

**JUSTICE360: A DIGITAL CRIME REPORTING AND RECORDING
MANAGEMENT SYSTEM CASE STUDY: UGANDA CHRISTIAN UNIVERSITY
POLICE STATION**

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**UGANDA CHRISTIAN
UNIVERSITY**

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Declaration

We hereby declare that the project titled “**Justice360**” is our original work carried out as part of the academic requirements for the award of a Bachelor’s Degree at Uganda Christian University (UCU).

This project has not been submitted to any other institution of higher learning for any academic qualification. All sources of information, literature, and materials used in this work have been properly acknowledged and cited in accordance with academic standards and UCU guidelines.

We take full responsibility for the content and authenticity of this project.

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Dedication

This project is dedicated to **Uganda Christian University (UCU)** for nurturing innovation, integrity, and excellence in technology education.

We also dedicate this work to the wider community, especially citizens who face challenges in reporting crimes due to fear, inefficiency, or lack of proper systems. May this system contribute to safer communities, improved transparency, and faster response to criminal incidents.

Finally, we dedicate this project to law enforcement officers and community leaders who work tirelessly to maintain peace, justice, and order in our society.

ACKNOWLEDGEMENT

As a team, we wish to express our sincerest thanks to all those who participated in all stages of development of Justice360, our digital crime reporting and recording system.

First and foremost, among those whom we would like to extend our heartfelt thanks to are:

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Mr. Solomon Opio for his invaluable advice and ongoing support throughout this project

We are especially grateful to the officers and administrative staff of UCU Police Station, who allowed us to use their operations as a case study. Their willingness to share information about current crime reporting procedures and challenges greatly influenced the design and structure of this system.

Our heartfelt thanks to:

Our families for their unwavering encouragement, patience, and inspiration.

Uganda Christian University for providing the academic support and the ground upon which this project has been based.

The Computing Department of Uganda Christian University for giving us the technical competence and understanding required to bring Crime reporting and reporting management system, every one of you made it all possible. For coming with us on our journey to build solutions for Uganda's Security sector:

Abstract

This study examines the challenges associated with the manual crime reporting and record-keeping system used at the Uganda Christian University (UCU) Police Station. The existing system relies heavily on paper records and the Station Diary (SD) book, which leads to problems such as slow information retrieval, risk of data loss, lack of standardized reporting, and difficulties in tracking crime cases. These limitations affect the efficiency of law enforcement operations and reduce accountability.

To address these challenges, the study proposes the development of Justice360, a Digital Crime Reporting and Record Management System (CRRS). The study adopted a case study approach where data was collected through interviews, questionnaires, and observations to understand the weaknesses of the current system and identify user requirements.

The system was developed using the Agile software development methodology and implemented using modern web technologies to provide a secure and centralized platform for crime reporting and record management. The proposed system improves data security, enhances efficiency in accessing records, and supports faster and more reliable crime reporting within the university community.

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CHAPTER ONE: INTRODUCTION.

Effective crime reporting and record management are essential for maintaining safety, accountability, and efficient law enforcement operations. However, many institutions, particularly in developing contexts, still rely on manual paper-based systems such as station diaries and physical files to record crime incidents. These traditional methods often lead to challenges including slow retrieval of records, risk of data loss, limited confidentiality, and difficulty in tracking ongoing investigations. Such limitations can reduce operational efficiency and discourage members of the community from reporting crimes. In response to these challenges, this project presents the design and implementation of a **web-based Crime Reporting and Record Management System (CRRS)** for the Uganda Christian University Police Station. The system aims to provide a secure and centralized digital platform that improves crime reporting, enhances record management, supports case tracking, and strengthens transparency and efficiency in handling crime-related incidents within the university community.

1.1. Background of the Study

Modern policing increasingly relies on digital systems to manage crime reports, track case progress, store evidence, and support decision-making. These systems improve efficiency by enabling faster retrieval of records, secure data storage, better coordination among officers, and the generation of statistical reports that assist in planning and crime prevention.

Despite these advancements, the UCU Police Station at Uganda Christian University in Mukono District relied entirely on handwritten Station Diary (SD) books and manual filing systems for crime reporting and case management. Officers recorded incidents in diary books, stored case files physically, and documented evidence in separate folders. Retrieving past records required searching through multiple books and files, often causing delays, difficulty in tracking cases, and risks of record loss or damage. Such limitations reduce efficiency in an environment where confidentiality, speed, and accuracy are important.

Furthermore, the manual reporting process discouraged members of the university community from reporting crimes due to concerns about privacy and transparency. Survey findings (Mubangizi & Kizza, 2014), indicated that 72% of respondents were concerned about lack of confidentiality, 60% feared stigma or blame when reporting crimes, and 55% lacked confidence that reported cases would receive proper follow-up.

The Proposed Digital crime reporting and recording management system addresses these challenges through, improving reporting, case tracking, and overall policing efficiency at UCU Police Station.

1.2. Problem Statement

The major problem at the Uganda Christian University Police Station is the inefficiency and unreliability of the manual crime reporting and recording system.

This problem is mainly caused by reliance on handwritten notes and the Station Diary book, which are slow, insecure, unorganized and make record storage and retrieval very difficult. In their study, (Mubangizi & Kizza, 2014) found out that 72% of respondents cited lack of confidentiality, while 60% feared stigma or blame and 55% lacked trust that reporting would lead to action. Additional factors include fear of retaliation, long reporting procedures, limited awareness of reporting mechanisms, and time constraints due to academic and work commitments. These factors collectively explain the low levels of crime reporting within the UCU community. Consequently, crime records are difficult to retrieve, evidence may be misplaced or damaged, investigations are delayed, case tracking is poor and trust in the reporting system is reduced.

1.3. Objectives of the study

1.3.1. Main Objective

The main objective of the study is to design and implement a secure, Digital Crime Reporting and Record Management System that improves efficiency, transparency, confidentiality, and accountability in crime reporting and case management at Uganda Christian University.

1.3.2. Specific Objectives.

- To analyze and study the problems associated with the current manual paper-based crime reporting and recording system at Uganda Christian University Police Station.
- To design and implement a digital system to address the problems associated with the current manual paper-based system.
- To test the implemented digital crime reporting and recording system.

1.4. Project Scope

This project focuses on the design and implementation of a digital **Crime Reporting and Record Management System (CRRS)** for the Uganda Christian University (UCU) Police Station located in Mukono District. The system is intended to support members of the university community, including students, staff, and security personnel, in reporting crime incidents and managing case records more efficiently.

However, the system does not include court trial management, sentencing processes, or integration with national police databases, as these fall outside the scope of the project management, transparency and responsiveness in handling crime-related incidents within the university.

The platform allows users to submit crime reports online, including the option of anonymous reporting, while enabling authorized police officers to review reports, assign cases, upload digital evidence, and track case progress through a centralized system.

Technically, the system was developed as a web-based application accessible through modern web browsers and includes features such as user authentication, role-based access control, case management, officer assignment, and real-time case status tracking.

The project was carried out over a period of seven months, from September 2025 to March 2026, covering requirement gathering, system design, development, testing, and documentation.

1.5. System Overview

The Crime Reporting and Record Management System (CRRS) is a web-based platform developed to improve how crimes are reported, recorded, and managed within Uganda Christian University. The system provides a digital interface through which members of the university community can report crime incidents easily, while enabling security personnel to manage and track reported cases efficiently. By replacing the traditional paper-based reporting process, the system aims to enhance efficiency, confidentiality, and accuracy in handling crime-related information.

The system supports both registered and anonymous crime reporting, allowing individuals to submit crime information even when they prefer not to disclose their identity. Once a report is submitted, it is stored in a centralized database where authorized officers can review the case, upload digital evidence, assign investigators, and track the progress of investigations. Role-based access control ensures that only authorized personnel can access sensitive information, while case status updates provide transparency in the investigation process.

CHAPTER TWO: LITERATURE REVIEW

The management of crime is fundamentally a problem of information structure, control and accessibility. Investigative effectiveness is directly proportional to the quality, integrity and how easy it is to retrieve recorded data. Where crime information is fragmented across manual files and unstructured documentation processes, institutional inefficiency becomes embedded within operational practice.

2.1. Challenges of Manuel Systems.

Scholarly literature consistently identifies manual record environments as vulnerable to duplication errors, unauthorized alterations, delayed retrieval and irreversible loss. The absence of structured indexing mechanisms and automated audit trails weakens institutional accountability and constrains evidence-based policing. Hughes and Jackson (2004) emphasize that the inefficiencies inherent in paper-based crime documentation systems significantly reduce investigative responsiveness and operational transparency.

2.2. Significance of Digital Systems.

Crime Records Management Systems (CRMS) are conceptualized within information systems theory as centralized data architectures designed to support structured documentation, secure storage, controlled access and analytical processing of crime-related information. These systems transform raw incident reports into organized datasets capable of supporting investigative workflows, supervisory oversight and strategic decision-making. (Osborne D. M. 2006)

2.3 Evolution and Adoption of Digital Crime Reporting and Recording Systems.

The evolution of digital crime management reflects broader developments in database systems, networked computing, and organizational information governance. Early digitization initiatives primarily focused on record preservation; however, contemporary CRMS platforms incorporate workflow automation, role-based authentication, real-time reporting dashboards, and performance analytics. These capabilities reposition crime data from passive documentation to active intelligence assets.

Implementation dynamics vary across contexts. While technologically advanced jurisdictions operate interoperable, integrated systems, developing environments face infrastructural constraints, budgetary limitations and institutional resistance to change. Studies examining policing institutions within Uganda highlight continued reliance on manual record systems, reinforcing the need for scalable and context-sensitive digital solutions (Mubangizi & Kizza, 2014).

The conceptual foundation of the Crime Reporting and Record Management System (CRRS) for UCU Police Station is grounded in these theoretical and empirical insights, positioning structured digital information management as the core mechanism for strengthening investigative efficiency and institutional accountability.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes the research methodology used in the development of the Crime Reporting and Record Management System (CRRS). It outlines the research design, study area, data collection methods, system development methodology and ethical considerations followed during the study. The methodology provided a structured approach for gathering information about the current crime reporting processes and identifying the requirements needed to develop an effective digital solution.

3.2. Research Design

The study adopted a **case study research design** focusing on the police station at Uganda Christian University. The case study design was selected because it allows an in-depth investigation of a specific organization or environment in order to understand existing operational processes.

A **mixed-methods approach** was used in the study, combining both qualitative and quantitative research techniques. Qualitative data helped understand the experiences and challenges faced by police officers in managing crime records, while quantitative data helped measure the level of awareness and perceptions of the university community regarding crime reporting procedures.

This combination of methods ensured that comprehensive information was collected to guide the development of the proposed system.

3.3. Study Area

The study was conducted at the police station located within Uganda Christian University. The station is responsible for handling crime reports, maintaining records of incidents and coordinating investigations within the university community.

The choice of this study area was based on the need to analyze the current manual crime reporting and record management procedures used within the institution. Understanding the operations of the police station helped identify weaknesses in the existing system and informed the design of the proposed digital solution.

3.4 Data Collection Methods

To obtain accurate information about the existing system and identify system requirements, several data collection methods were used.

3.4.1 Interviews

Interviews were conducted with police officers working at the university police station. Both structured and semi-structured interview techniques were used to allow participants to provide detailed responses.

The interviews aimed to:

- Understand the current crime reporting procedures
- Identify challenges faced when managing crime records
- Examine how case information is stored and retrieved
- Determine expectations for a computerized reporting system

The information obtained from the interviews provided insights into the operational challenges of the existing manual system.

3.4.2 Questionnaires

Questionnaires were distributed to selected members of the university community, including students. The purpose of the questionnaires was to gather quantitative data regarding crime reporting practices and perceptions of the current system.

The questionnaires focused on:

- Awareness of crime reporting procedures
- Challenges experienced when reporting crimes
- Willingness to use an online crime reporting platform
- The need for anonymous reporting mechanisms

The responses helped determine the level of demand for a digital crime reporting system within the university community.

3.4.3 Observation

Observation was also used as a data collection method to study how crime records were handled in the existing manual system. We observed daily activities at the university police station, including:

- Recording of crime reports
- Filing of case documents such as statements.

- Communication between officers when handling cases

Observation revealed several inefficiencies in the manual system including delays in retrieving records and the risk of misplacing important documents.

3.5. System Development Methodology

The development of the Crime Reporting and Record Management System followed the Agile Software Development Methodology.

Agile methodology is a flexible project management approach where work is divided into small, manageable tasks completed in short cycles, allowing teams to continuously test, review, and improve their output based on feedback. Instead of following a rigid, long-term plan, Agile encourages collaboration, regular communication, and adaptability to change, ensuring that problems are identified early and adjustments are made quickly.

We chose Agile because it delivers faster results, improves quality through ongoing testing, accommodates changing requirements, and keeps everyone involved throughout the process, leading to more efficient and successful project outcomes.

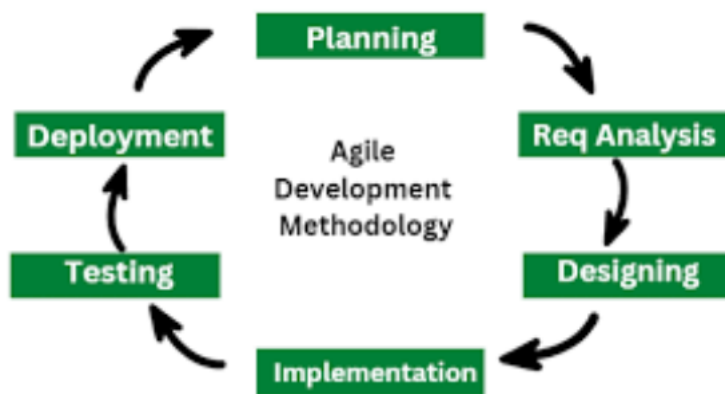


Figure 1: Agile Methodology

3.5.1 The major phases followed included:

Planning and Requirements Gathering: Collecting system requirements through interviews, questionnaires, and observation.

System Design: Designing system architecture, database structure, and user interfaces.

Implementation: Developing the system using appropriate programming technologies.

Testing: Evaluating the system to ensure it functions correctly and meets user requirements.

Deployment and Maintenance: Deploying the system and making improvements where necessary.

3.6. System Requirements Identification

The data collected from interviews, questionnaires and observation was analyzed to determine the key requirements for the proposed system.

The system was expected to:

- Allow users to create accounts and access the system securely
- Enable members of the university community to report crimes online
- Support anonymous reporting of incidents
- Allow police officers to manage and update case information
- Improve storage and retrieval of crime records
- Enhance tracking of reported cases

These requirements formed the basis for the design and development of the proposed system.

3.7. Ethical Considerations

Ethical principles were observed throughout the research process. Participants involved in interviews and questionnaires were informed about the purpose of the study before data collection.

Participation was voluntary, and respondents were assured that their responses would remain confidential. The information collected during the study was used strictly for academic purposes and handled responsibly to protect the privacy of participants and institutional data.

3.8 Limitations of the Study

During the research process, several limitations were encountered. These included limited access to historical crime records and time constraints for extended observation of police station activities. Additionally, the availability of participants for interviews sometimes affected the speed of data collection.

Despite these limitations, sufficient information was obtained to support the development of the proposed system.

CHAPTER FOUR: SYSTEM DESIGN AND IMPLEMENTATION.

This chapter presents the actual design and implementation of the Digital Crime Reporting and Management System. It describes the development environment, system modules, database implementation, interface design, and intelligent assignment mechanism. This chapter demonstrates how the system was translated from design into a fully functional working solution.

4.1. User Requirements.

Justice360 is designed to meet the requirements of two main user groups, Citizens (students and staff) and the Police force.

4.1.1. Citizens Requirements.

- User registration and authentication.
- Provide accurate and truthful information
- Give details of the incident
- State the date and time of the crime
- Specify the location of the incident
- Identify suspects
- Provide information about witnesses
- Submit supporting evidence
- Provide personal identification details
- Report the crime promptly
- Cooperate with authorities during investigations
- Avoid giving false or misleading information

4.1.2. Police Force Requirements.

- Receive and record complaints accurately
- Verify and assess the reported information
- Register the case in the system
- Ensure confidentiality and data protection
- Collect and preserve evidence properly
- Investigate the crime thoroughly
- Follow legal procedures and protocols

- Update records and maintain case files
- Communicate with the complainant
- Coordinate with other agencies if needed
- Take appropriate action (arrests, warnings, referrals)
- Prepare reports for court or higher authorities

4.2. System Requirements.

The system requirements specify the functions and features of Justice360. These are divided into Functional and Non-functional requirements.

4.2.1. Functional Requirements.

Functional requirements detail the specific operations that the system must be able to perform. Justice360 does the following:

User Management:

- The system allows students, staff and police officers to register, log in, and update their accounts.
- The system also has different user roles with multiple access layers.

Crime reporting:

- The system enables citizens to report crime.
- The system enables police officers to record reported crimes.

Crime Management:

- The system allows admins to assign crimes to officers.
- Officers can upload evidence, statements, and reports.
- Users can get feedback and track reported cases.

Crime insights:

The system has a feature where police officers can track:

- Crime hotspots.
- Most reported crimes.

4.2.2. Non-Functional Requirements.

These are requirements that specify the properties that the system must possess. Justice360 possesses the following non-functional requirements.

Performance:

- The system is responsive with quick loading times.
- The system handles a lot of users at the same time.

Security:

- The system protects user data and offers privacy.
- The system has secure authentication and authorization.
- The system has role-based access, limiting access to sensitive data.

Usability:

- The system is easy to use and intuitive.

Reliability:

- The system is available and reliable 24/7.
- The system has minimal downtime and recovery from failure.

Scalability:

- The system is able to accommodate future growth in users and data.

Maintainability:

- The system is easy to maintain and continues to run.

4.3. System Design.

The system has a multi-tiered architecture, which is the common solution for web applications. The multi-tiered architecture shall consist of the following layers:

Client/Presentation Layer:

The Presentation Layer handles the UI and UX. It shall receive user inputs and provide information to the users.

Application Layer:

This layer contains the application of business logic. It will process user requests, talk to the data layer, and enforce business rules.

Data Layer:

This layer deals with storing and retrieving data. It talks to the database management system (DBMS).

Architectural Design.

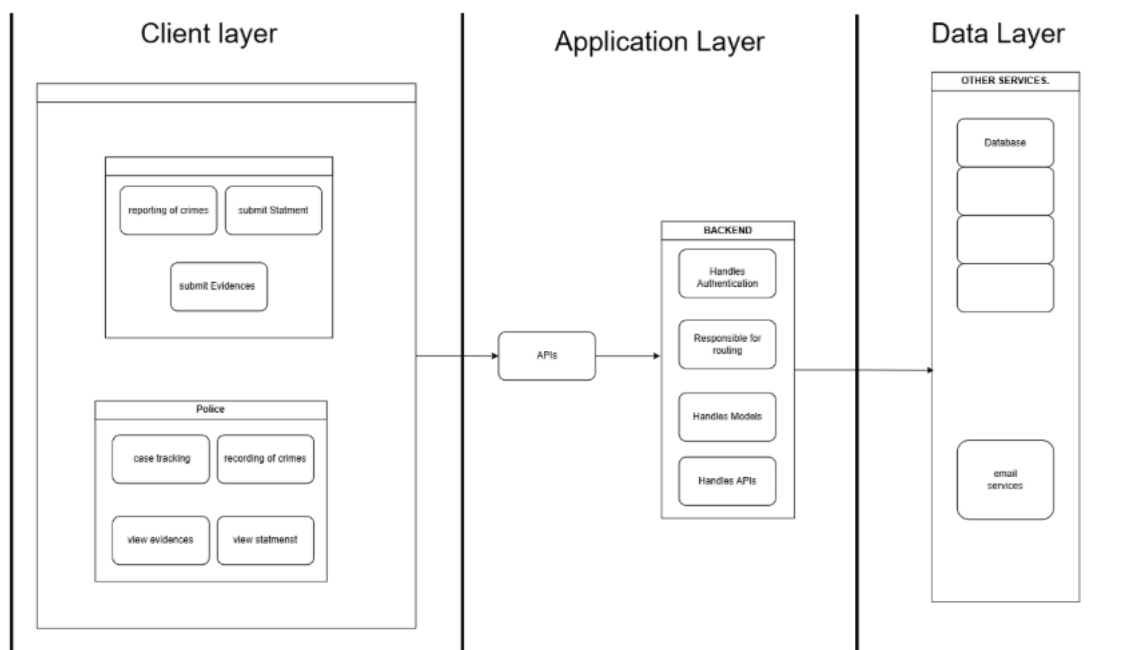


Figure 2: System Architectural Diagram

System Flow.

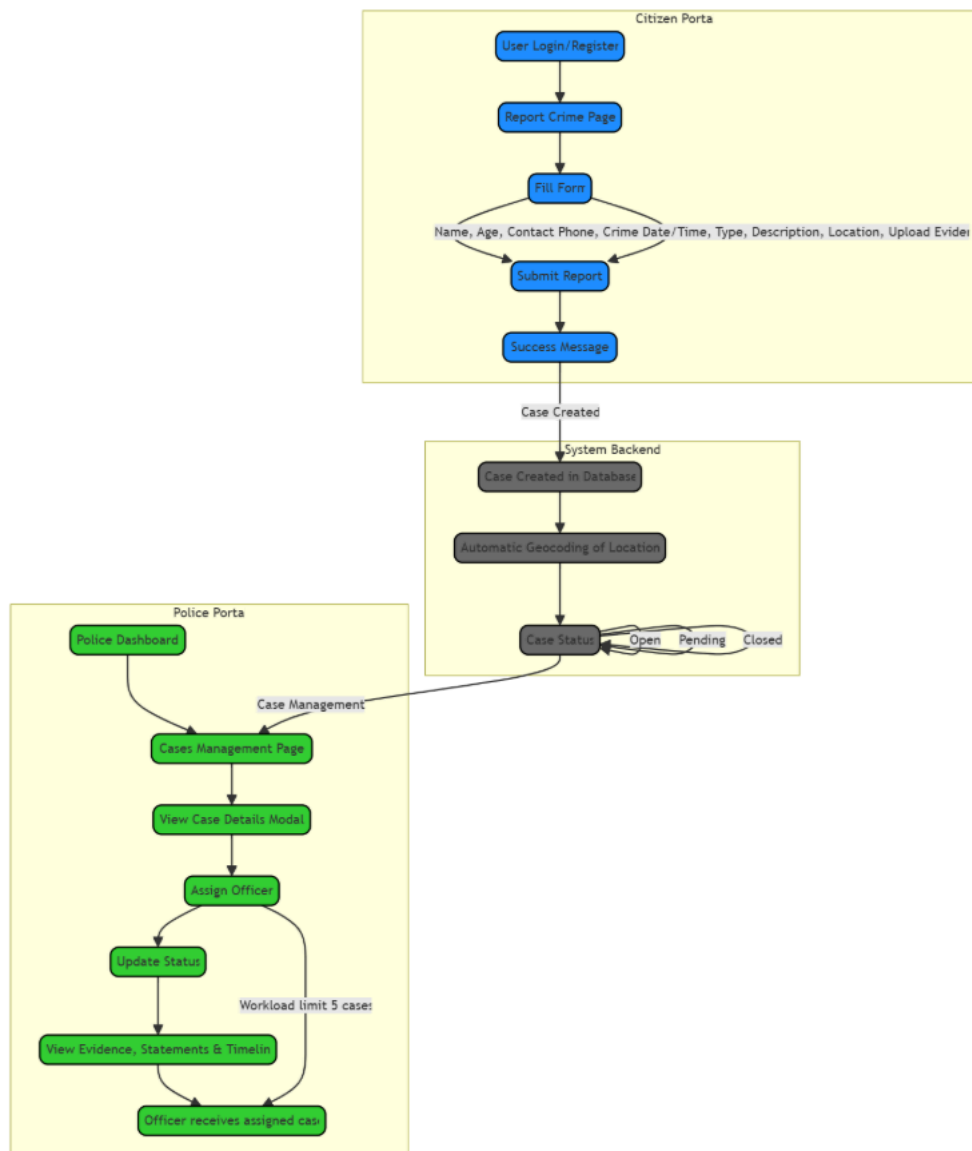


Figure 3: System Flow

4.4. Implementation.

4.4.1. System Design Implementation.

A MERN stack full stack was employed while developing the application to ensure scalability, maintainability, and responsiveness. The tools and technologies used are as follows:

Backend

- Node.js : A JavaScript runtime environment used to build scalable server-side applications.

- Express.js : A lightweight and versatile Node.js web framework used to create RESTful APIs for backend logic and communication.
- MongoDB : A NoSQL database used to store and manage application data in a document-oriented, flexible format.

Frontend

- React.js : A JavaScript library used for building dynamic and responsive user interfaces.
- Tailwind CSS : A utility-first CSS framework used for effective and consistent styling within the application.

Database Management.

The system uses MongoDB, which is well-suited for holding unstructured or semi-structured data. It has flexible schema design and horizontal scaling capabilities. Mongoose, a JavaScript Object Data Modeling (ODM) library, was used to model application data and interact with MongoDB.

Development Tools

- Visual Studio Code
- Git for Version Control
- Postman for API testing

Deployment Tools

- Web server environment
- SSL configuration for HTTPS

The selected technologies ensured scalability, security, maintainability, and high performance.

CHAPTER FIVE: SYSTEM TESTING AND RESULTS.

Once the system designs were implemented, the next was system testing. Several tests were carried out on the different system modules which are discussed below.

5.1 System Testing

To get results, the system was tested. The testing took place in a number of ways which are discussed below.

5.1.1. Functional Testing

All modules were tested against functional requirements.

Result: 100% of core functions operated as expected.

5.1.2. Security Testing

Tests conducted:

- Unauthorized endpoint access.
- SQL injection attempts.
- File upload exploitation tests.
- Role privilege escalation tests.

Result: System successfully blocked unauthorized access attempts.

5.1.3. Performance Testing

The system was analyzed carefully in order to assess its performance capabilities.

Measured Results:

- Average Page Load Time: 1.8 seconds
- Assignment Time: 1.2 seconds
- Database Query Time: < 150 milliseconds
- System Uptime During Testing: 99.4%

5.2. System Test Results.

The system was implemented in modular form to enhance maintainability and scalability.

5.2.1. User Authentication Module

This module was responsible for:

- User registration
- Login
- Password hashing
- Token generation (JWT)
- Session management

Implementation Details:

- Passwords were hashed before database storage.
- JWT tokens were issued upon successful authentication.
- Tokens were validated on every protected API request.
- Role-based permissions were enforced after login.

Security Outcome: Unauthorized users could not access protected endpoints.

5.2.2. Crime Reporting Module

This module enabled users to:

- Submit crime reports
- Select crime category
- Provide incident description
- Attach evidence files
- Submit anonymously (optional)

Implementation Features:

- Form validation (client-side and server-side).
- Secure file upload with file type validation.

- Automatic timestamp recording.
- Report ID auto-generation.

Outcome: Reports were successfully stored in the database and linked to the reporting user (or marked anonymous).

5.2.3. Intelligent Officer Assignment Module

- Once a report was submitted:
- System identified report category.
- Retrieved officers with matching specialty.
- Checked availability.
- Compared active workload.
- Assigned to officer with least active cases.

Outcome: Assigned officers were able to access the cases assigned to them. No officer could access any case not assigned to them.

5.2.4. Case Tracking Module

Users could:

- View report status.
- Track case progress.
- Receive updates.
- Update case progress.
- Add investigation notes.
- Mark case as resolved or ongoing.

5.2.5. Role-Based Access Control Module

The following roles were enforced:

- Student/User
- Security Officer
- Admin/ Officer in charge.

Outcome: Each role had specific permissions defined in backend policy rules. And only users with said roles to access certain endpoints.

For example:

- Students could only view their own reports.
- Officers could only access assigned cases.
- Admin could manage users

5.2.6. Evidence Management Module

Features implemented:

- File upload validation.
- Restricted file types.
- Secure storage directory.
- Evidence linked to report ID.
- Download restrictions based on role.

Outcome: Evidence was successfully uploaded and this could

5.2.7. Database Implementation

The database was implemented in MongoDB.

Key Tables Created:

- users
- Cases.
- assignments
- Evidence
- Statements.
- Reports
- Notifications
- audit_logs

Primary keys and foreign keys ensured referential integrity.

Indexes were created on:

- Case ID
- Officer ID
- Assignment status

This improved query performance.

5.2.8. User Interface Implementation

The frontend was developed using React.js.

Key Interfaces Developed:

- Login Page
- Registration Page
- Report Submission Page
- Dashboard (Role-based)
- Case Tracking Page
- Admin Panel

Design considerations:

- Responsive layout.
- Clean interface.
- Clear navigation.
- User-friendly forms.

Outcome: User testing indicated ease of use and intuitive navigation.

5.3. System Output

The system generated the following outputs:

5.3.1. Report Confirmation

- Unique Report ID

- Timestamp
- Status notification

5.3.2. Case Status

- Updates Pending
- Assigned
- Under Investigation
- Resolved

5.3.3. Administrative Reports

- Total cases per category
- Officer workload statistics
- Resolution rate
- Monthly crime trends

These outputs supported data-driven decision-making.

5.4. Improvements Over Manual System Manual System

Manual System	New system
Paper-based reporting	Web-based secure reporting
No anonymity	Anonymous reporting supported
Manual assignment	Intelligent automated assignment
Slow tracking	Real-time tracking
Risk of data loss	Secure digital storage
No analytics	Administrative dashboards

The new system significantly improved efficiency, transparency, and security.

5.5. Challenges Encountered During Implementation

Integration issues between Reactjs frontend and Nodejs backend.

Debugging JWT authentication errors.

File upload security validation.

Handling database migrations.

Solutions:

Thorough API testing.

Logging and debugging tools.

Incremental development approach.

CHAPTER SIX: CONCLUSION, RECOMMENDATIONS AND REFERENCES.

6.1 Conclusion.

6.1.1 Summary of Findings.

Justice360 system has been developed as a web-based platform to address the challenges at the Uganda Christian University Police Station and improve the crime reporting, recording and management process. The system provides a comprehensive solution for both citizens and officers, offering features such as user management, crime reporting, crime recording, and crime management.

The implementation of Justice360 has demonstrated the potential to:

- Streamline law enforcement operations and improve efficiency.
- Enhance the process of crime management.
- Increase transparency in crime management.
- Improve communication and engagement between citizens and officers.

6.1.2 Contributions.

The Justice360 system makes several significant contributions to the Law enforcement sector:

- It provides an integrated platform that connects citizens and Police officers, simplifying the process of crime reporting, recording and management.
- It leverages digital technology to address the specific challenges faced from the use of manual paper-based systems at Uganda Christian University Police station.
- It empowers citizens by providing them with a convenient system for reporting crimes.
- It enables the police officers to operate more efficiently and handle investigation more efficiently.

6.1.3 Key Benefits.

Justice360 effectively addresses critical challenges in crime reporting and police case management by providing a modern, digital platform that benefits both citizens and law enforcement agencies.

Meets an Essential Requirement:

The system solves major problems such as delayed crime reporting, poor case tracking, manual officer assignment, and lack of transparency between citizens and police. It offers a centralized, efficient platform for reporting crimes and managing cases in real time.

Ease of Use:

The platform features an intuitive and user-friendly interface, making it accessible to citizens with basic smartphone skills as well as police officers of varying technical abilities. Both reporting and case management processes are simple and straightforward.

Extended Functionality:

Beyond basic reporting, Justice360 includes powerful features such as GPS-enabled location tracking, evidence upload, real-time case status updates, intelligent officer assignment with workload balancing, case timelines, statements management, and statistical dashboards, making it a complete end-to-end crime management solution.

Support Towards Better Security Outcomes:

By enabling faster crime reporting, quicker police response, improved case coordination, and better resource allocation, the system directly contributes to enhanced public safety, increased police efficiency, and stronger trust between communities and law enforcement in Uganda.

6.2. Recommendations.**6.2.1. Future Works.**

Although Justice360 offers a solid foundation for digital crime reporting and case management, there remains significant potential for growth and innovation.

Future enhancements could include the integration of AI-powered crime pattern analysis, facial recognition support for evidence, and a public dashboard showing real-time crime statistics. Expanding the system to cover all districts in Uganda and integrating it with emergency services (999/112) and the court system would greatly increase its effectiveness.

Building strong partnerships with the Uganda Police Force, Ministry of Internal Affairs, local governments, and civil society organizations will be key to creating a fully connected national crime management ecosystem.

Justice360 Uganda is positioned as a modern solution that bridges the gap between citizens and law enforcement by providing seamless crime reporting, efficient case handling, officer workload management, and transparent case tracking, laying a strong foundation for a safer and more responsive Uganda. But it's not the best there is, there is room for better ones.

6.2.2. Areas of Improvement.

While Justice360 provides a functional and user-friendly platform for crime reporting and case management, several key areas can be enhanced to increase its reliability, accessibility, and overall impact.

Security:

Although basic authentication and token-based access are currently implemented, the system can be further strengthened through advanced encryption methods (such as AES-256 for sensitive data), stricter Role-Based Access Control (RBAC), two-factor authentication (2FA), and regular security audits and penetration testing. This will ensure better protection of citizen reports, case details, and officer information against cyber threats.

Offline Functionality:

The current system is heavily dependent on internet connectivity, which can limit its effectiveness in rural or low-network areas of Uganda. Future versions should incorporate offline reporting capabilities, allowing citizens and officers to draft and save reports locally, with automatic synchronization once internet connectivity is restored.

Accessibility:

To reach a wider population, especially in rural communities where smartphone penetration may be low, the system could integrate USSD-based reporting (*#shortcode#), SMS-based crime reporting, and voice-enabled features. This would allow citizens without smartphones or reliable internet to report crimes easily through basic mobile phones.

Data Accuracy and Integration:

For effective case management, analytics, and timely response, continuous improvement in data quality is essential. Future enhancements should focus on integrating with the Uganda Police Force's existing systems, national ID database, court management systems, and emergency response platforms (999/112). Additionally, implementing AI-powered data validation and duplicate case detection will help maintain high accuracy in the case database.

6.2.3 Final Thoughts

Overall, Justice360 provides a strong and solid foundation for a modern, innovative, and efficient crime reporting and case management system. By addressing the current areas of improvement and actively incorporating feedback from citizens, police officers, and other stakeholders, the platform has the potential to significantly transform crime reporting and justice delivery processes in Uganda.

Its user-friendly design, practical features, and flexibility make it well-positioned for large-scale adoption across police stations, community policing units, and the general public.

Justice360 not only bridges the gap between citizens and law enforcement but also has the capacity to improve public safety, increase trust in the police, and contribute meaningfully to a more secure and responsive Uganda.

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Appendix A: Interview Guide with the Officer-in-charge UCU Police Station.

Section A: Background Information

1. How long have you served as the Officer in Charge at UCU Police Station?
2. Approximately how many cases does your station handle per month on average?

Section B: Current Crime Reporting Process

3. What are the most common types of crimes reported at UCU Police Station?
4. Walk me through the current process a student or staff member follows when reporting a crime at your station.
5. What are the biggest challenges you face with the current manual crime reporting system?
6. How long does it usually take from when a crime is reported until the case is assigned to an officer?

Section C: Challenges and Pain Points

7. What are the main difficulties officers face in managing and tracking reported cases?
8. How often do cases get lost, delayed, or poorly followed up due to paperwork?
9. Do you currently face challenges with officer workload distribution? How do you assign cases to officers?
10. How do you currently communicate case updates back to the complainants (students/staff)?

Section D: Technology and Digitalization

11. Does your station currently use any digital system or software for case management?
12. Would a digital crime reporting system (where citizens report online with GPS, photos, and statements) be useful for your station?
13. What features would you like to see in a digital crime reporting and management system?
14. How important would real-time case status updates and notifications (SMS or email) be for your operations?

Section E: Questions on Justice360.

15. Do you think allowing students to report crimes online with evidence upload would reduce the workload at the station?
16. Would you be willing to adopt such a system at UCU Police Station if it was made available?
17. What challenges do you foresee in implementing a digital system at your station?

Section F: Closing Questions

19. What is the biggest improvement you would like to see in how crimes are reported and managed at UCU?
20. Is there anything else you would like to add regarding crime reporting or case management?