated complete workflow: user registration → post lost/found → search/match → admin verification → item recovery.

3 METHODOLOGY

The methodology describes the steps followed during system development, from planning to implementation

Requirement Analysis

- Requirement analysis involved identifying user expectations and system needs. Key stakeholders include users who report lost or found items and administrators who manage the system.
- Functional requirements include:
- User registration and login Item reporting and management Item search and filtering.
- Notification system and Admin Verifiation include :
  - System reliability Data security Performance efficiency User-friendliness
  - This phase ensured clarity in system objectives and functionality.

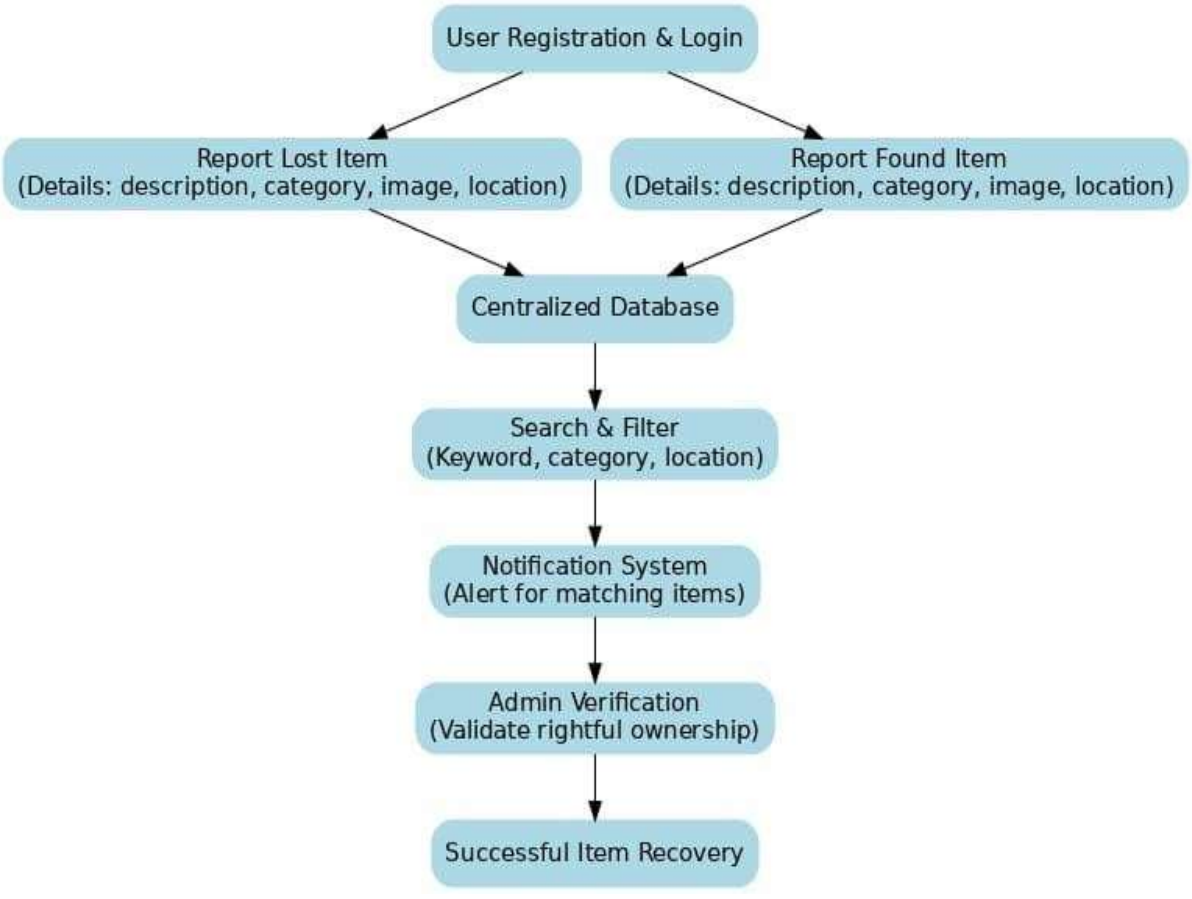

Fig.1: - Community Based Lost And Found Portal Workflow Diagram

4 RESULTS

The Result section illustrate the key user interface screens and functional outputs of the Community-Based Lost and Found Portal developed in this project.

Fig 2: - Login Page of the Community Based Lost and Found Portal Fig 3: - User Home Dashboard after Successful Login

Fig 4: - Lost Items List Display Screen Fig 5: - Found Items List Display Screen Fig 6: - Report Lost Item Form

The following figure 2 to 6 illustrate the proposed model.

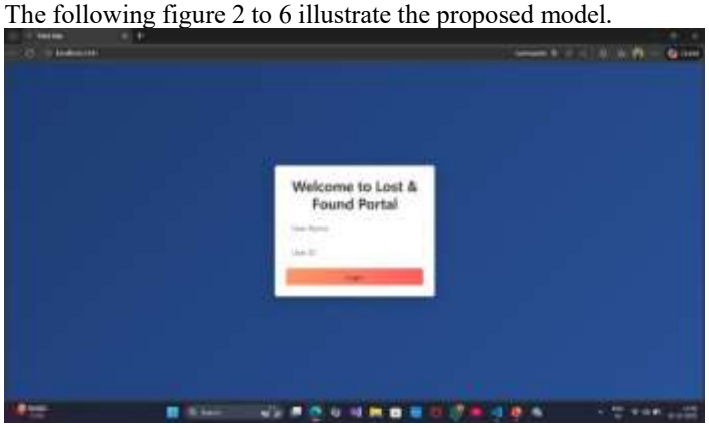

Fig 2: Login Page

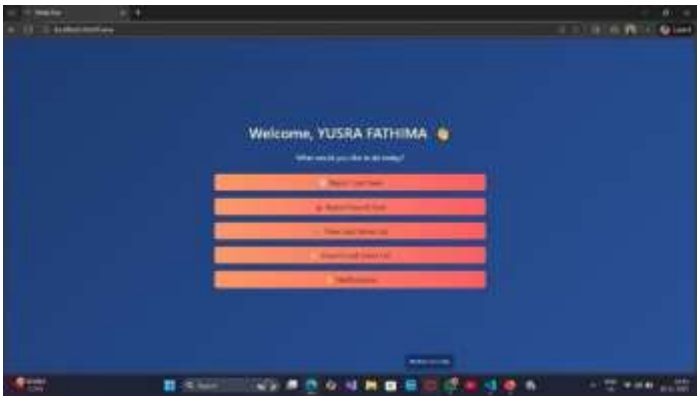

Fig 3: User Home Dashboard After Login

Fig 4: Lost Items List

Fig 5: Found Items List

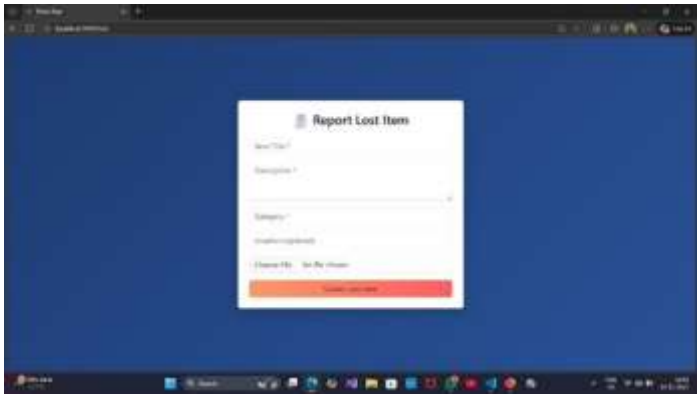

Fig 6: Report Lost Item Form

6 LIMITATIONS AND FUTURE ENHANCEMENT

LIMITATIONS: The Community-Based Lost and Found Portal has certain limitations despite its advantages. The system depends heavily on internet connectivity, which may restrict access for users in areas with poor or unstable networks. Its effectiveness is also influenced by the accuracy of information provided by users; incorrect or incomplete item details can result in failed matches. Since the portal is community-specific, its reach is limited to registered users within that area, reducing its usefulness on a larger scale. Storing personal and item-related data online may raise security and privacy concerns if adequate safeguards are not in place. Additionally, manual admin verification can introduce delays in approving reports, and the possibility of false or misleading submissions cannot be completely eliminated. Technical issues such as software bugs, server downtime, and the need for regular maintenance may also affect the system's performance and reliability. In addition to the existing limitations, the Community-Based Lost and Found Portal may face challenges related to scalability when the number of users and item records increases significantly, which can affect system performance and response time. The portal also relies on user participation and honesty; low engagement or misuse can reduce the effectiveness of the platform. Image quality and incomplete uploads may limit accurate item identification, especially when visual matching is required. The absence of automated intelligence in the current system means that matching largely depends on manual search and user effort.

FUTURE ENHANCEMENT: The Community-Based Lost and Found Portal can be further enhanced by integrating advanced technologies to improve efficiency, accuracy, and user experience. Future enhancements may include the use of artificial intelligence for automatic image-based item matching, enabling the system to identify similar items more accurately even with partial information. Integration with GPS, Bluetooth, or RFID technologies can help track the last known location of lost items in real time. The portal can also be expanded with mobile application support and multi-language functionality to improve accessibility for a wider range of users. Implementing blockchain technology can ensure secure and tamper-proof records for ownership

verification, reducing fraudulent claims. Additionally, smart chatbots can be introduced to guide users through reporting processes and provide instant assistance, while data analytics can be used to predict high-risk areas and prevent item loss. These enhancements will make the portal more scalable, secure, and effective across larger communities and public environments.

7 Conclusion

The Community-Based Lost and Found Portal developed in this project provides an effective and organized solution to the common problem of misplacing personal belongings within a community. By replacing traditional methods such as notice boards and informal communication, the system offers a centralized, digital platform that enables users to report, search, and recover lost or found items efficiently. Features like item categorization, advanced search, image uploads, notification alerts, and admin verification ensure transparency, accuracy, and reliability in the recovery process.

The portal enhances communication between users, reduces recovery time, and promotes community participation and trust. Its scalable and user-friendly design makes it suitable for implementation in various environments such as educational institutions, residential communities, offices, and public spaces. Overall, the Community-Based Lost and Found Portal demonstrates how technology can simplify everyday problems and strengthen community collaboration by providing a secure, accessible, and systematic approach to lost and found management.

The Community-Based Lost and Found Portal proves to be a practical and efficient solution for managing lost and found items in a structured and transparent manner. The system successfully demonstrates how web technologies can be used to simplify reporting, tracking, and recovery of misplaced belongings within a community. By providing features such as user authentication, categorized item listings, image uploads, search and filter options, and notification alerts, the portal minimizes confusion and reduces the time required to recover lost items.

The implementation of an admin verification mechanism further enhances trust and security by reducing false claims and ensuring data authenticity. The portal also promotes a sense of responsibility and cooperation among community members by encouraging active participation in the recovery process. Its modular and scalable design allows it to be adapted to various environments such as educational institutions, residential societies, offices, and public spaces. Overall, the project highlights the importance of digital platforms in addressing everyday problems and lays a strong foundation for future enhancements using advanced technologies such as artificial intelligence, location tracking, and data analytics to further improve efficiency and user experience.

REFERENCES

1. **Balachandran, R., and Anitha, R.,** “Design and Development of Lost and Found Portal using Web Technologies,” International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume 8, Issue 12, October 2019, Page No. 4502–
4506.

2. **Waghmare, A., and Patil, R.,** “Lost and Found Object Retrieval Portal Using Web Application,” International Research Journal of Engineering and Technology (IRJET), ISSN: 2395-0056, Volume 7, Issue 6, June 2020, Page No. 1205–1209.

3. **Sharma, P., and Verma, K.,** “Design and Implementation of a Web-Based Lost Item Reporting System,” International Journal of Advanced Research in Computer Science (IJARCS), ISSN: 0976-5697, Volume 11, Issue 5, September 2020, Page No. 45–50.

4. **Ramesh, S., and Gupta, A.,** “A Smart Lost and Found System Using Image Recognition and Geolocation,” International Journal of Computer Applications (IJCA), ISSN: 0975- 8887, Volume 183, Issue 28, August 2021, Page No. 12–18.

5. **Alkahtani, M.,** "IoT-Based Tracking and Recovery of Lost Items," Journal of Information Technology and Web Engineering, ISSN: 2168-8662, Volume 17, Issue 3, March 2019, Page No. 21–35.

6. **Sommerville, I.,** Software Engineering, 10th Edition, Pearson Education, 2015.

7. **Pressman, R. S., and Maxim, B. R.,** Software Engineering: A Practitioner's Approach, McGraw-Hill Education, 8th Edition, 2014.