A

Project Phase-I Report

On

"FoundIt: Your Campus Return & Recovery"

Submitted by,

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Under the guidance of

Mrs. Sneha S. Ghewari

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Dr. D. Y. Patil Pratisthan's College of Engineering, Salokhenagar, Kolhapur

Academic Year 2024-*2025*

CERTIFICATE

This is to certify that,

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have satisfactorily completed the Project Phase - I entitled **"FoundIt: Your Campus Return & Recovery"** in partial fulfillment for award of Bachelor of Engineering Degree in Computer Science & Engineering by Shivaji University, Kolhapur in Academic Year-2024-25 Semester-7.

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CERTIFICATE

This is to certify that, the project entitled,

" FoundIt: Your Campus Return & Recovery"

Is presented before Department Research Committee (DRC) by,

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Under the guidance of Mrs. Sneha S. Ghewari for the academic year 2024-25. The DRC has consented to give the approval for the said project.

Dr. Shivaani Kalle

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ACKNOWLEGEMENT

The sense of contentment and relation that accompanies the successful completion of the project "FoundIt: Your Campus Return & Recovery" would be incomplete without mentioning the names of those people who helped us in accomplishing the project. Those people whose Constant guidance and encouragement resulted in its realization.

We take this opportunity to thank our Campus Director Dr. Abhijeet M. Mane for providing a healthy environment in the college that helped us in concentrating on the task. We take this opportunity to thank our Principal Dr. Suresh D. Mane for providing a constant support and resources that helped us in completing the task.

We express a deep sense of gratitude to our HOD Dr. Shiivani Kalle for providing the necessary facilities for the completion of this project work.

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Abstract

"FoundIt: Your Campus Return & Recovery" is an advanced web-based platform developed to modernize and simplify the management of lost and found items within a college campus. This system enables users to efficiently search for lost belongings or report found items by uploading partial details, such as item type, color, and location. The platform prioritizes security by incorporating verification methods, including personalized security questions, to ensure that items are returned only to their rightful owners. With multi-language support, FoundIt enhances accessibility for users from diverse linguistic backgrounds, ensuring that all campus members can engage with the system seamlessly.

The platform automates the traditionally manual process of visiting administrative offices to inquire about lost items, providing a more convenient and time-saving solution. It features real-time notifications to alert users when their lost item is reported, reducing the delay and frustration often associated with item retrieval. Additionally, FoundIt minimizes the risk of fraudulent claims by requiring detailed verification and matching processes, ensuring the correct owner receives their item.

Moreover, the system includes an administrative dashboard for campus officials to manage disputes and track found items efficiently. By offering a centralized, digital solution, FoundIt not only saves administrative resources but also enhances the user experience, providing a faster, more secure, and reliable way to handle lost and found items across the campus community.

1. Introduction

1.1 Literature Survey:

The concept of digitizing lost and found systems has gained traction in recent years, with various implementations designed to streamline the process of recovering lost items. Traditional lost and found methods are often manual and time-consuming, requiring individuals to repeatedly visit designated locations to inquire about missing items. This process is inefficient and prone to errors, leading to unnecessary delays and frustration for both the person who lost the item and the person who found it.

Several research papers and existing systems have explored the potential of digital platforms to address these issues. For instance, *Mafqudat: Arabic Smartphone Application for Reporting Lost and Found Items* presents a mobile-based solution that allows users to report lost or found items within an Arabic-speaking community. While the system provides an efficient way to connect users with their lost belongings, it is limited by its single-language functionality and mobile-only accessibility. This restricts its potential user base and limits the platform's versatility in multi-lingual or web-centric environments.

Other studies, such as the one conducted by Peters et al., analyze common strategies people use to locate lost items, both in home and outdoor environments. Their findings suggest that memory-based searches, retracing steps, and locus-based searches are frequently employed but may not always yield results, particularly in public or shared spaces where multiple people are involved. The integration of digital systems, which use crowd-sourced information and real-time data, can drastically improve the odds of recovering lost items by broadening the search network and eliminating the need for physical visits to lost and found locations.

Moreover, a report by UK Finance highlights the significant financial implications of lost items, especially in the case of lost or stolen bank cards, which accounted for a large portion of fraud losses in 2018. This data underscores the need for secure and efficient systems that not only facilitate the recovery of lost items but also mitigate the risk of fraudulent claims.

In light of these findings, *FoundIt: Your Campus Return & Recovery* is designed to address the shortcomings of traditional and existing digital systems by incorporating multi-language support, secure verification processes, and real-time notifications. The system automates the process of reporting and searching for lost items, reduces administrative overhead, and provides a seamless user experience tailored to a college campus environment. By learning from previous implementations and research, FoundIt offers a more accessible, secure, and efficient solution for managing lost and found items.

1.1.1 Existing System :

The existing lost and found system on many college campuses, including ours, relies on manual processes that require individuals who find lost items to physically deliver them to a central department, such as student services or the administrative office. Those who lose items must visit this office to inquire if their belongings have been found, often requiring multiple visits. The process is inefficient and time-consuming, with no real-time updates available to either party. Additionally, the lack of organization can lead to items being misplaced or overlooked, while the absence of a verification process raises the risk of dishonest claims, as there is no formal method for confirming ownership before items are returned.

This system also presents several challenges in terms of accessibility and user experience. For one, users must visit the lost and found office during limited operating hours, making it inconvenient for those with busy schedules. Furthermore, the system lacks digital capabilities, meaning all inquiries must be done in person, with no remote or online support for reporting or searching for items. International students or non-native speakers face an additional hurdle, as there is no multi-language support. As a result, the current system fails to provide a seamless or efficient experience, highlighting the need for a more modern, automated solution like *FoundIt: Your Campus Return & Recovery*, which addresses these shortcomings by offering a user-friendly, secure, and fully digital platform.

1.1.2 Propose System

The proposed online "Lost and Found" website addresses these issues by

digitizing the process

Search Functionality

Users can search for lost items posted by others. If someone finds an item, they can upload partial details, like color and type, ensuring that not all identifying information is publicly available.

Verification via Security Questions

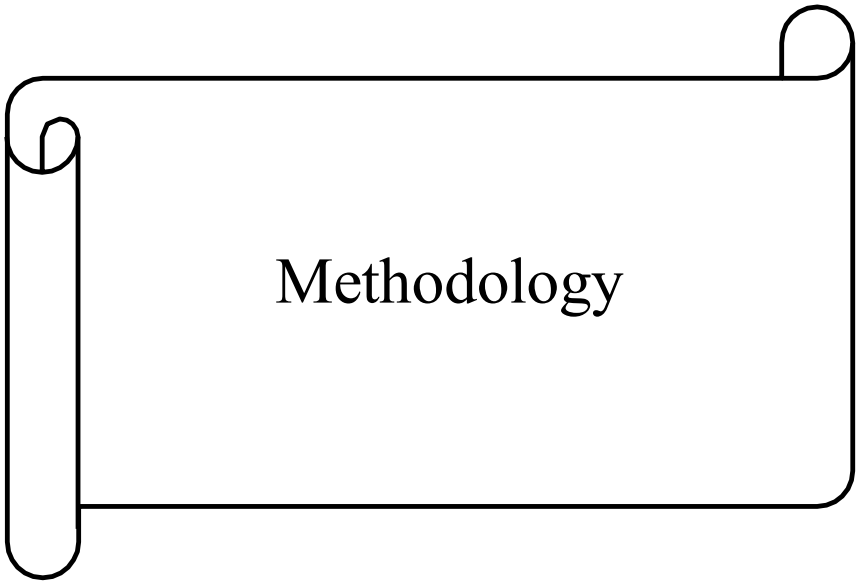
The finder can use a security question to verify the true owner before returning the item, reducing the chances of false claims.

Convenience

Both the owner and the finder can communicate through the platform, eliminating the need for repeated physical visits to the department.

Multi-language Support

The platform is designed to cater to a diverse user base by offering support in multiple languages, improving accessibility for all students and staff.


Methodology

2. Methodology

The development of *FoundIt: Your Campus Return & Recovery* follows a structured methodology aimed at ensuring efficiency, user-friendliness, and security. The project is divided into several phases, each focusing on different aspects of the system, from planning and design to implementation, testing, and deployment.

1. Requirement Analysis:

- The first step involved gathering requirements from potential users, including students, faculty, and administrative staff. This was done through surveys and interviews to understand the key issues with the existing manual lost and found system. Requirements such as real-time notifications, multi-language support, secure verification, and accessibility were prioritized based on user feedback.

2. System Design:

- The design phase included creating wireframes and mockups for the user interface (UI) to ensure a smooth user experience. The system architecture was designed using a client-server model, where the front-end would communicate with a back-end server via APIs. A relational database (e.g., MySQL or PostgreSQL) was selected to store user data, item reports, and verification logs. Special emphasis was placed on multi-language support to make the system accessible to a diverse user base.

3. Front-End Development:

- The user interface was developed using web technologies such as HTML, CSS, and JavaScript (React or Angular). The UI was made responsive to ensure compatibility across different devices, including desktops and smartphones. Multi-language support was implemented, allowing users to switch languages easily.

4. Back-End Development:

- The back-end was developed using Node.js or Django, with RESTful APIs for managing user accounts, item reports, and notifications. Security measures, such as user authentication and encryption, were integrated to protect personal information and ensure that only verified users could interact with sensitive data. An algorithm was developed to match lost and found reports based on user inputs like item details and location.

5. Database Design:

- A robust database schema was created to store lost item reports, found item reports, and user verification data. The system allows users to upload partial item details for enhanced security, requiring the rightful owner to answer security questions for item retrieval. The database was optimized for fast search and retrieval of items.

6. Testing:

- Extensive testing was conducted at various levels, including unit testing for individual components, integration testing to ensure smooth interaction between front-end and back-end systems, and user acceptance testing (UAT) to gather feedback on usability. Security testing was also performed to ensure that the verification process was foolproof and that user data remained protected.

7. Deployment and Maintenance:

- After successful testing, the system was deployed to a cloud platform (e.g., AWS, Heroku) to ensure scalability and reliability. Post-deployment, ongoing maintenance will be provided to address any issues that arise, implement updates, and ensure continuous system improvements based on user feedback details for user looking for roommate, interests and activities and general preferences.

2.2 System Architecture

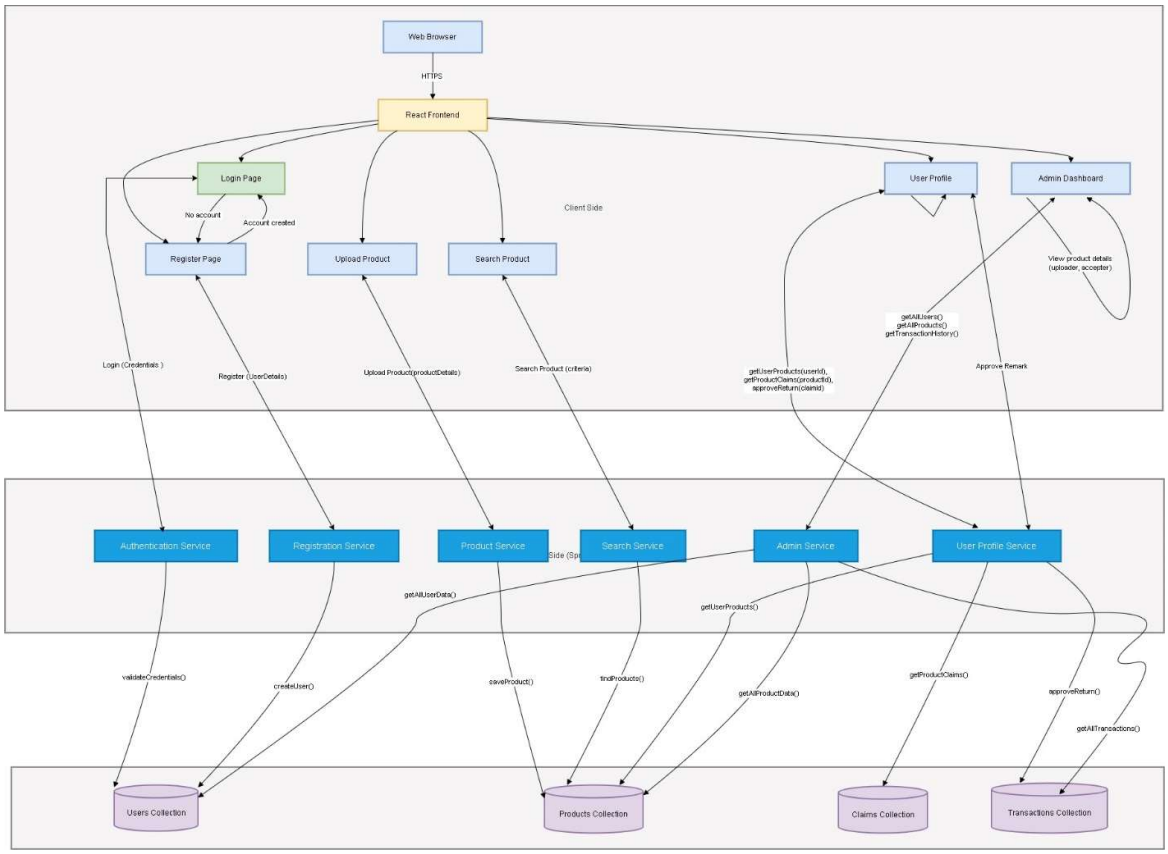


Fig. System Architecture.

2.3 Flowchart:

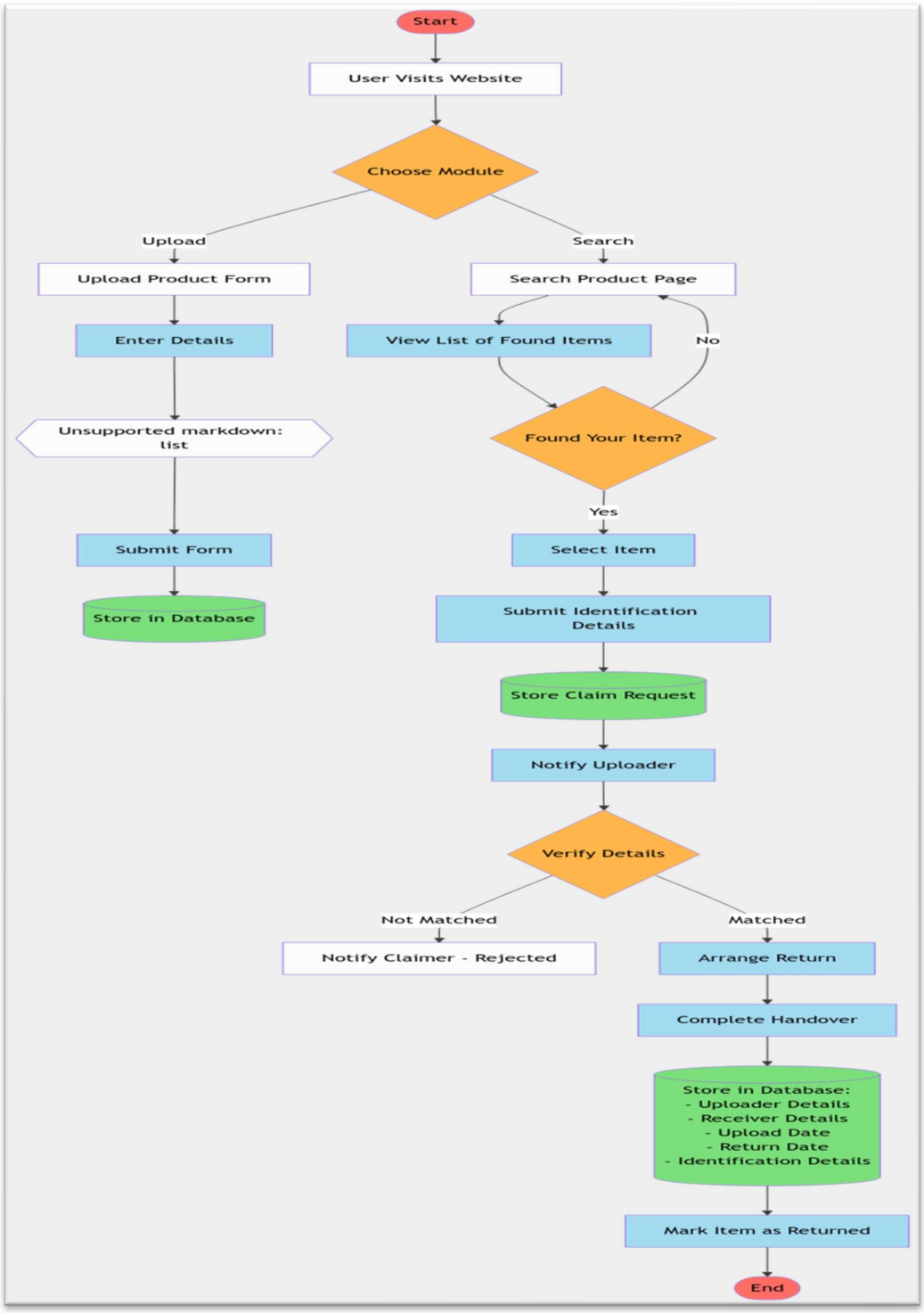
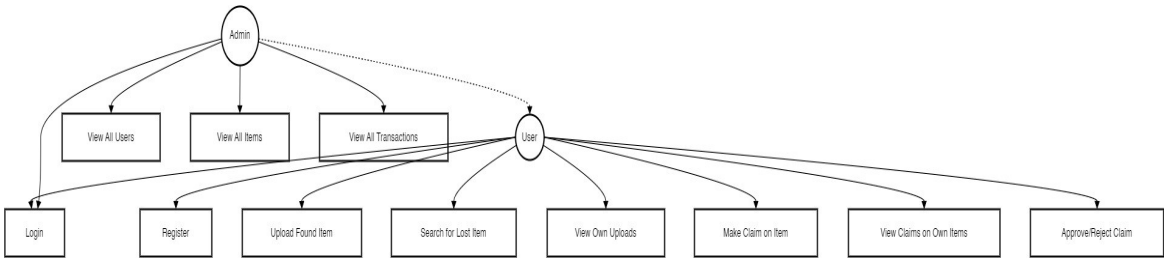


Fig. Flow chart

2.4 Use Case



2.5 Navigation Diagrams

- Database Design(E-R Diagram)

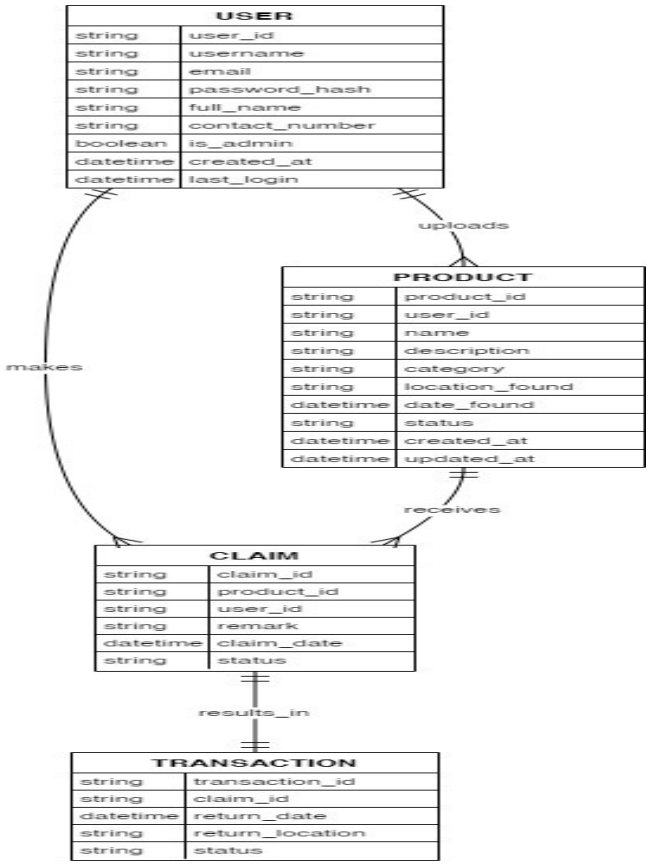
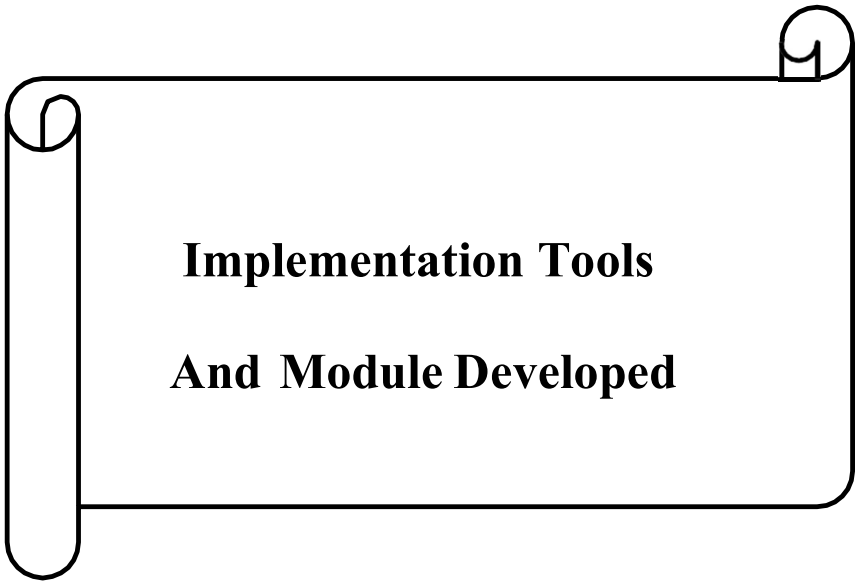


Fig. Database Schema


Implementation Tools
And Module Developed

3. Implementation tools & Module developed

Development Tools:

- Java Development Kit (JDK): Version 11 or higher.
- Integrated Development Environment (IDE):
  - IntelliJ IDEA

Frameworks and Libraries:

- Web Framework:
  - Spring Boot
  - Hibernate or Spring Data JPA
- Frontend Libraries/Frameworks :
  - React

Database Management System (DBMS):

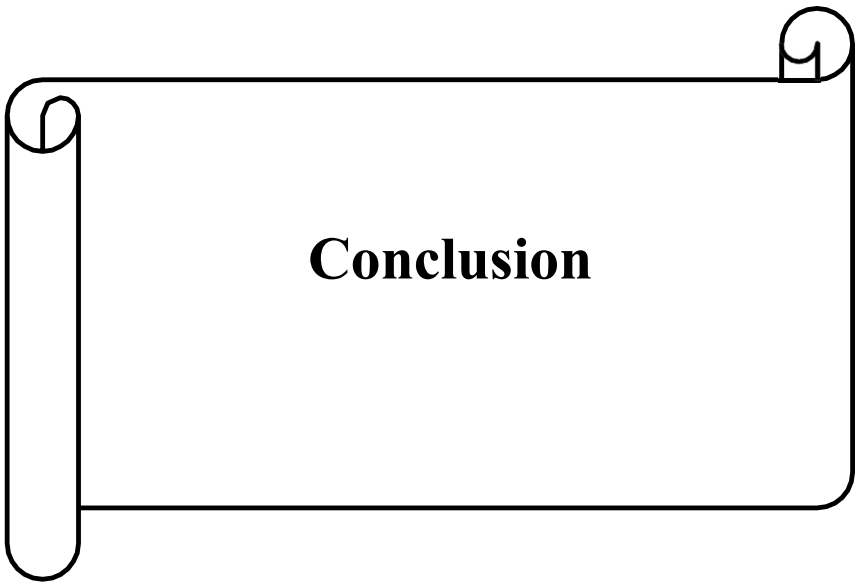
- Relational Databases:
  - SQL(Oracle)

Build Tools:

- Maven

Application Server:

- Apache Tomcat


Conclusion

4. Conclusion

FoundIt: Your Campus Return & Recovery provides a modern, efficient, and secure solution to the challenges posed by traditional lost and found systems. By digitizing the process, the platform significantly reduces the time and effort required for students, staff, and faculty members to report and recover lost items. The system introduces features such as real-time notifications, multi-language support, and a secure verification process to ensure that items are returned to their rightful owners, addressing key shortcomings of the manual system.

The automation of reporting, searching, and verifying lost items brings transparency and convenience to the entire process, eliminating the need for multiple physical visits to a central office. Moreover, the system's scalability and ease of use make it adaptable to various campus environments. By integrating user feedback and incorporating best practices from existing digital lost and found solutions, *FoundIt* ensures a more streamlined experience for users, reducing frustration and increasing the chances of item recovery.

In conclusion, *FoundIt: Your Campus Return & Recovery* stands as a significant improvement over traditional methods, making it easier, faster, and more reliable to recover lost items within a college campus. Its user-friendly interface, secure features, and automated processes offer a scalable solution that can be expanded to other environments, offering a blueprint for future lost and found systems in educational institutions and beyond. This project demonstrates how technology can be effectively used to solve real-world problems and enhance community welfare.

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