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MAKERERE UNIVERSITY BUSINESS SCHOOL

**DEVELOPING A WEB-BASED SYSTEM FOR REPORTING AND RECOVERING
LOST AND FOUND ITEMS AT MULAGO NATIONAL REFERRAL HOSPITAL**

By

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**A Project Proposal Submitted to the Faculty of Computing & Informatics of Makerere
University Business School in Partial Fulfillment for the Award of the Degree of Bachelor
of Business Computing of Makerere University**

November, 2025

DECLARATION

We, the undersigned, declare that to the best of our knowledge, this proposal is our original piece of work, and has never been published and/or submitted for any award in any other University or Higher Institution of Learning.

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APPROVAL

This project proposal has been submitted with my approval as supervisor, and my signature is here appended:

Signed.....

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SECTION ONE

1.INTRODUCTION

1.1 Project Background

Across many sectors today, web-based systems have become the backbone of how organizations operate and deliver services. These systems allow people to access information anytime, anywhere, through a browser, making work faster, more accurate and more transparent. Unlike traditional paper-based or desktop methods, web platforms can handle many users at once, reduce costs, and eliminate delays that come with manual record-keeping.

In the education sector, universities and schools now use web-based systems to manage student records, online learning and results. Makerere University Academic Information Management System (AIMS) for example, has simplified course registration, payments, and result checking, reducing paper work and long queues. In the financial sector, banks and mobile money providers use web platforms to support digital banking, online payments and financial tracking, making transactions faster and secure. The public administration sector also benefits through e-government services that allow citizens to apply for documents, pay taxes and receive updates online, cutting down corruption and bureaucratic delays.

In the health sector, web systems have brought massive change. They help hospitals manage patient records, appointments, inventories and billing. Studies such as Sumarsono et al (2023) show that such systems improve data accuracy, accountability and overall service delivery. In Uganda, while hospitals are gradually adopting digital systems for clinical operations, non-medical areas like lost and found management are still mostly manual causing unnecessary confusion and loss.

At Mulago National Referral Hospital, Uganda largest and busiest hospital, over 3,000 outpatients and 1,800 inpatients are served daily by more than 2,500 staff members. With that level of movement and interactions, it's no surprise that many people lose personal belongings every day, from phones, wallets and IDs to patient files and clothing. These items create stress, especially for patients already going through physical or emotional pain.

Currently, Mulago records lost and found items in a manual book kept by the security or reception department. When an item is found, it's listed by hand, often with incomplete details. Patients or visitors who lose items must physically move around the hospital trying to trace them, sometimes visiting multiple offices. The process is slow and sometimes even unfair items may be claimed by the wrong person due to poor verification, while genuine owners leave empty-handed.

The storage process is also weak. Found items are often kept in drawers or small offices without proper labeling, making them easy to misplace. On busy days, when hundreds of people move in and out, staff get overwhelmed and cases of lost items pile up. Patients often express feelings of frustration, helplessness and disappointment, especially when they lose essential documents, money, or phones that connect them to their loved ones.

To solve this, a web-based lost and found system can digitize the entire process. It would allow staff, patients and visitors to report or check for lost items online. The system would generate unique tracking numbers, securely store all data and help administrators verify claims faster. With this kind of platform, Mulago could bring transparency, accountability and efficiency to a problem that has persisted for years.

In short, just as other sectors have embraced digital transformation to improve service delivery, Mulago can also use technology to make hospital life more organized, professional and humane ensuring that no patient or visitor has to feel lost over a misplaced item again.

1.2 Statement of the Problem

Mulago National Referral Hospital handles thousands of patients, staff and visitors every day. This heavy human traffic naturally leads to frequent cases of lost and found items like phones, wallets, documents and other personal belongings. Yet, the hospital still relies on a manual, paper-based system to record and manage these incidents.

Currently, details of lost or found items are written by hand in a single ledger kept by security or reception staff. This book-based approach is unreliable and inefficient. Records are often incomplete or misplaced, and verifying ownership becomes a difficult and time-consuming process. Patients or visitors looking for their belongings have to move from office to office, flipping through pages, hoping to find a match. Sometimes, items are released to the wrong person due to unclear verification, while genuine owners never recover theirs.

The manual method also makes accountability nearly impossible. There is no central database to track items which were found, which were returned or which are still pending. In cases of disputes, staff has no reliable reference point to confirm what was recorded. Over time, this damages the hospitals image and erodes public trust.

For patients already dealing with illness or emotional distress, losing personal items only worsens their experience. Many describe feelings of anger, frustration and hopelessness when told to check again tomorrow, an unnecessary burden in an already overwhelming environment.

Therefore, there is an urgent need for a web-based system that automates how lost and found items are reported, tracked and recovered at Mulago Hospital. Such a system would provide a centralized digital database, instant record updates and secure verification, making the entire process faster, more transparent and more reliable. By doing so, Mulago would not only improve efficiency and accountability but also restore confidence and peace of mind to the patients and families it serves.

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Ahmad, E., & Alammary, A. (2022). Towards unified management of software capstone projects in Saudi universities: a survey-based study. *Arab Gulf Journal of Scientific Research*, 40(2), 118-138.

1.3 Project Goal and Objectives

1.3.1 Project Goal

This project seeks to design and develop a web-based system for Mulago National Referral Hospital to improve the recovery of lost and found items.

1.3.2 Project Objectives

To study and analyze the current lost and found system used by Mulago National Referral Hospital.

To identify requirements for designing a based system in Mulago National Referral Hospital.

To design and develop a based system for Mulago National Referral Hospital.

To test a web-based system that have been developed.

To implement the web-based system in Mulago National Referral Hospital.

1.3.3 Project Scope Summary

The project aims to develop a web based lost and found system for Mulago Hospital to digitize the reporting and recovery of lost items, replacing manual methods to improve accuracy, transparency, and accountability.

Project duration and scope: The project will span three months, following the system development lifecycle cycle framework with five key phases, each producing specific deliverables aimed at developing a function, efficient, and secure system.

System analysis: The system analysis phase examines Mulago hospital's lost and found process through interviews, questionnaires, observations and document reviews involving staff, patients, and its personnel. The findings will identify inefficiencies and guide system requirements definition (Creswell& Creswell, 2023).

System design phase: The system design phase translates requirements into requirements into detailed models, including DFDs, ERDs and interface mockups, to define system structure and operation, aiming to create a secure, user friendly and responsive web-based system.

System development phase: The phase focuses on building the prototype and final system using the prototyping model with HTML, CSS, bootstrap, php and MYSQL. It includes modules for user management, lost and found reporting, tracking and administration, emphasizing validation, security and efficiency (Maulana al., 2021).

System testing phase: This phase ensures functionality, reliability and security through unit, integration, system and user acceptance testing involving staff, patients and visitors to assess performance and usability.

Documentation and deployment phase: In the final phase, the team will prepare comprehensive documentation, deploy the system on a local or online server and conduct user training. Key outputs include a fully functional and found web platform, a MYSQL database, design documents, testing and user manuals and a complete project report for presentation and evaluation.

Expected outcomes: The platform will eliminate paperwork, prevent record loss and enhance efficiency, while improving staff accountability, real-time data access and transparency between the hospital and its clients.

In conclusion, the project will provide a secure, responsive and modern web-based system to automate lost and found management at Mulago National Referral Hospital. It will enhance departmental coordination, speed up item recovery and improve record accuracy, showcasing how web technologies like HTML, CSS. Bootstrap, PHP and MYSQL can effectively address real institutional challenges.

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Maulana, F. I., Susanto, V., Shilo, P., Gunawan, J., Pangestu, G., & Budi Raharja, D. R. (2021, September). Design and Development of Website Dr. Changkitchen Diet Catering Using SDLC Waterfall Model. In Proceedings of the 6th International Conference on Sustainable Information Engineering and Technology (pp. 75-79).

Sumarsono, S., Sakkinah, I. S., Permanasari, A. E., & Pranggono, B. (2023). Development of a mobile health infrastructure for non-communicable diseases using design science research method: a case study. *Journal of Ambient Intelligence and Humanized Computing*, 14(9), 12563-12574.

1.4 Anticipated Significance of Project

The proposed web based lost and found system will automate Mulago Hospital's manual processes, providing centralized platform for reporting, tracking and recovering items. It will enhance transparency, reduce errors, save time, improve accountability enable reporting, and strengthen department coordination. The project also gives the student team practical experience in system analysis, development and teamwork, linking theory to real world application.

1.5 Project Assumptions

The project's success relies on assumptions regarding the operating environment, resource availability and stakeholder cooperation. This assumption from the foundation for the team's planning, design and execution.

Availability of Resources: it is assumed that all necessary resources, including computers, development tools (MYSQL, PHP, HTML, CSS, and Bootstrap), and stable internet access, workspace, and electricity, will be available and functional throughout the project. These resources are essential to ensure smooth, timely and uninterrupted development of the web-based platform.

Stakeholder participation and support: it is assumed that all stakeholders, including the project supervisor, Mulago hospital representatives and team members, will actively engage and provide timely feedback during requirements gathering, system testing and evaluation. The supervisor will offer technical guidance, while hospital staff and management will with consultations and validation of the proposed solution.

Project Scope Stability: the team assumes that the project the project's approved scope, objectives and deliverables will remain stable during development, with changes limited to necessary adjustments recommended by the supervisor or client. This stability ensures timely and budget-compliant delivery of the system.

Technology Compatibility and Functionality: it assumed that PHP, MYSQL, HTML and Bootstrap will function effectively and remain compatible with major browsers and devices, while the WAMP/XAMPP server provides a stable environment for testing before online deployment.

Data and Literature Accessibility: it is assumed that the team will have access to relevant data, documents and literature to understand the hospital's current lost and found process, which is essential for accurate requirements gathering and system design. Credible online resources and academic journals will also be used to support system development.

Team commitment and time management: it is assumed that all members of the project team will remain committed and available throughout the project lifecycle. Each member will contribute actively to research, coding, documentation and presentation activities to ensure that tasks are completed on schedule the project meet its intended objectives.

Network and System Accessibility: it is assumed that the system will operate within an environment that provides stable internet connectivity and reliable network infrastructure, enabling real time access for hospital staff and users. These assumptions underpin the project's success by ensuring resource availability, stakeholder cooperation, stable scope, and technology compatibility. While deviations may affect timelines or quality, the team is prepared to address any challenges through effective communication and collaboration.

SECTION TWO

REVIEW OF LITERATURE

2. SECTION INTRODUCTION

This section reviews literature on web-based system, digital information management and lost and found tracking platforms in organizations. Guided by the project objectives, it examines the relevance, design, implementation and challenges of web-based application, drawing insights from recent studies, journals and reports on how IT improves record management and operational efficiency, particularly in healthcare.

2.1 Web Based Systems and Digital Information Management

Web based systems, access browsers, enable remote database interaction and offer accessibility, real time data sharing and scalability (Ahmad & Alammery, 2022). They have transformed sectors like health, education and business by reducing paper-based processes, enhancing transparency and improving collaboration, accuracy and accountability (Maulana et al., 2021). Adoption of such digital platforms also boosts organization performance, especially in developing countries reliant on manual systems (World Bank, 2020).

2.2 Application of Web Based Systems in Health Institutions

Healthcare organizations increasingly use web-based systems to streamline administrative and operational workflows, including patient registration, medical records and resource management, improving efficiency and service delivery (Sumarsono et al., 2023). In Uganda the ministry of health promotes digital transformation in public hospitals, but challenges like limited ICT infrastructure, low staff ICT literacy and reliance on manual records persist (Nabukenya, 2022). Implementing a web-based platform for non-medical operations such as managing lost and found items, can enhance accountability and improve user experience at hospital like Mulago National Referral Hospital.

2.3 Lost and Found Management Systems

Lost and found management systems are digital platforms that help organizations record, track, and recover lost property, providing structured reporting and verification mechanisms (Babu et al., 2020). Unlike manual logbooks, which are prone to data loss and limited accessibility, web-

based systems allow users to upload items details and images, improving record accuracy, reducing administrative workload and enhancing transparency (Carr & Kaynak, 2007).

The design and implementation of web-based systems involve gathering user requirements, creating system models and developing interfaces for seamless database interaction. The design science research (DSR) methodology guides the development by addressing real world problems, defining objectives, designing the system and evaluating performance (peffers et al., 2008). Usability and security essential, requiring intuitive navigation, data validation and secure login mechanisms. Integrating PHP for backend processing, MYSQL for database management, and bootstrap for front-end design ensure a robust, responsive and maintainable system (Dennis, Wixom, & Roth, 2020).

2.4 Design and Implementation of Web Based Systems

Designing web-based systems involve collecting user requirements, modeling the system and creating user friendly interfaces. The design science research (DSR) methodology supports this by addressing real world problems, setting objectives, designing and evaluating the system (peffers et al., 2008). Key consideration includes usability, security, intuitive navigation and data validation. Employing PHP, MYSQL and bootstrap ensure a robust, responsive and maintainable system (Dennis, Wixom, & Roth, 2020).

2.5 Challenges in Development and Implementing Web Based Systems

Developing and implementing web-based systems in developing countries faces challenges such as limited funding, poor network infrastructure, low staff computer literacy, resistance to technology and security concerns (Ahmad & Alammary, 2022). Overcoming these issues requires effective user training, stakeholder engagement, proper system testing, change management, continuous monitoring and ensuring compatibility with existing processes (Carr & Kaynak, 2007). For the lost and found platform, ongoing feedback from hospital staff will help refine the system to meet practical needs.

2.6 Conclusion

The literature highlights that web-based systems improve efficiency, accountability and transparency by automating data management and reducing human errors. Although many

sectors in Uganda have adopted such technologies, hospitals often still use paper-based methods for non-clinical operations like lost and found management. Developing a web based lost and found platform for Mulago National Referral Hospital will address this providing centralized efficient and transparent system for managing lost property.

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SECTION THREE

RESEARCH METHODS

3. PROJECT METHODS

This section highlights the research methods, research design, target population, sample, sampling technique, project development process, data collection methods, project constraints and ethical considerations.

3.1 Research Design

Design science research (DSR) is a methodology for creating and evaluating innovative artifacts to solve real world problem (Hevner et al., 2004; Peffers et al., 2007). In this project, DSR will guide the development of a web lost and found system for Mulago hospital by identifying inefficiencies in the current manual process, designing and developing a digital platform and iteratively testing it with user feedback. The approach ensures a structured, user centered and practical solution, allowing for iterative refinement, improved usability and functional effectiveness. DSR is chosen because it aligns with the project's goal of providing a reliable and efficient system for managing lost items

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Design Science Research (DSR) Process Model (adapted from Peffers et al., 2007)

DSR Stage	Research Objective Addressed	Proposed Methods	Expected Results
Problem Identification	To analyze the current manual lost and found process	Observation, interviews, document review	Identify current process weaknesses.
Defined Objectives	To establish the system requirements and features needed in the new system	Stakeholder meetings, workshops	Clear and achievable system objectives
Design and Development	To create a web-based system for lost and found items	Use case diagrams, ERD, system architecture, coding (HTML, CSS, PHP, Bootstrap, MySQL)	A functional prototype of the web-based system
Demonstration	To show how the developed system addresses the challenges of the manual process.	Prototype testing, demonstrations to stakeholders, and user walkthroughs.	Confirm that the developed system efficiently manages lost and found items.
Evaluation	To test and assess the usability, reliability, and performance of the system.	User testing, validation meetings, and error debugging.	A validated, user-friendly system ready for deployment.
Communication	To prepare and present project findings and the working system to the supervisor and faculty.	Final documentation, oral presentation, submission to MUBS.	Successful defense and submission of the final report and system.

DSR Stages in Relation to the Project

Problem Identification: The team will observe and interview Mulago Hospital staff to identify challenges in the manual lost and found process, such as record loss, inefficiency, and delayed item recovery.

Define Objectives: The team will set system goals based on findings, including automating item reporting, verifying claims, and tracking recovered items.

Design and Development: The team will create system models (use case diagrams, database schema, prototypes) and develop the web-based system using PHP and MySQL

Demonstration: The team will present the prototype to hospital staff and supervisors to show how it addresses the identified challenges.

Evaluation: The team will test the system for performance, functionality, and usability, making adjustments based on user feedback.

Communication: The team will submit and present the final system and project report to the Faculty of Computing and Informatics at Makerere University Business School for assessment.

3.2 Project Organization Client

Mulago National Referral Hospital, situated on Mulago Hill in Kampala, Uganda, is the country's largest public healthcare facility and a teaching hospital affiliated with Makerere University College of Health Sciences. It operates with a bed capacity of 1,790, serving as a national referral center for specialized medical care. The hospital comprises various directorates, including Pediatrics & Child Care, Internal Medicine, Surgical Services, Nursing Services, Diagnostics, and Private Patient Services, each offering a range of specialized medical services. The hospital handles approximately 400,000 outpatient visits annually, reflecting its significant role in the Ugandan healthcare system. Currently, the management of lost and found items at Mulago Hospital involves manual processes, where patients or visitors report lost items to the security department using physical forms. These items are then logged manually, and retrieval is based on physical records, which can be prone to errors and inefficiencies. The proposed web-based system will serve hospital staff (security, receptionists, and administrators), patients, and visitors reporting or recovering items, and IT personnel maintaining the system, with estimated 50–70 active users during the initial phase.

The end-users of the system will include: Hospital staff members (Security, Receptionists, and Administrators), patients and visitors who report or recover items, and IT personnel responsible

for maintaining the system. The estimated population of active users at the initial phase is about 50–70 individuals, including staff and daily visitors who interact with the lost and found section.

3.2.1 Sampling Design

A sample of 50 respondents will be selected for the study and system design, based on Krejcie and Morgan's (1970) recommendations for a population of about 60 individuals. The study population includes security personnel, front desk staff, hospital administrators, and selected patients who frequently interact with the lost and found process at Mulago Hospital. A stratified sampling method will be used, dividing the population into relevant strata (staff categories and patients) and selecting participants proportionally from each group. This ensures that all key stakeholder groups are represented, providing reliable, relevant, and specific information for the system's functional requirements while reducing data collection time and cost.

3.3 Sources of Project Data

The project team will collect both primary and secondary data to understand the lost and found challenges at Mulago National Referral Hospital and identify their causes and possible solutions. This information will guide the development of an IT solution tailored to the hospital's needs. Primary data will be obtained from hospital documents, manuals, and interviews with key personnel, including security officers, receptionists, administrators, and other staff involved in managing lost and found items. Secondary data will be gathered from online articles, journals, and other literature related to Mulago Hospital and best practices in lost and found management within healthcare facilities.

3.4 System Analysis and Design Approaches

The project team will use an Object-Oriented Design (OOD) approach, a methodology that models software systems using objects representing real-world entities, each encapsulating data and behavior. OOD was chosen because it provides a modular, organized framework that simplifies maintenance, supports scalability, and allows for reusable components, making it ideal for complex systems with interacting entities. Its benefits include modularity, reusability, flexibility, scalability, and easier maintenance. The OOD process involves several stages: analyzing system requirements, identifying objects and their attributes and behaviors, designing object interactions and relationships, implementing the design into code, and testing and maintaining the system to ensure functionality and adaptability.

3.4.1 Data Collection Techniques

The project team will analyze Mulago Hospital's current lost and found process to identify challenges like manual record keeping, delays, and difficulties in tracking items. This will inform the requirements for a new web-based system aimed at improving efficiency, transparency, and accountability. Information will be gathered using requirement elicitation techniques.

Observation: The team will study Mulago Hospital's lost-and-found process by observing staff such as security personnel, receptionists, and administrators, as well as patients and visitors, to identify challenges and gather requirements for a web-based system that improves efficiency, transparency, and accountability.

Interviews: The team will study Mulago Hospital's lost-and-found process by observing and interviewing key stakeholders, security officers, receptionists, administrators, and selected patients or visitors—to identify challenges and gather requirements for a web-based system that enhances efficiency, transparency, and accountability.

Focus Group Discussions (FGDs): The team will study Mulago Hospital's lost-and-found process through observation, interviews with key stakeholders (security officers, receptionists, administrators, and selected patients or visitors), and focus group discussions with staff involved in lost-and-found operations, to identify challenges and gather requirements for a web-based system that improves efficiency, transparency, and accountability.

Mind Mapping: The team will study Mulago Hospital's lost-and-found process using observation, interviews, and focus groups with staff, security officers, receptionists, administrators, and selected patients or visitors, followed by mind-mapping sessions to organize and prioritize their requirements for a web-based system that improves efficiency, transparency, and accountability.

Problem Tree Analysis: A problem tree will be drawn to identify the root causes of inefficiencies in the current system and to map how the new web-based solution can address each of them. This will provide a clear linkage between identified problems and the proposed features.

The combination of these techniques will ensure that the system requirements are accurate, comprehensive, and user driven, leading to the development of an effective and sustainable Lost and Found Web-Based Information System for the hospital.

3.4.2 Design Techniques

To support system design and implementation, the following techniques will be applied:

Use Case Diagrams to show user interactions with the system

An Entity-Relationship Diagram (ERD) to represent database relationships

System Architecture Diagram to visualize components and data flow

Wireframes and Prototypes to design user interface layouts before implementation

3.5 Anticipated Project Constraints

Limited Access to Hospital Data: Some administrative data may be confidential, making it hard to obtain detailed information.

Mitigation: The team will rely on supervisor authorization and use anonymized data.

Limited Programming Skills: Some team members may lack advanced web development experience.

Mitigation: The team will utilize online learning resources and divide tasks according to members' strengths.

Time Constraints: The academic schedule provides limited time for full implementation and testing.

Mitigation: The team will follow a strict timeline and prioritize critical modules first.

Network or Power Interruptions: Inconsistent electricity and Internet connectivity may disrupt development.

Mitigation: Use local servers (WAMP) and backup data regularly.

3.6 Project Development Process

The development process will follow a simplified SDLC model, represented below:

System Planning: Identify the problem (manual lost-and-found issues) and define clear project objectives (centralized tracking, faster recovery, and accountability).

System Analysis: Gather and analyze requirements via observation, interviews, and document review; document functional and non-functional needs.

System Design: Create models and blueprints (use-case diagrams, ERDs, wireframes, class diagrams, database schema) that specify how the system will work.

System Development: Implement the design: build the database (MySQL) and code frontend/back-end modules (PHP, HTML, CSS, JavaScript); integrate components.

Testing & Validation: Run unit, integration, system, and user-acceptance tests; log and fix defects; verify the system meets requirements and is stable.

Deployment & Documentation: Host the system (configure server environment), release to users, prepare technical and user manuals, and provide training/support.

3.7 Ethical Considerations

The project will uphold ethical research standards by ensuring confidentiality of collected data, obtaining consent from participants, and using the system responsibly. Sensitive information will not be shared publicly. The team will also properly reference all external sources and ensure originality through plagiarism checks.

3.8 Timeline & Milestones

Activity	Month 1	Month 2	Month 3
Problem Identification & Data Collection	✓ ✓ ✓		
System Analysis & Design	✓	✓ ✓	
System Development		✓ ✓	✓
Testing & Evaluation			✓ ✓
Documentation & Presentation			✓ ✓ ✓

3.9 Disclosure and Declaration Statement

The project team declares that no conflict of interest exists regarding this project. The system is being developed solely for academic purposes and to benefit Mulago National Referral Hospital. The team also acknowledges that Generative AI tools (such as ChatGPT) were used under supervision for drafting, editing, and organizing documentation, not for writing code. The use of AI tools helped the project team improve clarity, structure, and consistency in reports, save time during documentation, and enhance overall presentation quality. All ideas and code were independently developed, reviewed, and refined by the team.

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APPENDICES

I: Proposed Project Budget

Item	Description	Estimated Cost (UGX)
Software Development Tools	PHP, MySQL, HTML, CSS, Bootstrap (Free/Open Source)	0
Hosting & Domain Registration	Online deployment for live system (1 year)	250,000
Internet Costs	Data bundles for research and testing (3 months)	100,000
Printing & Documentation	Proposal, report printing, and binding	150,000
Transport	Movement to Mulago Hospital for interviews	200,000
Refreshments	During data collection & meetings	100,000
Miscellaneous	Contingency fund for unexpected costs	50,000
Total Estimated Cost		850,000

II: Data Collection Tools

Interview Guide: Interviews will be conducted with key Mulago Hospital staff, including security officers, receptionists, administrators, cleaners, and selected patients or visitors, to understand the current processes, challenges, and experiences related to managing lost and found items and expectations from a digital lost and found platform.

Observation Checklist: The research team will observe security officers, receptionists, and administrators to understand how lost items are recorded, stored, and returned to their rightful owners.

Focus Group Discussion (FGD): A Focus Group Discussion will be held with security officers, receptionists, and administrative staff to validate user requirements and gather insights for the design of the proposed system.

III: Schedule of Activities (Gantt Chart)

Activity	Month 1	Month 2	Month 3
Problem Identification & Data Collection	✓ ✓ ✓		
System Analysis & Design	✓	✓ ✓	
System Development (Coding)		✓ ✓	✓
Testing & Evaluation			✓ ✓
Documentation & Final Presentation			✓ ✓ ✓