

CHAPTER I

THE PROBLEM AND ITS BACKGROUND

INTRODUCTION

According to Merriam-Webster, a crime is an illegal act punishable by the government, often involving a significant breach of the law. Any act that harms others—whether physical, emotional, verbal, or mental—can be considered a crime, and such acts can deeply affect the reporting victim. Law enforcement agencies, such as the police, assist victims in filing reports and processing the necessary documentation. Individuals proven guilty of committing crimes face legal consequences as outlined by the law.

Globally, the crime rate varies significantly. Venezuela recorded the highest crime index of 83.76 in 2023, indicating severe security challenges requiring urgent government intervention. Conversely, countries like Qatar (crime index of 12.13), the UAE (15.23), and Taiwan (15.46) exhibit low crime rates, reflecting robust law enforcement and effective preventive measures (Crime Rate by Country, 2024). Understanding crime rates is crucial for assessing security conditions in various nations and implementing necessary actions to ensure public safety.

In the Philippines, the Philippine National Police (PNP) reported a 27% decrease in crime rates from January to February 2024 compared to the same period in 2023.

This decline spans several categories, including murder, homicide, physical injury, rape, robbery, theft, and vehicle-related crimes (Joviland, 2024). Initiatives such as the Crime Information, Reporting, and Analysis System (CIRAS) have contributed to these improvements by enabling law enforcement to analyze crime patterns and implement preventive measures.

According to The Global Centre for Risk and Innovation, an Emergency Management System (EMS) is a framework encompassing activities designed to prepare for, respond to, recover from, and mitigate disasters and emergencies. This system requires coordinated efforts from government agencies, non-profit organizations, and private sector partners to reduce the impact of unexpected events. By focusing on protecting the public, preserving property, and ensuring environmental and economic stability, EMS emphasizes the importance of proactive and integrated approaches to crisis management, including crime reporting systems.

Currently, the Nasugbu Municipal Police Station (MPS) uses a basic system limited to storing data on victims and suspects, accessible only to administrative personnel and assigned officers. These constraints hinder efficient case management and timely responses. Recognizing these challenges, researchers propose a Comprehensive Crime Reporting System with Case Management. This system will enhance crime reporting by integrating case folders with essential evidence, offering real-time updates, and ensuring greater accessibility for both residents and law

enforcement. By leveraging modern technologies, this initiative aims to streamline case processing and foster a safer community.

BACKGROUND AND SETTINGS OF THE STUDY

The Nasugbu Municipal Police Station (MPS) is a primary unit for maintaining law and order in the town of Nasugbu. Being the primary law enforcement agency in the area, it is responsible for protecting the well-being of its citizens, businesses, and guests alike. Among the other duties that this police department fulfills are holding community meetings, regular patrols that increases positive interactions between law enforcement officers and residents and implementing strategic crime prevention efforts. The second measure employed is to investigate the crimes reported to identify the culprits, collect evidence, and assist in their prosecution. Moreover, MPS works hand in hand with other government departments, local leaders, and community-based organizations that aim to find a lasting solution to challenges such as poverty, drug abuse, and others that contribute to crime.

The current procedure of crime reporting at the Nasugbu Municipal Police Station (MPS) is that an individual should physically go to the police station, stand before a desk officer, and give an initial interview based on a previously drafted complaint. There are two main types of case filings handled by the Nasugbu MPS: regular filing and inquest filing. Regular filing is for delayed reports or incidents

that require further investigation, while inquest filing applies to cases following warrantless arrests. Cases that are resolved at the barangay level are typically referred to as barangay-level cases or barangay-level disputes. Any complaints or reports pertaining to violations of women's and children's rights, such as domestic violence and abuse are directed to the WACPD for investigation and appropriate action. In general cases, the investigator will ask pertinent questions to the complainant regarding the case, assist the complainant in obtaining the necessary documents or folder, and collect photos and videos of the area, which are compiled into what is called a Case Folder. These documents will then be submitted to the fiscal office to file a case on behalf of the complainant.

However, the existing system at the Nasugbu MPS is primarily designed for record management and handling delayed reports. The process involves manual encoding of case folder contents into the record management system. Additionally, while online reporting is possible through the MPS's Facebook page, there is no dedicated website available for complainants to use.

The MPS encounters difficulties with its current crime reporting system with manual paperwork, inefficiencies in reporting processes, and a lack of digital platforms for streamlined reporting and emergency management. These limitations hinder the prompt and efficient reporting of crimes by the community.

To address these issues, the researchers proposed the development of a Comprehensive Crime Reporting System with Emergency Management Integration. Emergency Management involves systematic planning and collaboration to address disasters and crises, ensuring preparedness, effective response, recovery, and risk reduction. This proposed solution aims to streamline crime reporting processes, digitize operations for greater accessibility, and bolster emergency response efforts, ensuring the safety and security of the residents of Nasugbu.

STATEMENT OF THE PROBLEM

The main purpose of the proposed project is to guide the Nasugbu Municipal Police Station to an easier way of managing crime reports and organizing case folders for faster action and enforcement.

Specifically, it will attempt to answer the following questions:

1. What are common problems and constraints that the existing system faces with regards to crime reporting and emergency reporting?
2. What features and functionalities will the proposed system offer to improve crime reporting and emergency reporting?
3. What is the level of satisfaction of the respondents on the proposed system in terms of:

3.1. Crime Reporting

3.2. Emergency Reporting, and

3.3. User Interface?

4. What is the level of acceptance of the proposed system as evaluated by IT Experts in terms of:

4.1. Performance

4.2. Reliability

4.3 Security

SIGNIFICANCE OF THE STUDY

Nasugbu Municipal Police Station. The proposed system helped the station adapt to technological advances and made crime actions and law enforcement in the area faster.

Police Officers. With the proposed system, the officers at the station were able to process, manage, and create case folders more efficiently without the need to wait for the client for additional follow-ups. Also, the proposed system provided a feature that organized the documents for case folders, so that they could back up the files when the hardcopy was lost.

Nasugbu Citizens. The citizens did not need to go directly to the station to discuss or submit reports, since it was accessible on the Web. It saved both the client and the officers time from discussing whilst addressing the mentioned crime.

Future Researchers. This study may serve as reference for those will be conducting a similar study and can be used for further enhancement.

SCOPE AND LIMITATION OF THE STUDY

The system served the residents of Nasugbu and the Municipal Police Station (MPS) by providing real-time crime reporting, location detection for emergencies to enable early response, and efficient case management tools for both users and personnel. It offered residents a user-friendly mobile application to securely report emergencies and minor crimes, receive real-time updates through notifications and alerts about their cases, and submit necessary information. For the Nasugbu MPS, the system provided features such as streamlined communication among law enforcement personnel, efficient case assignment, comprehensive case management capabilities, report validation for submitted crimes, and data analysis and visualization for informed decision-making.

The study utilized a descriptive research method. Researchers conducted face-to-face surveys using questionnaires to gather data, revealing the level of satisfaction and acceptance of the system. The responses were then encoded,

transforming raw data into a manageable form and analyzing it using statistical methods to derive meaningful conclusions. Data were collected from residents of Nasugbu, law enforcement personnel, and IT experts.

The study was limited to a system responsible for reporting minor crimes by residents who had an account or were registered with the GuardianWatch system. At the request of the Nasugbu MPS, the system was implemented as a web-based platform for law enforcement personnel to ensure accessibility regardless of device capabilities. The investigation of suspects was not included, as this responsibility fell to law enforcement. The system was excluded from the iOS platform and did not support the submission of documents and evidence but remained functional for reporting minor crimes, validating reports, analyzing and visualizing crime data, and ensuring efficient case management.

DEFINITION OF TERMS

Case Management System (CMS). A digital tool within CIRAS that enables law enforcement to track, monitor, and manage cases from initiation to resolution, ensuring accountability and organized record-keeping.

CIRAS. (Crime Information, Reporting and Analysis System). It is a system that make reporting easier and accessible to all people living in a particular area.

Dashboard. A user interface that provides a real-time overview of critical system data, including reports, crime statistics, and response statuses, to support informed decision-making.

Database. A structured digital repository where all crime-related data, reports, and evidence are securely stored and managed within CIRAS.

Digital Transformation. The process of using digital technologies to create new or existing business processes, cultures, and customer experiences to meet changing business and market needs.

Emergency Management System (EMS). A system for coordinating resources, personnel, and processes to efficiently respond to and mitigate the impact of emergencies or disasters.

Geolocation. A feature that uses GPS technology to determine the location of a reported incident, allowing law enforcement to respond efficiently.

Hazard Mapping. A method of identifying and visualizing potential risks and dangers in a specific area, such as high-crime zones or disaster-prone locations, to improve safety measures and strategic planning.

Incident Report. A formal document created within the system to detail the circumstances of a reported crime, including time, location, and involved parties.

Interrogation. A process of asking the suspect, witnesses or person of interest by law enforcement officers to get information or evidence related to the crime.

IT Expert. A highly skilled professional with advanced knowledge and experience in Information Technology, specializing in areas such as system development, network administration, cybersecurity, data analytics, and technical support.

Law Enforcement Officer. Is a person that enforces law, such as police.

Minor Crimes. Crimes that are considered less severe, such as petty theft, vandalism, and disorderly conduct, which typically require quicker resolution and less legal processing than major offenses.

Quick Response. A system designed to provide immediate assistance and response to reported incidents, allowing for faster reaction times by law enforcement officers in handling minor crimes.

Real-Time Analytics. The capability of the system to process and analyze crime data as it is reported, providing immediate insights for law enforcement decision-making.

Record Management. Is a system that is used to retrieve, manage records, and storage in a digital form.

Regular Filing. It refers to a normal process of submitting legal papers or reports to the legal authorities or the court in accordance with the established methods.

WACPD. (Women and Children Protection Desk). At the police station, they handle reports of any related to women and children.

CHAPTER II

RELATED LITERATURES

This chapter presents the conceptual and research literature after thorough and in-depth searches conducted by the researchers. It also provides the technical background of the project and the conceptual framework to fully understand the research to be done, and lastly, synthesizes the study.

CONCEPTUAL LITERATURE

According to Duff and Marshall (2023), the concept of civic responsibility in reporting crimes within a democratic society, building upon Miri Gur-Arye's critical discourse. It is an ideal societal framework where citizens not only recognize but actively fulfill their duty to assist law enforcement by reporting violations, including instances of their own wrongdoing. It considers the possibility of citizens making arrests in situations where law enforcement does not intervene. It thoroughly examines the reasons behind these civic duties, assesses their scope and implementation, and discusses the potential for establishing legal requirements for reporting specific types of crimes. Additionally, the paper delves into the ethical and legal implications of citizens taking on law enforcement roles, investigating the justifiability and obligations associated with such actions within a democratic context.

The recent announcement by Philippine National Police (PNP) chief Police General Benjamin Acorda Jr. reveals a notable decline in the country's crime rate during January-February 2024, with a reduction of approximately 27% compared to the same period in 2023. This decrease is particularly evident in both Index Crimes and Focus Crimes, which encompass a range of serious offenses such as murder, robbery, rape, and theft. Index Crimes serve as significant indicators of the overall crime situation due to their severity and frequency, while Focus Crimes highlight specific categories of criminal activity prioritized for monitoring and prevention efforts by law enforcement agencies. The reported decline reflects positive progress in crime control efforts, suggesting potential improvements in public safety and law enforcement effectiveness. However, sustained efforts are necessary to address underlying factors contributing to criminal behavior and ensure long-term reductions in crime rates. The findings underscore the importance of continued vigilance and proactive strategies in maintaining law and order within the country. (Rita, 2024)

Yu and Monas (2020) shed light on the often-overlooked task of composing police reports and its critical role within law enforcement. Through discussions with officers, the researchers aimed to uncover the determinants of successful police reports. Departing from traditional perspectives that view report writing as a mere factual recording, their findings reveal the multifaceted purposes and functions of

these reports within the criminal justice system. This paradigm shift emphasizes the broader societal context and objectives of report writing, highlighting the importance of clear and transparent communication in law enforcement.

Scott (2019), states that the concept of crime varies and lacks universal agreement, often understood as actions that violate the law. However, critics argue that this perspective is limited and influenced by those holding power. They contend that crime is shaped by societal norms and serves the interests of the influential. Certain scholars assert that an exclusive focus on crime often results in punitive measures without addressing underlying societal issues. They propose a shift in how we perceive and address crime, advocating for approaches that transcend rigid legal definitions and prioritize inclusivity and healing.

The recent release of the Mobile Vic PD mobile application by the Victoria police in Canada signifies a novel approach to combating crime. This application empowers users to report minor crimes, offer anonymous tips to law enforcement, stay informed about ongoing criminal activity, receive alerts about missing children, and verify stolen property. However, a notable drawback of this application is its susceptibility to false crime reporting, lacking a robust mechanism for verifying reported incidents. Nevertheless, Mobile Vic PD aligns with the objectives set by Canadian law enforcement units, aiming to bolster public willingness to report crimes. It emphasizes non-emergency usage, serving as a tool to aid law

enforcement efforts in enhancing community safety. While not intended for emergency situations, these applications foster a sense of civic responsibility, encouraging public vigilance and collaboration with law enforcement agencies. Reported information is stored in a database, facilitating officer review and subsequent dissemination to relevant stakeholders. Ensuring prompt verification of reported incidents can significantly elevate the value and efficiency of crime reporting systems, thereby advancing the effectiveness of law enforcement operations. (Boateng, 2018)

The adoption of data dashboards in criminal justice systems reflects a trend toward leveraging technology for transparency and efficiency. Allegheny County and San Francisco exemplify this trend, developing comprehensive dashboards that offer insights into system-level and operational data. Despite challenges in integration and cleaning, the benefits are substantial, providing deeper insights into criminal justice trends. San Francisco's approach offers lessons for jurisdictions without integrated data systems, while Allegheny County demonstrates the potential for dashboards to drive systemic change. Both jurisdictions achieved success in creating user-friendly dashboards, serving as catalysts for meaningful changes. As data-driven approaches continue, dashboards will play a pivotal role in shaping criminal justice decision-making (Russo, Jannetta and Duane)

Yuan-Jung Tsai (2021) worked on the “Framework of Emergency Response System for Potential Large-Scale Landslide in Taiwan,” an emergency response framework by including data in hazard mapping and early warning were introduced. The hazard mapping large-scale incidents were categorized, each type of disaster has different hazard zones has methods identify the affected areas. This integrated framework could provide a feasible risk avoidance method for local government and residents.

Police records management systems (RMS) excel in recording criminal incidents but often lack the functionality needed for investigative tasks and case management. Despite advancements in technology, many RMS solutions remain unchanged, prompting law enforcement agencies to rely on paper-based or makeshift systems for critical case management work. In contrast, case management software offers comprehensive tools for running investigative units efficiently, supporting collaboration and ensuring data security. However, adoption is hindered by awareness gaps, procurement challenges, and budget constraints. Integrating RMS and case management capabilities can enhance incident reporting, clearance rates, and overall public safety (Birkenfeld)

Pawar emphasis on simplicity and consistency in website design resonates profoundly within the context of web-based crime reporting systems. In the realm of crime reporting platforms, the user interface plays a pivotal role in facilitating

efficient communication between law enforcement agencies and the public. Pawar underscores the importance of simplicity by advocating for the exclusion of unnecessary elements from website designs. This principle is particularly relevant in crime reporting systems, where clarity and ease of use are paramount to encourage public engagement. By streamlining the design, users can navigate the platform effortlessly, thereby expediting the reporting process and enhancing overall user experience. (Pawar)

On the other hand, the insights from Cardello (2020), further reinforce the importance of various design elements in creating an effective web-based crime reporting platform. Aligning with Pawar's emphasis on consistency, Cardello emphasizes the significance of consistency in content, elements, typography, and colors throughout the website design. Consistency in these aspects not only enhances visual appeal but also contributes to user familiarity and ease of use, thereby enhancing the overall user experience. In the context of crime reporting systems, consistent design elements contribute to the platform's credibility and reliability, instilling confidence in users to utilize the system for reporting incidents effectively.

Ram (2023), highlights HTML, CSS, and JavaScript as the fundamental elements of front-end development, essential for creating engaging and functional user interfaces. HTML provides structure to web content, CSS adds aesthetic appeal

and enables responsive design, while JavaScript enhances interactivity. Proficiency in these technologies is crucial for developers and companies aiming to deliver exceptional services in the evolving field of front-end development. Embracing HTML, CSS, and JavaScript empowers developers to craft impressive websites and applications, thereby enhancing user experience and making a notable impact in the digital domain.

The Structure Query Language (SQL), conceptualized by IBM in the early 1970s and further developed over subsequent years, stands as a foundational programming language within the realm of database management. Originally designed to facilitate interactions with relational databases, SQL has evolved to encompass a broader range of data management systems, including data stream management systems. (Becker)

Additionally, SQL is recognized as the foremost language for database operations, encompassing queries, manipulations, and data aggregation. Its versatility enables efficient organization, reorganization, and manipulation of data within relational tables, offering unmatched functionality for database management (Pickett)

Engbreth and Sahu (2023) delve into PHP's versatility in web development, stressing its crucial role in efficiently handling and presenting data for dynamic web content sourced from both static and dynamic origins. They emphasize the

importance of databases as structured repositories for dynamic data, akin to organized spreadsheets, and highlight how SQL queries executed through MySQL enable seamless data retrieval and manipulation, from simple to complex tasks. Additionally, they underscore PHP's flexibility in integrating dynamic variables into SQL queries, enabling tailored results. This symbiotic relationship between PHP and MySQL empowers developers to create responsive web applications capable of adapting to evolving data requirements.

RESEARCH LITERATURE

This section consists of information gathered from thesis and dissertations which are also relevant to the research and attempt to support the present study.

The study about An Ad-Hoc Crime Reporting Information Management System discusses about the different crimes, from serious acts like murder and to less obvious ones like theft or fraud. The research provided insights that can be useful for potential strategies in crime prevention and intervention. One of its goals is to examine how laws categorize and punish crimes which is also related to the implementation of the Guardian watch because it also focuses on handling crimes and giving appropriate punishment to it. The research developed a system that allows the residents to report crime happened within the area and for gathering and analyzing requirements needed for crime reports. Also providing law enforcement

with advanced features like a user-friendly interface, real-time analytics and emergency reporting capabilities. This idea will be helpful for developing a crime reporting system where case folders and requirements needed in a report can be handled properly. (Kommey, Opoku and Asare-Appiah)

The Development of a Software System for Real-time Management of Crime Reports in Southwestern Nigeria by Joseph Akinyede et al. (2023) is designed to tackle the challenges in the Nigeria Context. The system was developed to help the Nigeria Police Force and National Security and Civil Defense for a faster action against criminal activities and to have an organize management of crime reports. As a result, the GEOTISCM innovatively separates crime reporting and data management, improving efficiency and establishing a distinctive system identity. They highlight the importance of adopting digital platforms to streamline crime reporting, increase efficiency, and contribute to community safety. (Akinyede, Ponnle and Olebu)

Abhishek Kshirsagar et al. (2023) developed an online crime reporting system that is designed using HTML, PHP, and SQL to make a significant advancement in crime management. The goal of the system is to make crime-related services accessible to everyone and to easily submit complaints online. This also gives the police and social workers a better understanding of societal issues. It aims to fix the problems with manual crime management and use advanced technology for easier

work. The system used HTML, PHP, and SQL for developing the web-based approach. The idea will be a great help for the proposed Guardian Watch system because of the technology that the researchers were going to use in developing it. (Kshirsagar, Channe and Meshram)

Mia Villarica et al. (2023) developed the Crime Reporting System to identify patterns of crime in Laguna. The crime rate the Philippines was increasing and there's a need to an effective way of preventing crimes. The project highlights the importance of using technology for faster law enforcement and prevention of crimes within the province of Laguna. As a solution for this, the crime reporting system was developed for managing crime information and using data mining for lessening crime risk in the place. The system utilizes advanced technology to enhance community safety through comprehensive crime reporting system. It also promotes collaboration with law enforcement agencies, particularly municipal police stations for emphasizing the importance of involving local authorities for optimal system impact. (Villarica, Balahadia and Asor)

Jimmy Gandhi et al. (2021) developed a real-time emergency reporting system aimed at improving communication and coordination during critical situations. The research highlights the importance of swift and efficient reporting in emergencies, as delays in communication can significantly impact response times and the overall effectiveness of the emergency services. The authors emphasized the need for a

platform that allows users to report incidents in real time, ensuring that authorities can respond quickly and accurately.

The system proposed by Bhavesh et al. integrates multiple features that enhance the user experience, such as an intuitive interface, geolocation tracking, and automated notifications for authorities. By incorporating these features, the system aims to address challenges such as communication gaps, delayed response times, and lack of situational awareness during emergencies. Furthermore, the study stresses the significance of data security and privacy, ensuring that the information provided by users remains confidential and protected.

Thamer Alameri et al. (2022) developed a Crime Reporting and Police Controlling: Mobile and Web-Based Approach for Information-sharing in Iraq. The researchers believe that technology has the power to make law enforcement stronger and fight against crime. They observed that there's an increasing crime that go unreported because people don't feel confident reporting, they're scared, there are security threats and a lack of evidence. For improving public safety, they developed a system that will handle crime reports, which is accessible for everyone within the area. They evaluate and suggest improvements to the sharing of Crime-Report (CR) information for quicker collaboration among law enforcement. The system also offers community collaboration, which enables citizens to work with authorities in achieving peace and reducing crimes in their respective areas. The idea will be a

great help for the proposed Guardian Watch System to implement a platform that the users will be comfortable to report, ensuring their safety and privacy. (Alameri, Alhilali and Ali)

Cheng-Chien Liu et al. (2018) implements a Flood Prevention and Emergency Response System Powered by Google Earth Engine. The study aims to develop a system that focuses on its application at the three stages of floods: Post-Flood, Pre-Flood and During-Flood, it has the capability of switching among various topographic models and flexibility of managing and searching data through geospatial database. But the main function it has is the emergency response. In the proposed Guardian Watch system, emergency response is one of the key functions of the system that the residents of nasugbu can use if they wanna report sudden crimes that took place in the area. (Cheng-Chien Liu, Ming-Chang Shieh, Kung-Hwa Wang)

Vennie John Baltazar et al. (2022) developed a Disaster and Crime Reporting and Monitoring System for Hagonoy Bulacan with Decision Support Mechanism. For this research, a Monitor and Report System with Decision Support Mechanism was designed to tackle the problem of disaster and crime reporting in Hagonoy. Citizen can use web and mobile applications for reporting emergencies, accessing safety information as well as receiving updates. It is headed by the Department of Police, Fire, and MDRRMO of Hagonoy that takes care of emergency reports while

updating website. Mobile application went through experimentation which showed the system's capacity in providing efficient emergency and incident reporting, thus benefiting both citizens and LGU (Local Government Unit) of Hagonoy. The system's evaluation score when using prototyping model for software development was 4.86 which rose up to representation its high acceptance level showing readiness for deployment purposes. (Baltazar, Lagman and De Angel)

KN Jayasinghe et al. (2021) conducted a study about the impact of the crime reporting system on the effectiveness of the police service. The study discusses the challenges that some crime victims face using reporting apps and systems. Some of the problems encountered are fake identities and misleading alerts, making it hard for law enforcement to take action regarding the crime reports. The study highlights how reporting systems benefit both communities and modern law enforcement units. The idea coming from the study will be useful for the proposed Guardian Watch system for risk management and solving problems related to the usability of the system. (Jayasinghe and Perera)

Ravi Anitha et al. (2021) developed an Online Crime Report and Maintenance Using Centralized Data. The system enables residents to easily report crimes and developed a secure interface for authorized personnel only in which the information can be handled. The system has three interfaces: Administrator, Residents, and Department. The administrator is capable for managing the information and guiding

the users in reporting a crime. Residents can report crimes through the system in a more efficient and safe way. The department are the one who can manage complaints efficiently and it allows them to see and respond to reported crimes quickly. The system is web-based and uses the technologies like HTML, CSS and JavaScript, which is similar to the technologies that are planned to be used on the development of the proposed Guardian Watch system. (Anitha and Rambabu)

Siddharth Sharma et al. (2020) developed a Crime Reporting System. The system is web-based and can be accessible for online complaining and computerized management of crime records. It has three interfaces: Users, Administrators and Department, which has different functions and usage. The system helps in storing records associated with criminals, cases, and complaint records. This will be a great help for the police officers so that their work can be easier as there's no need for manual processes. The technology used are HTML, CSS, PHP, MYSQL and JavaScript, resulted to a successful development of a web-based crime reporting system. The system has four modules that makes it more organize and flexible for the users. The Station module is for registration for both citizens and administrators and once registered, they can now access the website. The Citizen module is designed only for citizens registered within the area. They can sign –in to the website and report their complaint in this module. Crime module is for entering all the details about the crime to be reported. This is where the evidences and other

details will be inputted. Administrators' module is designed only for admins for maintenance, updating and removing unnecessary data. (Sharma, Chauhan and Singh)

James Cloyd Bustillo et al. (2020) implement an Automated Incident Reporting Management System Using Mobile Technology. The system is a business solution to solved the problems on the response time of reported incidents for Butuan City Police Office (BCPO). It is a web-based system that allows the user to report incidents happened on the place. The BCPO will handle the incidents reported and take a faster action and response to this. The user maintenance module manages all types of users and includes app users profiling, authentication procedures, police users profiling, police sub-station profiling and duty rotation, which makes the system to function well and organize. Web technologies such as HTML, PHP, CSS, JavaScript and MYSQL are used in the development of the system, making it accessible to everyone. (Bustillo, Patrimonio and Mateo)

Jonardo Asor et al. (2020) conducted the Implementation of Predictive Crime Analytics in Municipal Crime Management System in Calauan, Laguna, Philippines. The study defines crime as an act that is punishable by law and offenses are based on the crime that is done, it can be minor offense or major offense. This used predictive analytics to evaluate a dataset to discover patterns that can be useful in forecasting crime occurrence. The study also shows different kinds of crimes in

Laguna and visualized to know which crime has the highest rate on the area and which place in Laguna has the highest crime rates. Consequently, the PNP was able to produce strategic planning based on historical data with the significant assistance of predictive crime analytics. (Asor and Sapin)

Lilibeth Antonio (2020) conducted research about Enhancing Barangay Justice System Through the Development of a Web-Based Crime Monitoring Module. According to this, ensuring peace and order is the most important goal of every community. People should be able to go about their daily activities without fear for their security. Public safety officials understand that maintaining individual's property, life, wellbeing of the natural environment, and handling conflicts among others are essential duties they must carry out. To solve issues regarding public safety and security, the researchers conducted a Web-Based Crime Monitoring Module which has the features for record keeping and management of offenses in the area. The main goal of the study is to develop a web-based system that will help the community of Plaridel, Bulacan to ensure peace, safety and security, which is also the goal of the proposed Guardian Watch system. Having a crime monitoring system can be a great help for faster responses and action on the reported crimes in the area, as well as preventing them from happening again. (Antonio)

Riya Lohan et al. (2019) developed an Online Crime Reporting System to solved the delays in handling real crime with the existing reporting apps. The system was

developed because the usual criminal justice system has limitations in controlling crime. The police officers are seeking to have a system that can make the operation faster and easier for them, as well as the users, to navigate. The main goal of the study is to improve the manual process of reporting a crime into a simpler approach using technology. It gives useful information about how to incorporate online reporting, sharing practical tips, highlighting challenges, and explaining the benefits of using technology for reporting crimes. (Lohan and Singh)

The Crime Management System developed by Khan, Aamir, et al. (2019) is a solution created to efficiently store and handle records related to criminals, cases, and complaint histories. The system is designed to store and manage records of crimes and user information for easier finding and organizing, and only authorized people can use and access the system to protect sensitive information. This is helpful for law enforcement agencies, making their work easier and reducing manual tasks. The study is related to the Guardian Watch system as it uses an efficient way of managing crimes with the features of a search engine for filtering and finding records, which is one of the goals of the proposed system. The technology used for the system was also HTML and PHP which can also be used for developing the web-based system of Guardian Watch. The system also suggests multilingual support and improved graphics for user-friendliness and offers ideas that can be

applied to fit the specific needs of the target client for Guardian Watch. (Khan, Singh and Chaulan)

Social Video Streaming (SVS): A Prototype Application for Street Crime Reporting developed by Zulfiqar Bhutto et al. (2019) is a prototype of system that offers an innovative solution by enabling direct streaming of crime incidents to a dedicated server through mobile devices. This ensures that law enforcement, especially police, gains instant access to critical information, fostering a more robust policing approach. This contributes to crime reduction and enhanced public safety. The system is a user-friendly designed platform for reporting crimes through the use of 3G/4G LTE or Wi-Fi connections, which is also a requirement to the proposed Guardian Watch System. The SVS system undergoes usability testing refining its features based on feedback to optimize the user experience during crime reporting. (Bhutto, Dahri and Lakho)

Mengvi Gatpandan et al. (2018) conducted a study about mining crime instance records of the Philippine National Police District, Province of Cavite, Philippines. In this study, crime management was the primary function of the police, regarding crime reports, law enforcement, and taking actions and responding to them. The DEA was used as a powerful tool for evaluating and measuring the performance of organizational units and police officers. The researchers concluded that there's an increase in the crime rate in the Philippines and that there's a need to strengthen law

enforcement. The idea of this study will be helpful to the proposed Guardian Watch system because it discusses the issues regarding crime reporting and finds solutions to enhance crime prevention programs within the area. (Gatpandan and Ambat)

Laureano Alexis Marinas et al. (2018) implement a Pragmatic Approach in Analyzing Information and Communication Technology-Based Policing and Community Involvement in Crime Prevention and Solution. Communities are vital players in enhancing a police organization's crime prevention and solution capabilities, our proposed system is one that integrates cutting-edge Information and Communication Technology (ICT) approaches as well as community involvement. Index crime data analysis, index crime clearance efficiency and index crime solution efficiency constitute the study's measurements for evaluating this approach. This further encourages more media activities to strengthen public trust for police thereby engaging the community more in preventing crimes or even providing solutions to them. The integration of these findings and strategies, will in turn develop the Guardian Watch system to become more efficient in reducing crime, improving police-community relationships and enhancing public safety. (Marinas, Saong and Tumabaga Sr.)

TECHNICAL BACKGROUND

The term crime reporting could vary: Reporting to Law Enforcement, Online Crime Reporting, Corporate Reporting Policies. (1) Law Enforcement could be reported directly to a local law officer, such as police departments or sheriff's offices. And it could be done onsite, through the phone. (2) Online Crime reporting typically needed users to provide specific information about the crime, including descriptions, images, and location data. (3) Corporate Reporting Policies were about organizations, where the staff may have needed to report criminal behaviors like fraud, theft, or workplace violence to other staff or internal compliance departments.

Since this was a web-based system proposed project, different kinds of scripting languages were needed for it to be made. Such as HTML, CSS, JavaScript, PHP, MySQL, Visual Studio Code, GitHub, and XAMPP. (1) HTML was used for the page's main content and structure and could be used for "Form Submission," in which HTML forms could collect information from the users when reporting a crime. (2) CSS or Cascading Style Sheet was used for the page's main design and look, but also its flexibility; it was able to maintain and update the system's visual design. (3) JavaScript was used for the functionality and working buttons of the system/page and the "Client-Side Form Validation," where it helped improve the user's experience by giving automatic feedback on input errors like invalid email

addresses or missing fields. (4) PHP was used for the server-side of things and could be used for “User Authentication and Authorization.” (5) MySQL was used for handling any kind of information: records, case files, evidence, etc., that were put in the system's database, and it could be used for “Reporting and Analytics,” where it served for generating reports and conducting data analysis in the crime reporting system. (6) GitHub was a platform for collaborative software development, offering tools and features that facilitated collaboration, development, and maintenance. It could also streamline workflows, enhance code quality, and provide a more robust and secure system. (8) XAMPP provided a comfortable and versatile local development environment for testing, debugging, and facilitating the development of web applications.

THEORETICAL FRAMEWORK

The proponents will use Technology Acceptance Model (TAM) as the theoretical framework for the study. TAM will be useful for Nasugbu Municipal Police Station because it can improve efficiency in crime reporting when Guardian Watch system has been made easy for use and also perceived as useful by the law enforcers; this will result into a quicker registration and processing of reported cases hence responding faster to incidents on matter of police. TAM can also help to gain trust between community and police by enabling community members to report crimes

more easily resulting into safe environments hence reducing crime rates within these communities. TAM is also useful for identifying potential obstacles in advance during development so that interventions can target them for improving user acceptance and engagement.

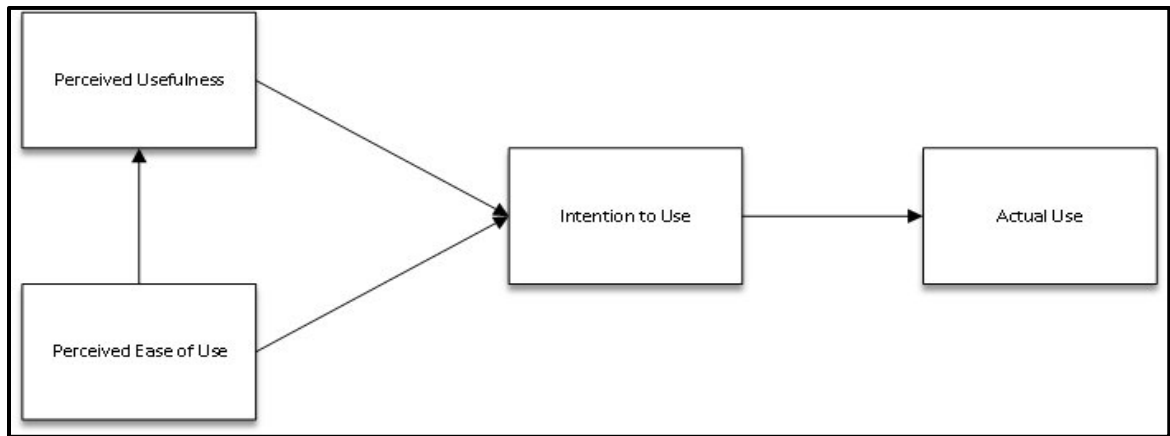


Figure 2.1 Technology Acceptance Model Framework

Figure 2.1 shows the theoretical framework of the proposed system. It provides a systematic framework that can be used to understand and predict technology adoption by users. In relation to the Guardian Watch system, perceived usefulness refers to people's understanding that the system will help them report crimes more effectively hence increase their safety. Perceived ease of use is about people's perspective of how easily they can access and use the platform to report crimes. Intention to use embodies a user's intention and willingness to use the guardian watch system based on their perceptions of its usefulness and ease of use. Lastly, actual use denotes that users will really employ the platform in reporting crimes while interacting with law enforcement agencies. (Marikyan et al., 2023).

CONCEPTUAL FRAMEWORK

The paradigm of the study was constructed using input, process, and output as framework for evaluation.

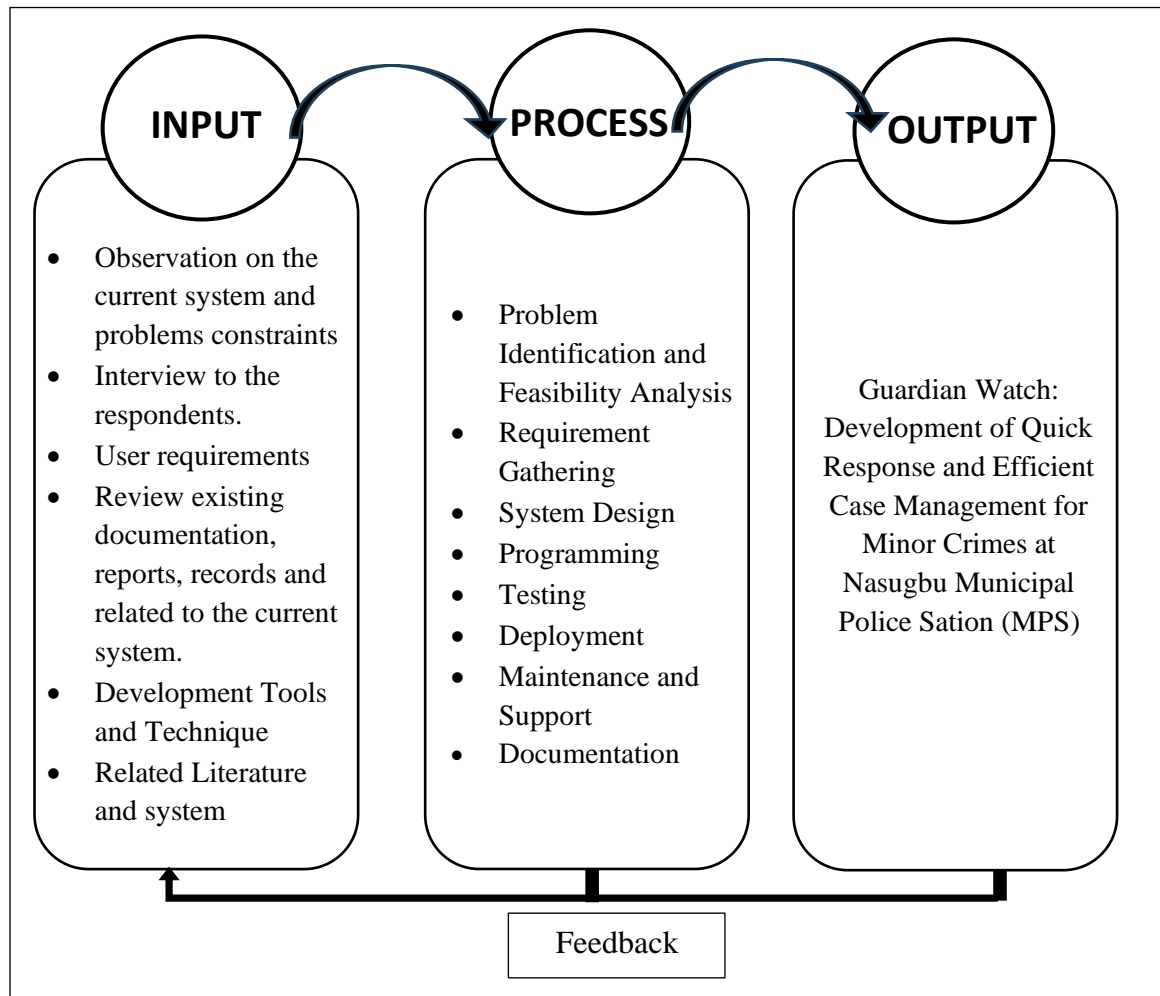


Figure 2.2

Research Paradigm on Guardian Watch: Development of Quick Response
and Efficient Case Management for Minor Crimes at
Nasugbu Municipal Police Station (MPS)

Frame 1 presents the input of the of developing the Guardian Watch system, information is collected regarding the challenges and restrictions of the current system through observation of its operations. Interviews are conducted with Nasugbu Municipal Police Station (MPS) personnel and users to comprehend their requirements. Additionally, examination of pertinent documents, reports, and records associated with the current system is undertaken. Moreover, identification of development tools and techniques is carried out, alongside the study of relevant literature and existing systems to inform the process.

Frame 2 shows the process. This includes the development process shows to the Software Development Life Cycle (SDLC), which comprises various stages. Initially, the process begins with Problem Identification and Feasibility Analysis, where system requirements are defined and the feasibility of addressing identified issues is assessed. Following this, Requirement Gathering involves identifying user needs and functionalities required for the system. System Design then follows, where the architecture and structure of the system are outlined. Subsequently, the Programming phase involves coding to implement the designed system. Testing is then conducted to ensure system functionality and address any detected issues. Once the system is deemed ready, The Feedback, Review, Adjust, Upgrade, and Remake, introducing iterative cycles throughout the development process to continuously improve and refine the system. Deployment takes place, releasing it to users.

Finally, Maintenance and Support are provided, offering continuous assistance and updates as necessary. Documentation is maintained, providing comprehensive guides and reference materials for stakeholders.

Lastly, Frame 3 shows the output. This output encompasses the implementation and ongoing maintenance of the Guardian Watch system, serving as a cornerstone in enhancing the efficiency and effectiveness of crime reporting and document management at the Nasugbu MPS.

SYNTHESIS

These studies were significant in the context of our current study, particularly in their conceptual literature. This literature provided the theoretical framework for our study, guiding our understanding of crime reporting systems. We compared these studies with our own to identify similarities and differences in the research literature.

The study of Benjamin Kommey shared the practicality of the current study as it developed a crime reporting system within the targeted area, streamlining the way crime reports and the document process were handled, ensuring user-friendly satisfaction, and preventing crimes. The difference lay in the focus on the punishment level and the severity of the crime in his system.

Aamir Khan's study mirrored the adaptability of the current study as it simplified the handling of stored records like case files, evidence, and reports/complaints for law enforcement agencies. His system also used HTML and PHP, which Guardian Watch used for its development. The only significant difference was that it was web-based.

As stated by Joseph Akinyede, his study was different from the purpose of the current study since he used real-time analytics. However, there were some similarities in that the system was created for a specific location in Southwestern Nigeria, while ours was in Nasugbu. It encouraged citizens to participate in reporting and preventing crime and helped law enforcers act quickly on criminal activities.

Zulfiqar Bhutto's study differed from the current study's purpose; first, his system focused on streaming crime incidents to a server through mobile devices; next, it was a prototype. It helped the officers gain instant access to crucial information and improve public safety. One of the requirements of Guardian Watch was a 3G/4G LTE or Wifi connection since the system was web-based.

Thamer Almeri's study differed from the current study's purpose; its main objective was information-sharing. It noted that people were too afraid, not confident, and lacked evidence when conducting a report. That was why he created

this system. Similarities included that it was web-based, like Guardian Watch, which encouraged citizens to cooperate more.

We believed Abhishek Kshiragar's study was similar to the current proposal. He developed a web-based crime reporting system using scripting languages like HTML, PHP, and SQL, similar to Guardian Watch.

In opposition, the study of KN Javasing differed from the current study's purpose since it was a "Conducted Study"; it just highlighted how reporting systems benefited the communities and modern law enforcement units. However, this idea was helpful for Guardian Watch in risk management.

Derived from Riya Lohan's study, it was similar to the purpose of the current study since it developed a similar concept, online crime reporting. Its purpose was the same as Guardian Watch; the primary goal of his study was also the same as Guardian Watch, which was to improve and reduce the manual process of filing and reporting a crime.

Influenced by Ravi Anitha, its study was similar to the purpose of the current study. Both systems were web-based, with three interfaces, just like Guardian Watch: User, Police, and Admin interface, each having its functions. It also used HTML, CSS, and JavaScript, which Guardian Watch used to implement.

As described in Siddharth Sharma's study, it was similar to the purpose of the current system, just like Ravi Anitha's study. Both studies were web-based and had three interfaces for each User: User, Admin, and Department. Both systems used the same scripting language: HTML, CSS, PHP, MySQL, and JavaScript. The critical difference was that this study had four modules while Guardian Watch had only one.

Derived from Mia V. Villarica, it was different from the purpose of the current study. Even though it was a crime reporting system, its main objective was to identify the crime patterns happening in Laguna. It managed crime information and used data mining to reduce crime risk.

The study of James Cloyd M. Bustillo was similar to the purpose of the current study; both were web-based systems with similar scripting languages; the only difference was they only had one module that handled different kinds of users of the system. Guardian Watch had three separate interfaces for each type of user.

The study of Cheng-Chien Liu differed from the current study's purpose since his system focused more on preventing possible catastrophic events, sediment-related or earthquake-related disasters. However, it was similar since it also had an emergency report. In our current study, Guardian Watch also implemented that idea.

As stated in the study of M. Mazhar Rathore, it was different from the purpose of the current study since their study focused more on medical emergency and public health. However, the idea of integrating real-time emergency response was taken into account for Guardian Watch, as it made reporting sudden crimes or emergencies faster and more accessible.

Predicated on the study of Mengvi Gatpandan, it differed from the current study's purpose since this was a "Conducted Study," not a developed system. It highlighted the primary functions of the police, crime reports, law enforcement, taking actions and swift responses to it, and how DEA was used to evaluate and measure the performance of police units.

The study of Moayang Aloqaily differed from the current study's purpose since it was about receiving the first emergency treatment for people with abnormal health conditions. Although it had emergency response that Guardian Watch had, it was about reporting crime online, so it was evident and different from one another.

Based on the study of Jonardo R. Asor, it was different from the current study's purpose because this system implemented predictive crime analytics; it highlighted crime as an act that was punishable by law and offenses. It also showed the various crimes in Laguna and visualized which crime had the highest rate. Guardian Watch was an online crime reporting system.

Although the study of Lilibeth Antonio differed from the current study's purpose, it was about improving the justice system of a Barangay through a web-based crime monitoring module. However, the objective was similar to ours, which was to keep peace, reduce crime in the area, and ensure safety.

The study of Laureano Aleix Marinas was different from the purpose of the current study since this was about implementing a pragmatic approach when using information and community technology. Although it was improving crime prevention, solution capabilities, and community involvement, it was still different from Guardian Watch. However, the idea of integrating this into the current study should make it more efficient in reducing crime and improving officer and community relations and safety.

Influenced by the study of Vennie John Baltazar, it was similar to the purpose of the current study because it was about disaster and crime reporting and monitoring systems for Hagonoy. The difference was that it had a decision support feature headed not only by the police but also by the fire and MDRRMO of Hagonoy. Another similarity was that it was web-based, like Guardian Watch.

CHAPTER III

DESIGN AND METHODOLOGY

Research Design and Methods Used

The researchers adopted the descriptive-developmental type of research method to gather information concerning Guardian Watch, a Comprehensive Crime Reporting System with Emergency Management Integration, designed for the Nasugbu Municipal Police Station (MPS).

Descriptive research was a methodological approach that sought to depict the characteristics of a phenomenon or subject under investigation (Singh, 2023). Furthermore, Hassan (2024) discussed that by using the descriptive method, the researchers were able to observe a large sample size, which helped ensure that the data was representative of the population of interest. A large sample size also helped to increase the reliability and validity of the data. Employing a systematic approach, the researchers conducted a comprehensive survey questionnaire, and the information collected from the responses was statistically presented in this type of research method for easy interpretation by the report users. Since the researchers analyzed the selected respondents' levels of satisfaction concerning the utilization of Guardian Watch, the descriptive method was effectively used to statistically analyze the data.

In developing the system, the researchers followed the phases of the agile methodology, which provided a structured yet adaptive framework that facilitated the successful development and completion of the Guardian Watch system, meeting the evolving needs of the Nasugbu MPS and the community effectively.

The developmental research, understanding how individuals change over time, was often a key focus. To capture these changes effectively, researchers carefully considered the research design they employed. While research methods served as the tools for collecting information, research design acted as the strategic framework for determining how data was gathered and analyzed (Hoose, 2020).

According to Zeba-Shahzeab and Shaheen Sajjad (2020), the Agile process model embodied the principles of rapid adaptation and flexibility in software development. It was supported by iterative development, wherein tasks were broken down into smaller iterations or parts, minimizing the need for extensive future planning. At the outset of the process, the project scope and requirements were established, with clear plans regarding the number of iterations, their duration, and scope predetermined. The phases of the Agile model typically included requirements gathering, design, development, testing, and deployment, as shown in Figure 3.1.

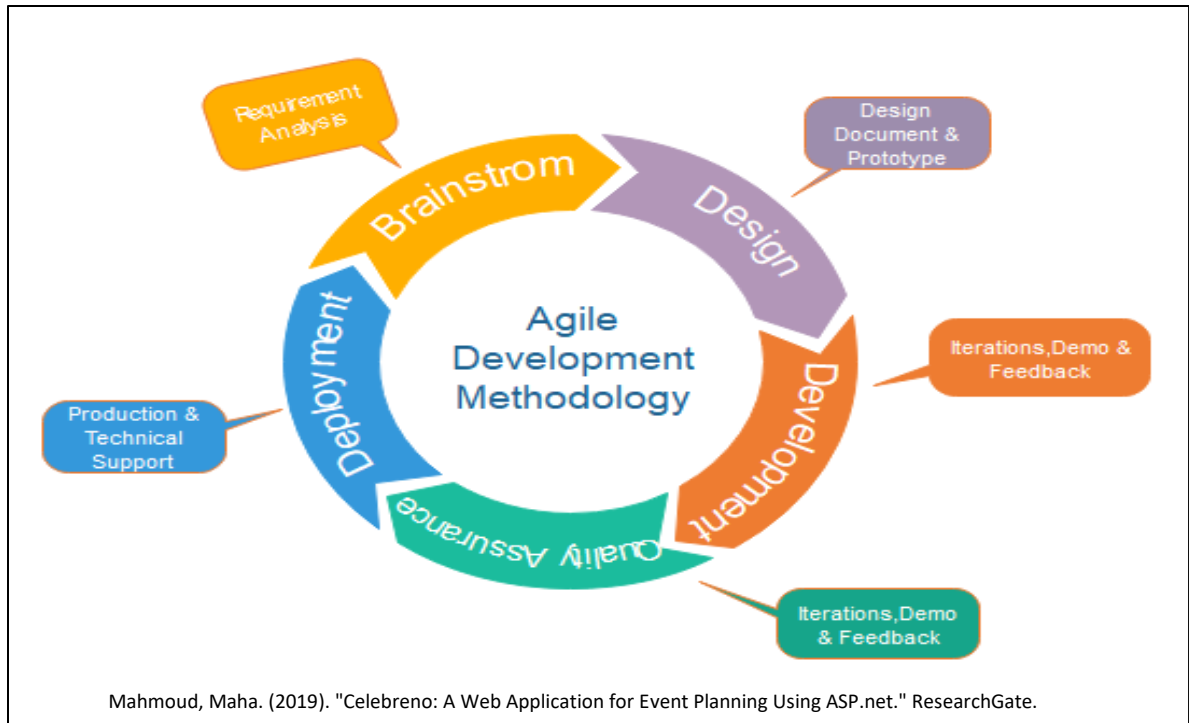


Figure 3.1 Agile Methodology

Figure 3.1 shows the Agile framework that encompasses several phases, including requirements gathering, design, development, testing, deployment. This framework is particularly well-suited for the development of crime reporting and emergency management systems due to its iterative and flexible nature.

Requirements gathering / Brainstorming phase

The requirements gathering phase involved a detailed analysis of the specific functionalities and features essential for effective crime reporting, emergency management, user access control, and seamless integration with existing systems within the law enforcement infrastructure.

Design phase

The design phase involved developers creating the architectural and user interface designs for the crime reporting and emergency response system. This entailed detailed planning and structuring of the system's architecture, user workflows, and data models to ensure they precisely matched the identified requirements and met the operational needs of law enforcement personnel.

Development phase

The development phase involved executing the functional software through short sprints that focused on specific features, with close collaboration and continuous feedback to align with stakeholder needs. The development team wrote code, built system components, and integrated modules to make the software functional.

Testing / Quality Assurance phase

The testing phase ensured the quality, functionality, and reliability of the system. Tasks included unit testing to check individual components, integration testing to verify seamless operation of different parts, and user acceptance testing to ensure alignment with user needs. These tests were essential for identifying and addressing any defects before deployment, ensuring a high-quality final product.

Deployment phase

The deployment phase involved preparing the system for installation, migrating data, conducting user training, and thoroughly testing it to smoothly integrate the system into the operations of law enforcement and the community.

DEVELOPMENT PROCESS

The development process of the Guardian Watch system began with requirements gathering sessions involving stakeholders to identify specific functionalities. This was followed by the design phase to create architectural and user interface designs. Implementation involved coding based on design specifications, followed by rigorous testing. After testing, the system was deployed, data migration was performed, and user training was conducted. The feedback phase collected insights for continuous improvement of the system's functionality and performance.

Testing

The testing phase involved conducting automated tests to ensure the software met requirements and executing test cases covering functionality, usability, security, and performance. By simulating resident login and crime reporting, errors were identified and documented for resolution.

Debugging

The debugging phase, the team analyzed error logs, reviewed code, and performed additional testing to pinpoint the root cause of issues. Once identified, bugs were fixed, and the software was retested to confirm that the issues had been successfully resolved. This iterative process continued until all known bugs had been addressed, and the software was deemed stable and ready for deployment.

Validation

In the validation phase, the team conducted user acceptance testing (UAT) to gather feedback on usability and functionality, collaborating with stakeholders to confirm the system met expectations and performed regulatory compliance checks to ensure adherence to relevant standards, making it reliable and effective for law enforcement and the community.

PROGRAMMING PROCEDURE

The proposed web-based system Guardian Watch: Development of Quick Response and Efficient Case Management for Minor Crimes at Nasugbu Municipal Police Station involved several important steps. To create an easy-to-use interface that worked well on various devices, the front-end development used HTML, CSS, and JavaScript. For managing the system's data effectively, the back-end

development used MySQL integrated with XAMPP. The researchers used different kinds of diagrams for guidance on the flow of the system.

System Architecture

Figure 3.2 System Architecture

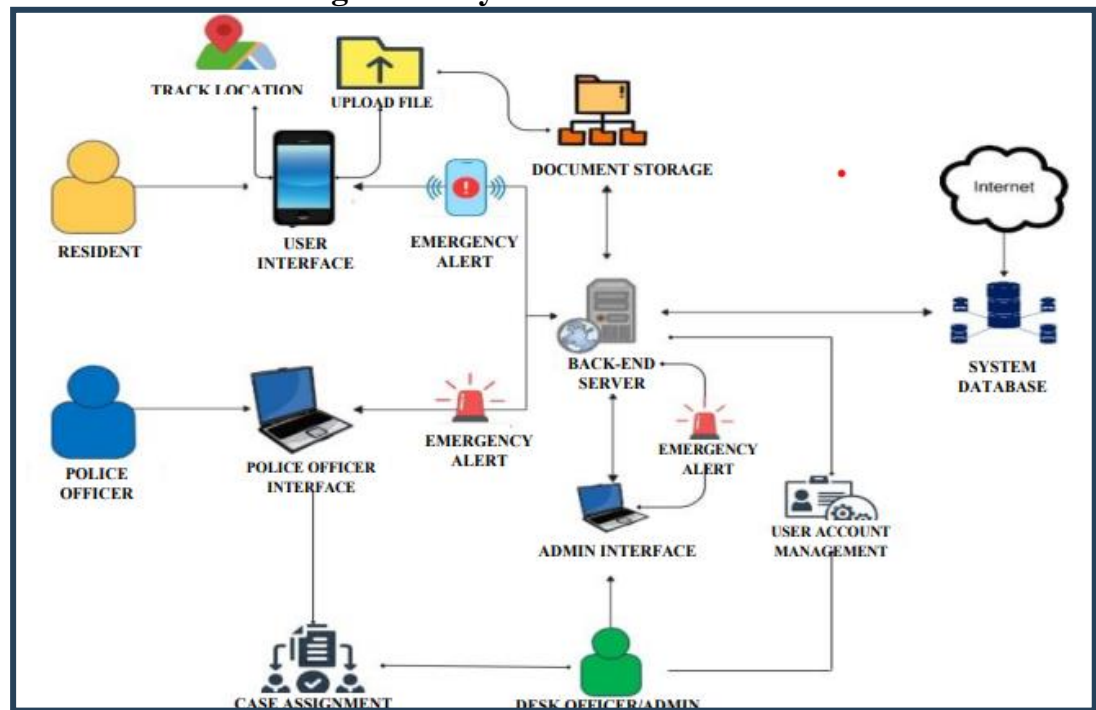


Figure 3.2 shows the System Architecture. In this system architecture, the users will interact to the system based on their roles (Resident, Police Officer and Desk Officer/Admin) and can send requests to the back-end server. This server processes these requests by accessing and modifying the data stored in the system database. Communication that works in both directions ensures efficient interaction between system components, facilitating the exchange of data and operations. The system enables the reporting of emergencies, which are handled promptly by the back-end server. The responses generated by the back-end server are then returned to the user

interfaces, providing users with requested information or confirmation of actions taken.

Requirements Analysis

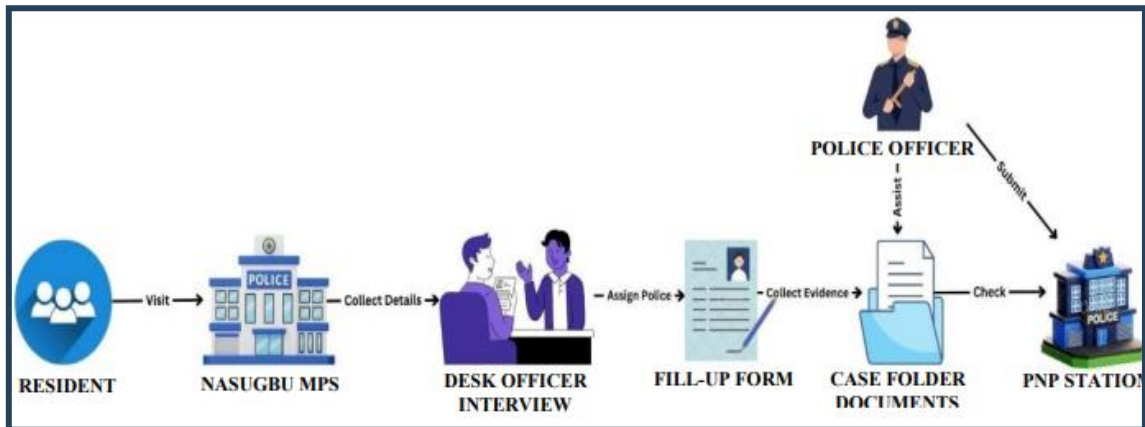


Figure 3.3 Requirements Analysis

Figure 3.3 shows the Requirements Analysis. The requirements analysis describes the flow of the existing crime reporting on the Nasugbu Municipal Police Station. The existing system is manual reporting of crimes in which the complainant will directly report their case on the Municipal Police Station. From then, the desk officer will identify what type of crime is the residents' reporting and will assign respective police officer to assist the complainant. The police officer will then guide them on completing their case folder and submit it to the PNP. This study forms the basis for the development of a comprehensive crime reporting system that streamlines the reporting process, improves efficiency, and promotes communication and communication among stakeholders

Use Case Diagram

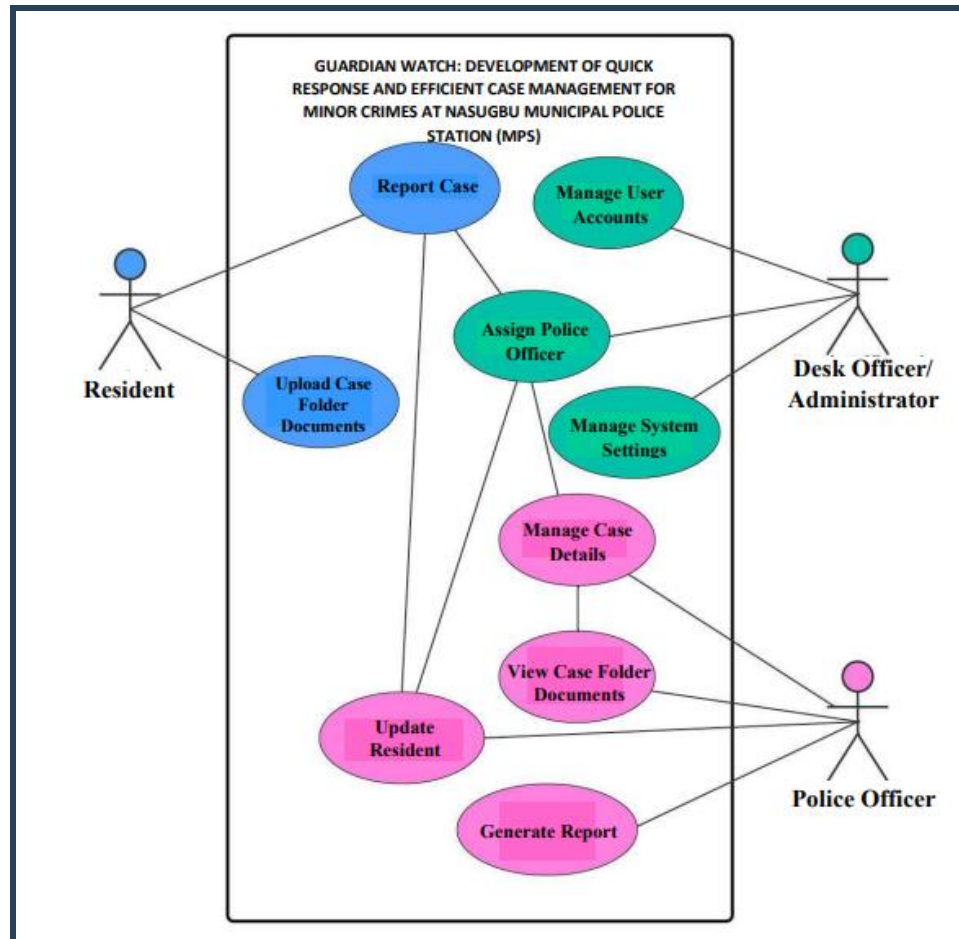


Figure 3.4 Use Case Diagram

Figure 3.4 presents the Use Case Diagram of the proposed system. A use case diagram is a graphical representation of interactions between the actors/users and the system. On the proposed system, there are three actors: Complainant/Resident, Desk Officer/Administrator, and Police Officer. The complainant can report case and upload their case folder documents. The reported crimes will be received by the desk officer to assign a police officer to assist the resident. The desk officer can also

manage user accounts and manage system settings. The police officer manage case details, update the complainant about the status of their report, view case folder documents, and generate reports for crime updates.

Context Diagram

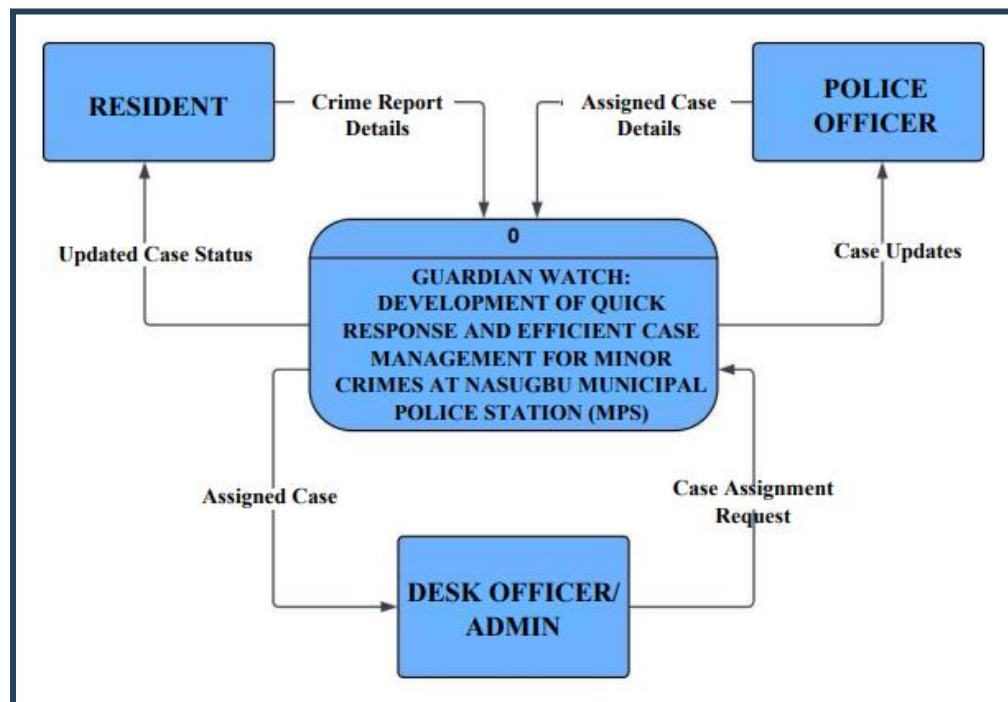


Figure 3.5 Context Diagram

Figure 3.5 shows the Context Diagram of the proposed system. A context diagram is a simple diagram that allows a quick look at a system and how it relates to other parts. It focuses on a single entity within the system and all other entities outside the system that are associated with it. The figure shows three external entities: resident, desk officer/administrator and police officer, which serves as important users of the system. Associated with them are the input that the external

entities will provide to the system and the output that they will receive from the system.

Data Flow Diagram

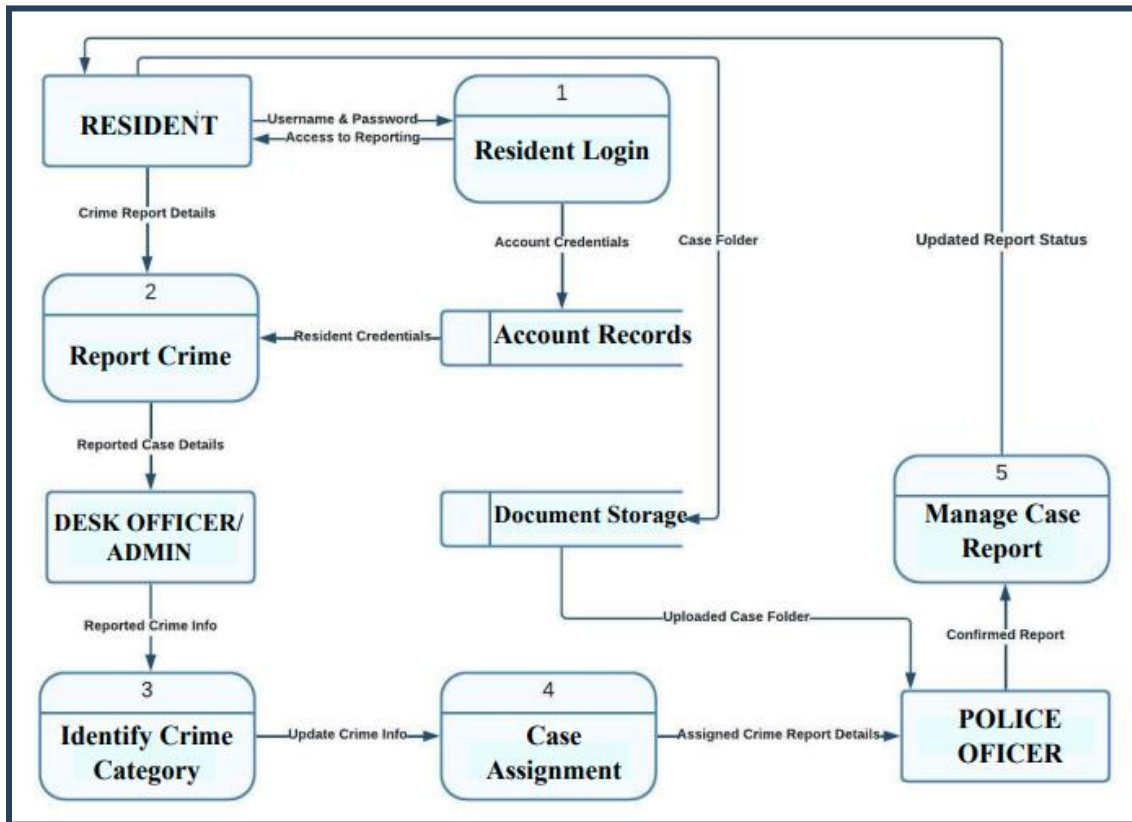


Figure 3.6 Data Flow Diagram

Figure 3.6 presents the Data Flow Diagram of the proposed system. The data flow diagram is a broader version of the context diagram and consists of two or more processes of the system. The figure has three external entities: Resident, Desk Officer/Admin, and Police Officer. These three are the primary users of the proposed system and interact with its processes. There are five processes presented in the diagram: Resident Login, Report Crime, Identify Crime Category, Case

Assignment, and Manage Case Reports. These processes are performed by the respective external entities of the system. The system includes a single data storage: Account Records, which handles the data coming from the external entities.

Entity-Relationship Diagram

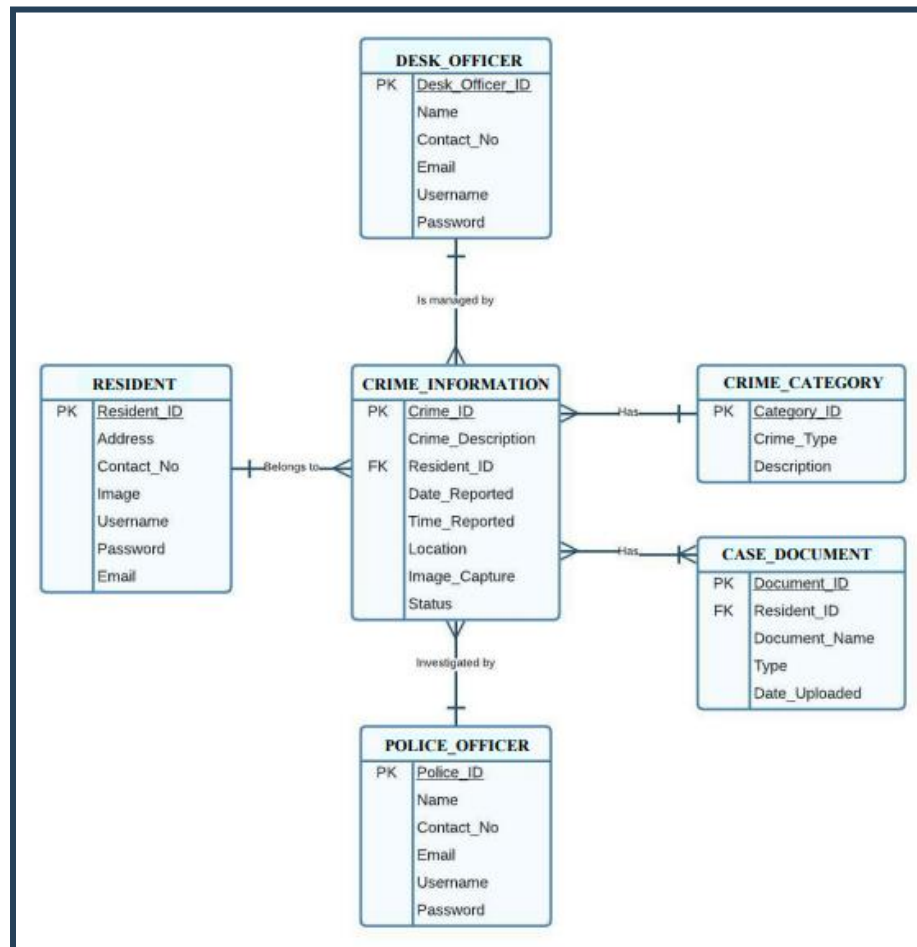


Figure 3.7 Entity Relationship Diagram

Figure 3.7 shows the Entity Relationship Diagram. ERD is a diagram that presents the entities and attributes needed to develop the system. Those entities are connected based on relationship and cardinality. From the figure, the links between

residents and crime information, allowing one resident to report multiple crimes, but only one resident per crime. The link between the desk officer and crime information, presents one desk officer can handle multiple crimes, but each crime is assigned to only one desk officer. The police officer is associated with the crime information, so one policeman can handle many crimes, but only one policeman will be assigned to each crime. The crime category link to crime information indicates that one category can be associated with many crimes' information. Lastly, each crime information should have at least one or more case documents.

HARDWARE AND SOFTWARE NEEDED IN THE DEVELOPMENT

Hardware Needed

Table 3.1
Hardware Needed in the Development

Hardware	Specification	Function
Personal Computer/ Laptop	3.4 GHz to 4.9 GHz Boost Clock Speed processor, 16GB DDR4 RAM, 256GB SSD storage, 14-inch to 15.6-inch Full HD display, 4-cell to 6-cell battery.	Development and deployment of the system
Printer	Inkjet type, Colored print technology, up to 2400 x 1200 dpi print resolution.	Testing document printing for record management
Router	802.11ac wireless standard, 1300 Mbps, 4 LAN ports, 1 WAN port, 1 USB 2.0 port.	Testing web-based system through online.

Table 3.1 presents the hardware needed for development of the proposed system. A personal Computer or Laptop is the most important hardware that will be needed for the development since this will be used for coding, testing and debugging of the system. A printer is used for printing documents such as case folders uploaded by the complainants. The printer will be used when the case folder is completed and ready to submit to the PNP.

Lastly, router is also important in the development because this will provide internet connection to the computer so that we can connect on the web server through online.

Table 3.2
Software Needed in the Development

Software	Specification	Function
Operating System	3.0 GHz processor, 16GB RAM, 256 SSD, 1920 x 1080 resolution.	Provides the platform for running the development tools, web server, and database
Web Server	Supports HTTP protocols, FTP server, Package size around 150-200 MB, Version 8.1.1	Local web server for development
Database	MySQL Version 8.0.28	Database management
Front-end Application	Versions: HTML5, CSS3, JavaScript (ES12).	User interface development
Back-end Application	PHP version 8.1.0	Server-side scripting for web development
Version Control and Collaboration	Git version 2.35.1	Source code management

Table 3.2 shows the software required to develop the proposed system includes an operating system that has high version of 10 or 11, which provides access to development tools. A web server is required for local development and testing of the web application. MySQL is required to maintain databases that store information and case information related to crime reports. On the front end, HTML, CSS, and JavaScript are used to build the user interface, while in the back, PHP is used to handle server-side logic and interact with the database Git is used for versioning control, and allows multiple developers to collaborate on the project and source code. In addition, emergency management systems can integrate emergency management tools to organize and manage digital records related to emergencies.

INSTRUMENTATION

Regarding Data Collection, the researchers used "Survey Questionnaires" that were given to Law Enforcement, Selected Barangays (with high criminal activity) within the Municipality of Nasugbu, Batangas, and IT Experts. The primary respondents targeted were law enforcement personnel who created and managed case files. Some residents of a chosen barangay were also the respondents for this study, along with IT Experts who provided insights on the technical aspects of the proposed system. The researchers used the Descriptive method to analyze and interpret responses effectively.

The researchers used scales of 1 to 5, with 5 meaning the highest value and 1 the lowest. The feedback obtained from the enforcers, staff of the station, and IT experts was crucial in integrating a brand-new system for processing, managing, and creating case files for crime investigations. Moreover, the capstone adviser reviewed the questionnaire to ensure that it met the enforcers' and experts' needs for the proposed system.

PREPARATION AND EVALUATION

To evaluate the proposed system, the researchers went to the Municipality of Nasugbu (Police Station) to interview and ask how they processed evidence, records, and case files, and to understand their perspectives and needs. A survey was given to the officers, selected barangays with the highest crime rates, and IT experts to gather feedback on "Guardian Watch's" features. The evaluation process used the "Likert Scale" with 5 points to determine the respondents' satisfaction level and their agreement with the proposed system and its performance. Descriptive figures were used to analyze and interpret their responses effectively.

Likert Scale = $i = \frac{h-l}{t}$

i = denotes the interval

h = highest value in the questionnaires

l = lowest value in the questionnaires

t = total number of options in the questionnaires

Table 3.3

Guideline Interval for respondent and IT experts' levels of satisfaction and acceptance.

Scale	Mean Range	Level of Acceptance	Level of Satisfaction
5	4.21-5.00	Highly Acceptable	Highly Satisfied
4	3.41-4.20	Moderately Acceptable	Moderately Satisfied
3	2.61-3.40	Acceptable	Satisfied
2	1.81-2.60	Slightly Acceptable	Slightly Satisfied
1	1.00-1.80	Not Acceptable	Not Satisfied

Table 3.3 will display the respondent's answers. Each scale number has a mean range and a descriptive equivalent. The information gained during the Likert Scale will be summarized after and visually by the researchers using descriptive statistics.

Sample Size Determination

The study included respondents comprising law enforcers from the Municipal Police Station, citizens of the chosen barangay (with a high crime rate), and IT

experts. These participants were selected based on their roles and understanding of crime reporting and technology implementation.

Sampling Procedure

Purposive sampling, one of the non-probability sampling methods, was used to gain insights into law enforcers and respondents in the chosen barangay. This approach allowed the researchers to gather in-depth and contextually rich data from individuals with relevant characteristics or experiences related to the research topic.

Criteria for the Citizens:

- They should be living in the Nasugbu area.
- They should be in a barangay with a high crime rate.
- Criteria for the Law Enforcers:
 - Officers should comply with many years of service.
 - Officers who have experience in using specific programs.
 - Officers must have undergone training and education.
 - Officers who handle records or the person in charge of the existing records management.

Participants of the Study

The study participants were law enforcers in the Municipal Police Station, residents of the chosen barangay, and IT experts. These respondents were selected to evaluate the proposed system, Guardian Watch.

Table 3.4
Guideline Interval for Questionnaire

Respondents	Sample Size
Law Enforcers	20
Residents	120
IT Experts	10
Total:	150

Table 3.4 shows the distribution of study participants, consisting of law enforcers, residents in the specific Barangay (with a high crime rate), and IT experts. These respondents are crucial for the proposed system, “Guardian Watch”; their feedback will also play a pivotal role in the system’s Acceptance and Satisfaction.

CHAPTER IV

FINDINGS, PRESENTATION AND INTERPRETATION

In this chapter, the researchers present their analysis of the hardware and software requirements necessary for the successful implementation of the proposed system. This chapter also highlights the findings, presentation, and interpretation based on the results of the evaluation. The researchers aim to provide a comprehensive overview of how these requirements align with the needs of the system, offering insights into the performance and effectiveness of the proposed solution.

Hardware Specification

This section is about the specification of the hardware needed to be used for the website and mobile application.

Table 4.1
Hardware Specification of a Computer

Hardware Component	Specification
Processor	Intel Core i5 (2.5 GHz or higher) or AMD Ryzen 5
Memory (RAM)	8 GB DDR4 RAM or higher
Storage (Hard Drive)	256 GB SSD (Solid State Drive) or higher
Network Interface	Wi-Fi 5 (802.11ac) or Wi-Fi 6 (802.11ax), Ethernet (1 Gbps)
Operating System	Windows 10 or higher, macOS for iOS development, Linux for Android development

Table 4.1 presents the hardware specifications required for the website application, focusing on the essential components necessary for optimal performance and user experience. The laptop needs an Intel Core i5 or AMD Ryzen 5 processor, which ensures sufficient processing power for handling web requests, running the application smoothly, and ensuring quick load times. With 8 GB DDR4 RAM, the laptop can effectively handle multiple tasks simultaneously, such as running the web application and supporting background processes without slowing down. The 256 GB SSD storage offers fast data retrieval, which is crucial for fast page loading and seamless operation of the website. A Wi-Fi 5 or Wi-Fi 6 network interface ensures fast and stable internet connectivity, enabling real-time updates and smooth data exchanges between the server and users. The operating system, either Windows 10 or higher, macOS, or Linux, supports compatibility with various software and ensures the website's accessibility across different platforms. These specifications ensure the laptop provides optimal performance for users interacting with the web application.

Table 4.2
Hardware Specification of a Mobile Device

Hardware Component	Specification
Processor (CPU)	Octa-core (Qualcomm Snapdragon 800 series or Apple A14 Bionic or higher)
Memory (RAM)	4 GB RAM or higher
Storage (Internal)	64 GB internal storage or higher
Operating System	Android 10.0 or higher (for Android development), iOS 14 or higher (for iOS)
Network Interface	4G LTE / 5G, Wi-Fi 802.11ac or 802.11ax, Bluetooth 5.0 or higher

Table 4.2 outlines the hardware specifications required for a mobile device to run the proposed system. Key components include a Quad-Core processor (1.8 GHz or higher) for smooth performance, 4 GB RAM for multitasking, and at least 64 GB of internal storage for app and data storage. Connectivity requirements include Wi-Fi 5 or 4G LTE and Bluetooth 5.0 for seamless internet and device connections. These specifications ensure optimal performance and user experience for the mobile application.

Software Specification

This section outlines the software specifications required for users to access the website and mobile application. It includes the necessary components such as operating systems, web browsers, internet connection speed, and security features.

Table 4.3
Software Specification

Software Component	Specification
Operating System	Windows 10 or higher, macOS, Linux, Android 9 (Pie) or iOS 12 and above
Web Browser	Google Chrome, Mozilla Firefox, Safari, Microsoft Edge (latest versions)
Internet Connection	50 Mbps or Above
Security	SSL/TLS encryption (HTTPS) for secure browsing and data protection

Table 4.3 presents the software specifications necessary for users to access the website. The **Operating System** specification indicates that the website can be accessed on a variety of platforms, including Windows 10 or higher, macOS, Linux, Android 9 (Pie), or iOS 12 and above. This broad compatibility ensures that users from different operating systems can access the site without issues. The **Web Browser** requirement specifies that the latest versions of popular browsers like Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge should be used. These browsers support modern web standards, ensuring the website runs smoothly and features dynamic content. The **Internet Connection** speed of 50 Mbps or above is recommended for optimal performance, ensuring fast loading times and uninterrupted browsing, especially when accessing data-heavy features or interacting with real-time information. Finally, the **Security** specification mandates the use of SSL/TLS encryption (HTTPS), which is crucial for protecting user data,

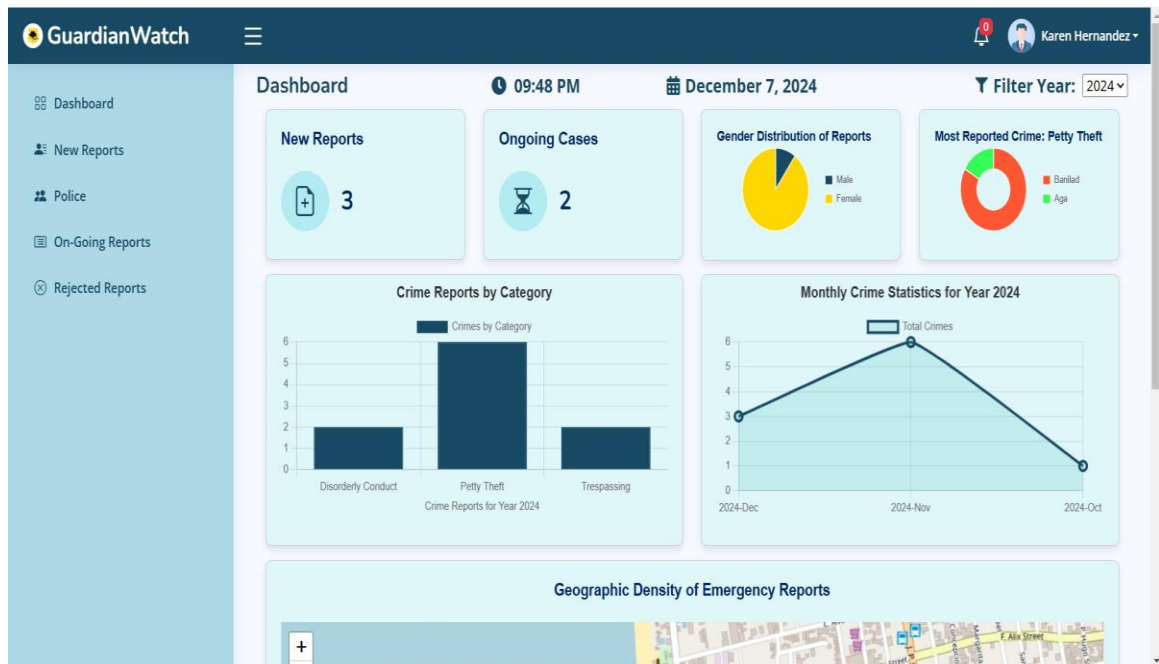
maintaining privacy, and ensuring secure communication between the user's device and the website. This combination of software components guarantees a seamless, secure, and efficient user experience on the website.

Demonstration

This section shows a visual demonstration of the proposed system, featuring screenshots of the main interface, dashboards, and important modules. These images provide a clear view of how the system works.

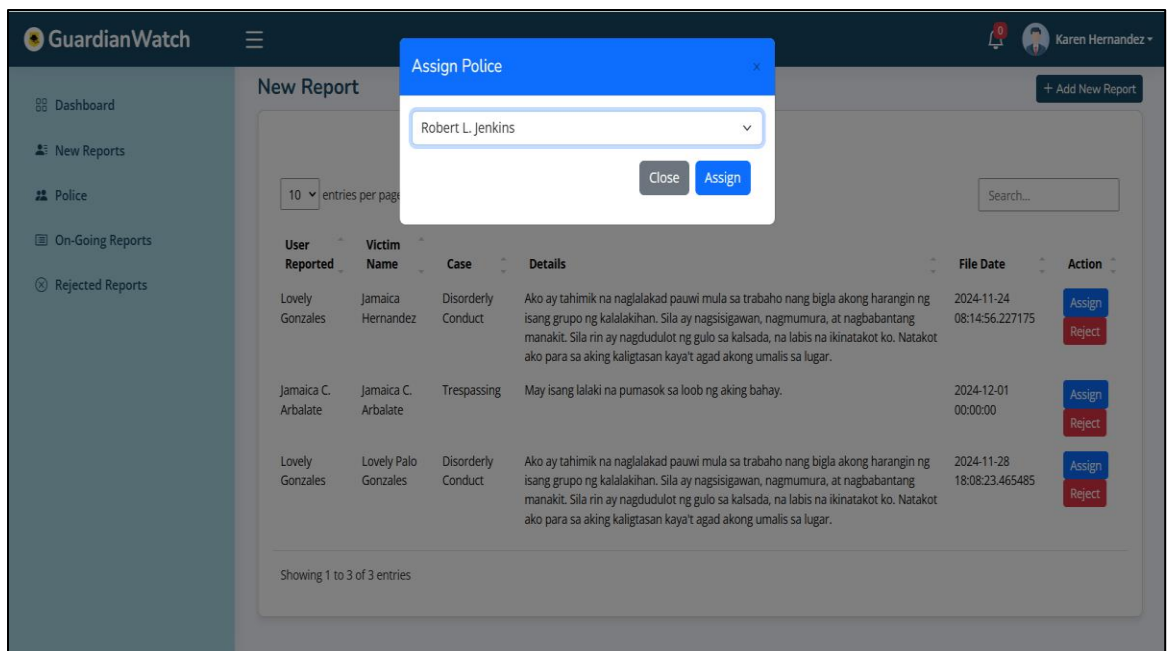
Webpage Interface for Admin (Desk Officer)

Dashboard for Admin



The dashboard for admin gives an easy-to-understand view of the system. It shows the number of new reports, ongoing cases, and helpful charts like a bar chart for crimes by type and a line graph for monthly trends. An interactive map highlights areas with many emergency reports. This dashboard helps admins respond quickly and manage reports better.

Assign Reports for Police



The Assign Reports to Police feature lets the admin give reports to police officers to handle. The admin reviews the report details and picks an officer from a list based on the category of crime reported. Once assigned, the officer gets the report and works on it. This helps make sure reports are handled quickly and shared properly.

Add New Reports for Walk-in Residents

The screenshot shows the 'Add New Report' modal in the GuardianWatch application. The modal has a dark blue header with the title 'Add New Report' and a close button. Below the header is a progress indicator with five steps, where the first step is active. The main content area is titled 'Select Crime Category' and features a dropdown menu with the placeholder text 'Select Crime Category'. Below the dropdown are two buttons: 'Next' and 'Close'. The background shows a blurred view of the main dashboard with a sidebar menu on the left and a table of reports on the right.

File	Date	Action
angin ng	2024-11-24	Assign
ntang	08:14:56.227175	Reject
o, Natakot		
Jamaica C. Arbalate	2024-12-01 00:00:00	Assign
Jamaica C. Arbalate		Reject
Lovely Gonzales	2024-11-28 18:08:23.465485	Assign
Lovely Palo Gonzales		Reject

The Add New Reports for Walk-In Residents feature lets the admin create reports for residents who come in person to report an incident. The admin fills out the details, such as the type of report, date, location, and description of the incident. This ensures that walk-in reports are recorded in the system, just like online reports, so all cases are tracked and handled properly.

Add New Police Account

The screenshot displays the GuardianWatch application interface. A modal window titled "Add New Police Account" is open in the center, allowing an administrator to create a new police officer account. The modal contains the following fields:

- Full Name
- Email Address
- Username
- Password
- Rank
- Profile Image (with a "Choose File" button and "No file chosen" text)

At the bottom of the modal are "Close" and "Add New" buttons. In the background, the "Police List" table is visible, showing a list of officers with columns for Name, Contact, Rank, and Status.

Name	Contact	Rank	Status
Robert L. Jenkins	09269008662	Police Officer 1	Available
Michael D. Thompson	09269008662	Police Officer 1	Available

The Add New Police Account feature allows the admin to create new accounts for police officers in the system. The admin fills in details such as the officer's name, rank, contact information, and login credentials. Once the account is created, the officer can access the system, view assigned cases, and perform their duties. This feature helps ensure that the police team is properly registered and able to manage their tasks within the system.

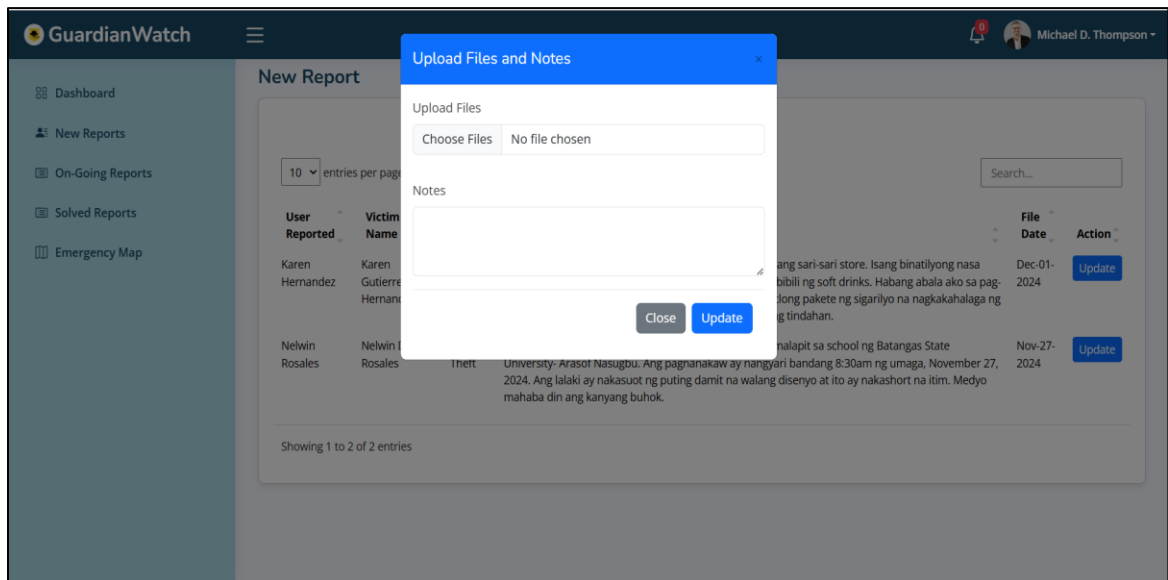
Webpage Interface for Police Officers (Office police personnel)

Dashboard for Police Officer



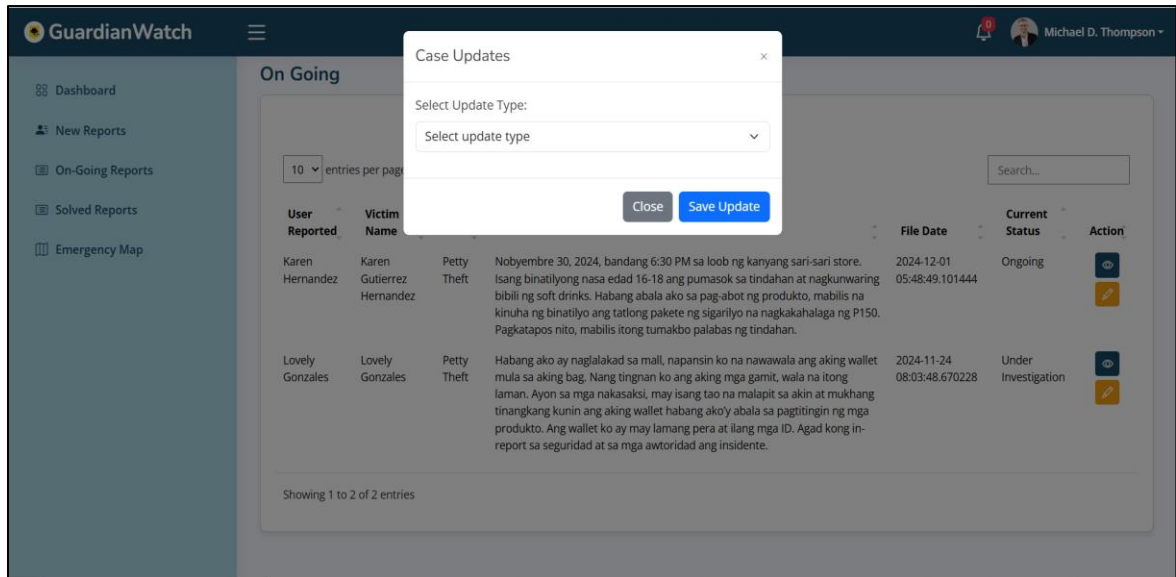
The Police Officer Dashboard gives officers a clear view of their tasks and updates. It shows the total number of assigned and resolved cases, lists updates on ongoing cases, and highlights urgent reports needing immediate attention. An interactive map displays the locations of assigned cases for better situational awareness. This dashboard helps officers stay organized, prioritize tasks, and manage cases efficiently.

Upload Files and Notes for Accepting the Report Assigned



The Upload Files for Reports feature allows police officers to add supporting documents, images, or other files to a case. Officers can upload evidence, progress reports, or final case summaries directly through the system. The police should upload the requirements template needed for preliminary interview on the station.

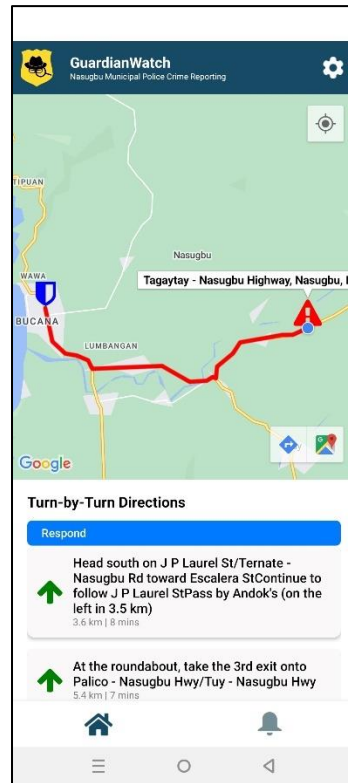
Case Updates (Selecting update type)



The Case Update with Select Update Type feature allows police officers to choose the type of update they want to provide for a case. Update types may include Change Status, Interview and Court Dates, Case Resolution or Request for Requirements. This ensures that each update is categorized clearly, making it easier for admins and other officers to understand the status and next steps. This feature streamlines communication and improves case management.

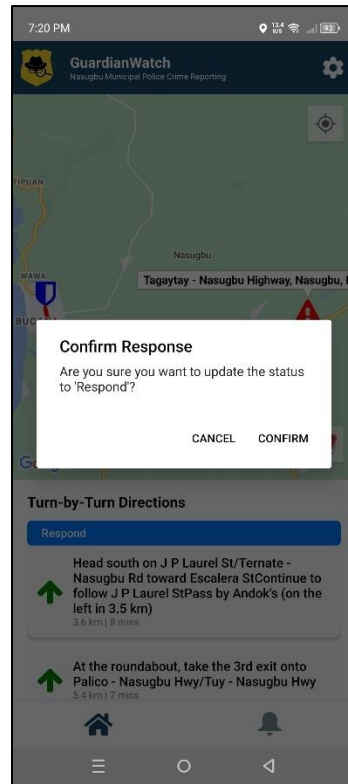
Mobile Application Interface for Police Officer (Response Team)

Emergency Report Marks



The emergency report system shows the location of incidents on a map with markers. Each marker gives basic details like the location of emergency without showing who sent it. The system also helps police or response teams find the quickest way to get there using the shortest route. This makes it easier and faster for them to respond to emergencies and helps them handle the situation better.

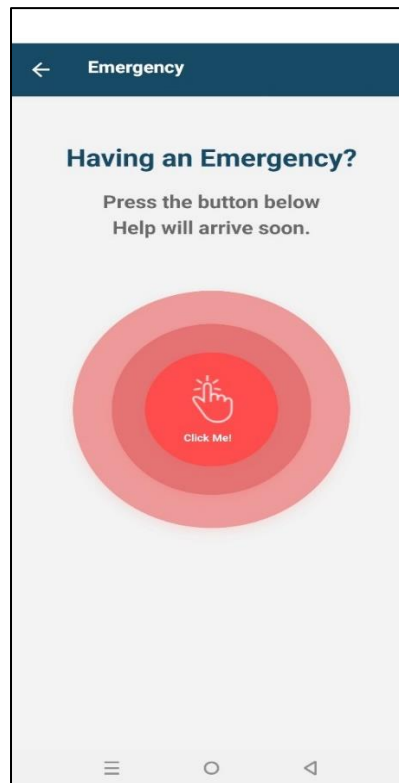
Responding to Emergency



The Respond button is used by the police to mark an emergency report as handled. When clicked, it updates the status of the report in the system to show that a response has been made.

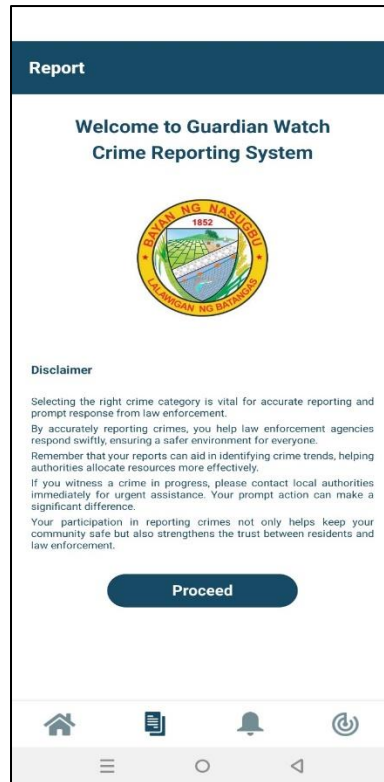
Mobile Application Interface for Residents

Emergency Report



The Emergency Report for Residents feature allows users to quickly report urgent incidents directly through the system. Residents can submit essential details such as the type of emergency and their location, which is automatically detected using location detector for accuracy. The report is immediately sent to the admin and police officers for prompt action. This feature ensures fast and efficient handling of emergencies, prioritizing the safety and security of the residents.

Click Proceed to Start Reporting



The Proceed button feature allows residents to begin the process of submitting a report easily. When users tap the "Proceed" button, they are guided to a step-by-step form where they can provide details about the incident, such as the type of crime, location, date, and any additional information.

Step 1: Select a Category (Incident Type)

← Category Selection

1 Select Category 2 Victim Details 3 Crime Information 4 Submit Report

Select a Category

Select Category ▼

Next

The Select a Category for Incident Type feature allows residents to choose the type of incident they are reporting from a list of predefined categories, such as theft, vandalism, assault, or other crimes. This step helps ensure that the report is categorized accurately, enabling faster processing and assignment to the appropriate authorities. It simplifies the reporting process and ensures consistency in how incidents are logged in the system.

Step 2: Fill Up the Information Needed for Report

← Personal Information

1 Select Category 2 Victim Details 3 Crime Information 4 Submit Report

Pangalan ng Biktima

First Name: Karen Last Name: Hernandez

Middle Name: Outierrez Suffix Name (Optional): (e.g., Jr)

Kasarian:

☐ Male ☒ Female

Contact Number (Biktima o Kamag-anak)

09551664331

Tirahan ng Biktima

Barilad Centro

☐ Do you have a Witness?

Previous Next

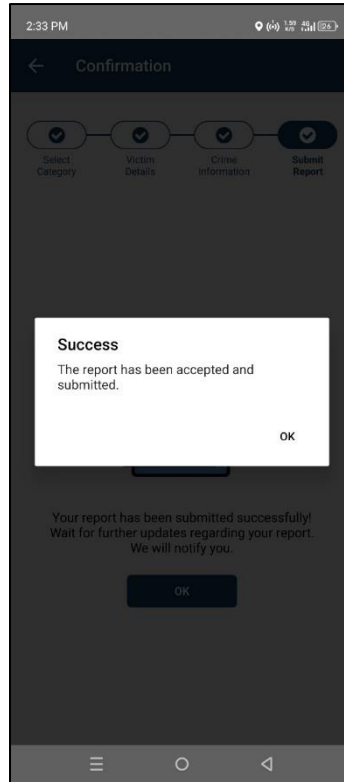
This feature guides residents to provide all necessary details for submitting a complete report. Users are prompted to enter information such as the date and time of the incident, location, a brief description, and any additional notes or evidence. This step ensures the report is accurate and contains enough details for authorities to take appropriate action, improving the efficiency of the reporting and resolution process. If you have witness, just click the checkbox for adding witness name and contacts.

Step 3: Input Crime Information Needed (Especially the Details or Story)

The screenshot displays a mobile application interface for reporting a crime. At the top, a dark blue header bar contains a back arrow and the title "Crime Information". Below the header, a progress indicator shows four steps: "1 Select Category", "2 Victim Details", "3 Crime Information" (the current step, highlighted with a dark blue circle), and "4 Submit Report". The main content area is light gray and contains three input fields: "Petsa ng Pangyayari (Date of Incident)" with a date picker set to "12/4/2024", "Oras ng Pangyayari (Time of Incident)" with a time picker set to "2:32:00 PM", and "Pahayag ng Biktima (Statement of the Victim)" with a text area containing a sample statement in Tagalog. At the bottom, there are two dark blue buttons labeled "Previous" and "Submit". The device's navigation bar is visible at the very bottom.

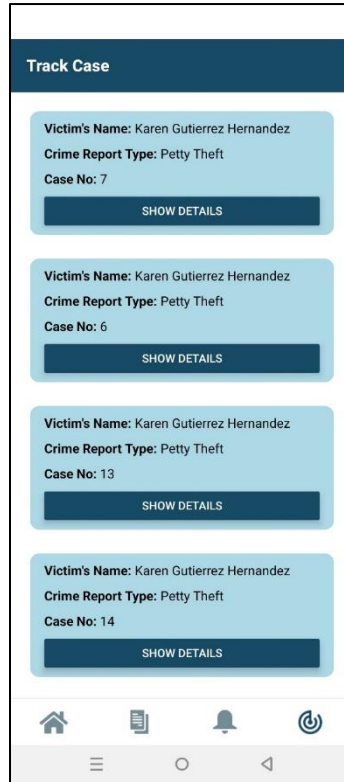
The Input Crime Information feature allows residents to provide detailed information about the incident, including a description or story of what happened. Users can enter specifics such as how the incident occurred, who was involved, and any other relevant details.

Step 4: Submit your Report



This feature allows residents to finalize and send their incident report to the system. After reviewing the details they've entered, users can click the "Submit" button to ensure their report is logged and sent to the appropriate authorities.

Track Screen for Reports



The Track Screen for Report feature allows residents to monitor the progress of their submitted reports. It displays the current status of each report, such as "Pending," "Under Review," or "Resolved," along with updates and any actions taken by authorities. This feature provides transparency and keeps residents informed about the handling of their cases, ensuring they feel engaged and supported throughout the process.

Test Plan

This section presents the test cases for the Guardian Watch System, focusing on identifying bugs, validating functionality, and ensuring reliable performance across all modules. It outlines the procedures, objectives, and resources needed to confirm the system meets its requirements.

Residents' Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Residents can register for an account with all required fields.	Residents successfully create an account and receive a confirmation message.	Residents successfully create an account and receive a confirmation message.	Success
02	Verify that Residents can log in using valid credentials.	Residents successfully log in and access the system.	Residents successfully log in and access the system.	Success
03	Verify that Residents can report an emergency using the "Report Emergency" button by clicking any available hotlines of the police stations	The "Report Emergency" button is functional, and the Resident successfully reports an emergency by selecting a police station hotline.	The crime report is submitted successfully, including all required information, and the Resident receives a confirmation notification.	Success
04	Verify that Residents can report a crime with all required details (e.g., crime type, location, time), personal information, and category of crime.	The crime report is submitted successfully, including all required information.	The "Report Emergency" button is functional, and the Resident successfully reports an emergency by selecting a police station hotline. The user's location is tracked by Law Enforcement and Police Patrol.	Success

05	Verify that Residents receive notifications about responses from Police Patrol or updates on their report given by the police assigned to their reported crime.	Notifications are delivered promptly and display accurate updates from the police assigned to their reported crime.	Notifications are delivered promptly and display accurate updates from the police assigned to their reported crime.	Success
06	Verify that Residents can view the status of their submitted crime reports in the system.	The system displays the status updates, such as "Pending," "On-going," or "Resolved."	The system displays the status updates, such as "Pending," "On-going," or "Resolved."	Success
07	Verify that Residents can update their account details, including Username, Successword, and Email Address.	Account details are updated successfully, and confirmation is provided.	Account details are updated successfully, and confirmation is provided.	Success

Police Patrol Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Police Patrol can log in using valid credentials.	Police Patrol successfully logs in and accesses the system.	Police Patrol successfully logs in and accesses the system.	Success
02	Verify that the system displays an error message for invalid login credentials.	An error message, "Invalid credentials. Please try again," is displayed.	An error message, "Invalid credentials. Please try again," is displayed.	Success
03	Verify that the map shows fixed patrol areas for each station	The map displays fixed areas accurately based on the assigned areas.	The map displays fixed areas accurately based on the assigned station.	Success
04	Verify that the system assigns emergencies to the	The system identifies and assigns the closest	The system identifies and assigns the closest	Success

	nearest Police Patrol unit.	patrol unit to respond to the incident.	patrol unit to respond to the incident.	
05	Verify that the system suggests the fastest route for emergency response.	The system provides the quickest route to the incident location.	The system provides the quickest route to the incident location.	Success

Admin/ Desk Officer Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that the Admin/Desk Officer can log in using valid credentials.	The system allows successful login and access to assigned features.	The user successfully logs in and accesses all assigned features.	Success
02	Verify that new crime reports are visible to the system.	A list of new crime reports submitted by residents is displayed for review.	A list of new crime reports submitted by residents is displayed for review.	Success
03	Verify that ongoing cases handled by Police Investigators are accessible.	The system displays a list of ongoing cases along with the details of the assigned Police Investigators.	The system displays a list of ongoing cases along with the details of the assigned Police Investigators.	Success
04	Verify that the dashboard displays crime statistics by category, monthly crime statistics, and geographic density of emergency reports.	The dashboard should display the following: - Crime reports categorized by type (e.g., theft, assault). - Monthly crime statistics for the year. - A map or chart showing the geographic density of emergency reports.	The dashboard displays crime reports categorized by type, monthly crime statistics for the year, and a map/chart showing the geographic density of emergency reports.	Success

05	Verify that crime reports classified as Barangay cases can be rejected.	The system allows rejecting a report marked as a Barangay case, preventing further action.	The system allows rejecting a report marked as a Barangay case, preventing further action.	Success
06	Verify that Police accounts can be managed.	The system provides options to create, edit, or delete accounts effectively.	The system provides options to create, edit, or delete accounts effectively.	Success
07	Verify that accounts can be created for Police or Law Enforcement personnel.	The system enables the creation of new user accounts for Police or Law Enforcement personnel.	The system enables the creation of new user accounts for Police or Law Enforcement personnel.	Success

Law Enforcement Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Law Enforcement can log in using valid credentials.	Law Enforcement successfully logs in and accesses the system.	Law Enforcement successfully logs in and accesses the system.	Success
02	Verify that the dashboard displays reported crimes or cases under their investigation.	The dashboard shows only the crimes or cases assigned to the Law Enforcement officer for investigation.	The dashboard shows only the crimes or cases assigned to the Law Enforcement officer for investigation.	Success
03	Verify that new crime reports assigned to Law Enforcement are visible in their system..	New reports assigned to the officer appear in the list for further investigation.	New reports assigned to the officer appear in the list for further investigation.	Success
04	Verify that Law Enforcement can notify residents about the required documents for ongoing cases.	Residents receive notifications about the documents they need to submit to the Municipal Police Station.	Residents receive notifications about the documents they need to submit to the Municipal Police Station.	Success

05	Verify that Law Enforcement can update residents regarding case resolutions or dismissals.	Residents are notified when their cases are resolved or dismissed.	Residents are notified when their cases are resolved or dismissed.	Success
06	Verify that Law Enforcement can view and filter cases by status (e.g., new, in progress, resolved).	The system allows filtering cases by their status for easier management.	The system allows filtering cases by their status for easier management.	Success

Implementation Plan

The implementation plan outlines the activities, resources, and timeline for deploying the GuardianWatch System, including hardware setup, software installation, and phased deployment. Initial testing will involve administrators and law enforcement, followed by full-scale use for residents. Comprehensive training programs, supported by manuals and tutorials, will ensure all stakeholders are well-equipped to use the system effectively. To enhance the system's efficiency and effectiveness, user feedback will be gathered through evaluation sheets and surveys. This feedback will guide iterative updates and improvements, ensuring the system meets user needs. Continuous monitoring and technical support will further maintain optimal performance and user engagement.

Table 4.4 Implementation Plan

Task	Activity	Persons Involved	Duration
Preparation	Setting up the necessary resources (e.g., laptops, mobile devices, and internet connection).	Developers, Project Team	2 days
System Setup	Deploying the mobile app on Android devices and the web system on the police department's server.	Developers, MPS IT Administrator	3 days
Training	Conducting training sessions for police officers on how to use the system, including incident reporting features.	Developers, Police Officers, Admin/Desk Officer	1 day
Testing	Performing user acceptance testing (UAT) with police officers and community members for real-time reporting.	Developers, Respondents, IT Experts	4 days
Deployment	Launching the server live and deployment of application and web.	Developers, Project Manager	7 days
Monitoring	Collecting feedback and monitoring the system for any technical issues post-deployment.	Developers, Police Officers, Respondents	5 days

The implementation of *Guardian Watch: Development of Quick Response and Efficient Case Management for Minor Crimes at Nasugbu Municipal Police Station (MPS)* involves a systematic approach to ensure its successful deployment for the Nasugbu Municipal Police Station (MPS). The process begins with resource preparation, including setting up laptops, mobile devices, and network infrastructure. The system will then be deployed on the police department's server for the web application and on Android devices for the mobile app. Training

sessions will be conducted to familiarize police officers with the system's functionalities, followed by user acceptance testing (UAT) with officers and selected community members to identify and resolve any issues. After incorporating feedback, the system will go live, with a dedicated monitoring period to ensure stable performance and address any technical concerns. This structured plan ensures a smooth transition to the new system while addressing the needs of both the police and the community.

Evaluation

The researchers developed a comprehensive questionnaire to evaluate the proposed GuardianWatch System, distributing it to three primary groups of participants: Law Enforcers, Residents, and IT Experts. A total of 20 Law Enforcers from the Nasugbu Municipal Police Station evaluated the system's performance, reliability, and security in managing crime reports, facilitating law enforcement communications, and accessing critical data. Additionally, 120 Residents from a high-crime Barangay assessed its effectiveness in reporting emergencies, submitting crime reports, and receiving real-time updates from authorities. Furthermore, 10 IT Experts reviewed the system's technical aspects, focusing on its security measures, operational reliability, and overall performance under various conditions.

Respondents identified challenges in the existing system, particularly in crime reporting, usability, and data security, while also evaluating the GuardianWatch System based on three key parameters: **Performance**, measuring its efficiency, functionality, and responsiveness; **Reliability**, assessing its stability and consistency under varying conditions; and **Security**, evaluating the robustness of data protection mechanisms to ensure confidentiality and integrity. This evaluation provided valuable insights into the system's capabilities, highlighting its strengths and identifying areas for improvement to better meet the needs of law enforcement, residents, and IT professionals.

Findings And Interpretations

This part contains the finding and interpretation of the data gathered by the researchers. The questionnaires were given to the residents, police officers and IT experts at Nasugbu, Batangas as the respondents of the study. In order to get the level of satisfaction and acceptance of the proposed system.

Table 4.5 Common Problems and Constraints of the Existing System and Process for Crime Reporting

Based on preliminary interviews, the researchers had determined the following problems and constraints of the existing system for crime reporting in Nasugbu Municipal Police Station.

Problems	Constraints
Reliance on manual paperwork for crime reporting.	Time-consuming and prone to errors.
Limited community access to reporting tools.	Inaccessible for residents without physical presence at the police station.
Challenges in maintaining accountability.	Inconsistent record-keeping for resolved and unresolved cases.
Slow emergency response.	Lack of tools for real-time communication and response coordination.
Poor coordination between police officers and teams.	Absence of a unified platform for communication and task assignment.
Inefficient case tracking for minor crimes.	Manual processes make it difficult to monitor and manage case progress effectively.
Overburdened police staff due to inefficient case management systems.	No digital system to automate or simplify case assignment and tracking.

Table 4.5 highlights the main problems and constraints in the crime reporting system at Nasugbu Municipal Police Station. Key issues include reliance on manual paperwork, limited access to reporting tools, and slow emergency response due to a lack of real-time communication systems. There are challenges in maintaining accountability and case tracking, especially for minor crimes, with inefficient manual processes and inconsistent record-keeping. Poor coordination among police officers and overburdened staff due to outdated systems further complicate the situation, emphasizing the need for a more efficient, digital solution for crime reporting and incident management.

Table 4.6 Features and Functionalities that the Proposed System Offer to Improve Crime Reporting and Emergency Response

Features	Functionality	Importance
Digitized Crime Reporting	Allows users to report crimes instantly via a mobile app.	Enhances accessibility and speed, encouraging prompt reporting and quicker response times.
Emergency Report Button	Allows users to report emergency anonymously, also provides hotline numbers of Nasugbu MPS for quicker access for phone calls.	Ensures accurate and quick identification of incident locations, facilitating faster emergency response.
Incident Tracking and Updates	Tracks the status of reported incidents and provides updates to residents.	Enhances transparency and trust, allowing the community to stay informed about ongoing cases.
Location-Based Emergency Mapping	Marks the location of emergency reported so that the police can view shortest route going to it.	Enables quicker response by providing clear, accurate directions to emergency sites, improving response time and efficiency for police teams.
Dashboard	Includes Geographic Density of emergency reports which enables the police to track the areas that are prone to incidents.	Helps identify high-risk areas, allowing law enforcement to allocate resources more effectively and proactively address crime trends.
Improved Reports Assignment for Police Officers	Desk officers efficiently assign crime reports to the police officers, considering the specific crime category and their availability.	Ensures that each case is handled by the officer best equipped to address it, improving case resolution times and overall law enforcement effectiveness.

Table 4.6 shows the main features of the Guardian Watch System, which is designed to improve crime reporting and emergency response at Nasugbu Municipal Police Station (MPS). It includes features like digitized crime reporting through a mobile app, an emergency report button for anonymous reports and quick access to police hotlines, and incident tracking to keep people updated. Location-based emergency mapping helps police get to emergency sites faster, while the dashboard shows crime hot spots so police can focus resources where needed. It also helps assign reports to the right officers, making the system more efficient and effective.

Table 4.7 Level of Satisfaction of the Respondents on the Proposed System as Evaluated by Residents of Nasugbu

Parameters	Weighted Mean	Verbal Interpretation
Crime Reporting	4.38	Highly Satisfied
Emergency Reporting	3.88	Moderately Satisfied
User Interface	4.17	Moderately Satisfied
General Weighted Mean	4.14	Moderately Satisfied

The results in Table 4.7 reveal that the residents of Nasugbu are highly satisfied with the crime reporting feature of the proposed system (weighted mean: 4.38), indicating it effectively meets their expectations. However, both the emergency reporting (3.88) and user interface (4.17) received moderate satisfaction ratings, suggesting that while these features are generally appreciated, there is room for

improvement to better align them with user needs and enhance their overall experience.

The General Weighted Mean (GWM) of **4.14** indicates that, overall, the respondents are **Moderately Satisfied** with the proposed system. While the crime reporting feature stands out as highly satisfying to users, both the emergency reporting and user interface are rated as moderately satisfying, suggesting areas for enhancement. To increase the system's overall satisfaction level, improvements could focus on making the emergency reporting process more efficient and refining the user interface for better usability and appeal.

Table 4.8 Level of Satisfaction as per Evaluated by Nasugbu Municipal Police Station

Parameters	Weighted Mean	Verbal Interpretation
Crime Reporting	4.01	Moderately Satisfied
Emergency Reporting	4.30	Highly Satisfied
User Interface	4.23	Highly Satisfied
General Weighted Mean	4.18	Moderately Satisfied

The findings in Table 4.8 highlight the satisfaction levels of Nasugbu Municipal Police Station officers with the proposed Guardian Watch system across three key parameters: Crime Reporting, Emergency Reporting, and User Interface. The

weighted mean for Crime Reporting is **4.01**, which falls under the interpretation of "**Moderately Satisfied**." This suggests that the system effectively streamlines the process of reporting crimes, including timely verification, organization, and updates. However, there is room for further improvement to elevate this feature to a higher level of satisfaction.

For Emergency Reporting, the weighted mean is **4.30**, indicating a "**Highly Satisfied**" rating. This result reflects the system's ability to promptly notify authorities, accurately detect and report emergency locations, and enhance coordination during critical situations. Officers expressed confidence in the system's performance in handling emergencies efficiently.

The User Interface received a weighted mean of **4.23**, also interpreted as "**Highly Satisfied**." This demonstrates that the system's design is intuitive, visually appealing, and responsive, making it easy for officers to navigate and perform tasks efficiently. The user-friendly interface significantly enhances the overall experience.

The General Weighted Mean (GWM) of **4.18** indicates that, overall, the Nasugbu Municipal Police Station is **Moderately Satisfied** with the proposed system. The emergency reporting and user interface features received a rating of highly satisfied, highlighting their effectiveness and alignment with expectations. However, the crime reporting feature was rated as moderately satisfying, suggesting room for

improvement in this area to better meet the needs of the police station and enhance their overall satisfaction with the system.

Table 4.9 Level of acceptance of the proposed system as evaluated by IT Experts.

Parameters	Weighted Mean	Verbal Interpretation
Performance	3.98	Moderately Acceptable
Reliabilty	4.10	Moderately Acceptable
Security	4.12	Moderately Acceptable
General Weighted Mean	4.07	Moderately Acceptable

In Table 4.9 reflect the **level of acceptance** of the proposed **Guardian Watch** system as evaluated by IT experts. The **Performance** of the system received a weighted mean of **3.98**, which indicates that the system is generally functional and meets basic expectations. However, this score suggests that there may be room for improvement in optimizing the system's performance to ensure smoother operation and enhanced user experience. The **Reliability** of the system received a slightly higher weighted mean of **4.10**, indicating that the system is considered dependable and operates consistently without frequent failures. Similarly, the **Security** aspect of the system was rated at **4.12**, reflecting that IT experts find the security features of the system to be satisfactory, providing a reasonable level of protection against

potential vulnerabilities. Overall, the system is regarded as **Moderately Acceptable** by the IT experts, but the findings highlight opportunities for further enhancements, particularly in performance optimization, to achieve a more seamless and robust system.

The General Weighted Mean (GWM) of **4.07** indicates that the proposed system is **Moderately Acceptable** to IT experts. While all parameters, including performance, reliability, and security, are evaluated as moderately acceptable, this suggests that the system meets basic expectations but requires further refinement to achieve higher levels of acceptance. Improvements in these areas could enhance the system's overall performance and appeal to IT professionals.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the study's findings, conclusions, and recommendations from evaluating a proposed system designed to help the Nasugbu Municipal Police Station (MPS) manage crime reports and case folders. The system aims to improve the efficiency of law enforcement by streamlining reporting and response processes. Data was gathered from residents, police officers, and IT experts in Nasugbu, Batangas, providing insights into the system's performance. The chapter presents the results, draws conclusions, and offers recommendations to improve the system's functionality, user satisfaction, and security.

SUMMARY OF FINDINGS

The study aimed to evaluate the proposed system designed to assist the Nasugbu Municipal Police Station (MPS) in managing crime reports and organizing case folders for faster enforcement actions. The findings are based on the results gathered from questionnaires answered by residents, police officers, and IT experts in Nasugbu, Batangas.

The following findings summarize the results of the research:

1. Identified Problems in the Existing System

The existing system relies heavily on manual processes, which are time-consuming, prone to errors, and inefficient for tracking minor crimes and resolving cases. Residents face challenges in accessing crime reporting tools, as they are required to be physically present at the police station. The lack of real-time communication tools results in emergency response delays, hindering coordination and slowing down response times. Additionally, poor coordination in task assignments and case management leads to overburdened staff and delayed case resolutions due to the use of outdated systems. The Study of Duff and Marshall examines the challenges in civic responsibility and reporting mechanisms, particularly in the context of traditional Police Records Management Systems (RMS). Their work highlights the limitations of manual processes and the need for integrated solutions to improve community access and case tracking. This directly relates to the identified problems in the existing system, as it underscores the necessity for technological advancements to streamline crime reporting and enhance community engagement. (Duff and Marshall)

2. Key Features and Functional Improvements in the Proposed System

The proposed system introduces digitized crime reporting, allowing users to report crimes conveniently via a mobile app, enhancing accessibility and reducing delays. Emergency reporting tools, such as an emergency report

button and hotline integration, enable prompt and anonymous reporting of incidents. Incident tracking and location-based mapping improve emergency response times by providing accurate case status updates and location data. A dashboard for hotspot analysis identifies high-risk areas using geographic density mapping, allowing for better allocation of law enforcement resources. Enhanced task assignment features ensure that cases are assigned to the appropriate officers, improving efficiency and reducing staff workload. Kommey's research emphasizes the importance of stakeholder input in the development of effective crime reporting systems. His findings advocate for user-friendly interfaces and efficient communication tools, which are crucial for ensuring that the needs of police officers, residents, and IT experts are met. This aligns with the feedback from respondents in the study, as it illustrates how incorporating user perspectives can lead to a more effective and satisfactory system.

3. Level of Satisfaction of Residents

Residents expressed high satisfaction with the crime reporting feature, with a weighted mean of 4.38, emphasizing its efficiency in simplifying the reporting process. The emergency reporting feature received a moderate satisfaction rating, with a weighted mean of 3.88, indicating room for improvement in confidentiality and response efficiency. The user interface

was moderately satisfying, with a weighted mean of 4.17, appreciated for its intuitive design, though enhancements in visual appeal were suggested. Overall, residents expressed moderate satisfaction with the system, reflected by a general weighted mean of 4.14. The Study of Garcia and Lee discusses the importance of continuous updates and maintenance in crime reporting systems to adapt to evolving needs and technologies. Their research highlights how ongoing support and improvements can enhance system functionality and security. This is directly connected to the recommendations for improvement in the study, as it emphasizes the necessity for a proactive approach to system development and maintenance to ensure long-term effectiveness and user trust.

Level of Satisfaction of Nasugbu MPS

Police officers found the crime reporting feature moderately satisfying, with a weighted mean of 4.01, though they highlighted delays in follow-ups and updates as areas for improvement. The emergency reporting feature received a highly satisfying rating, with a weighted mean of 4.30, recognized for its effectiveness in prompt notifications and accurate location detection. The user interface was also rated as highly satisfying, with a weighted mean of 4.23, appreciated for its user-friendly and responsive design. Overall, the Nasugbu MPS expressed moderate

satisfaction with the system, with a general weighted mean of 4.18. Birkenfeld (2021) research focuses on the effectiveness of case management software in law enforcement, particularly regarding system performance and user satisfaction. His findings suggest that comprehensive tools can significantly enhance operational efficiency and user experience. This is relevant to the study's findings on system performance, as it supports the notion that well-designed case management systems can lead to improved satisfaction among users, thereby validating the proposed system's objectives.

4. Level of Acceptance by IT Experts

IT experts rated the system's performance as moderately acceptable, with a weighted mean of 3.98, noting basic functionality but opportunities for optimization. Reliability was rated as moderately acceptable, with a weighted mean of 4.10, reflecting consistent and dependable operation. Security features were also moderately acceptable, with a weighted mean of 4.12, providing satisfactory protection against vulnerabilities. Overall, the system received a general weighted mean of 4.07, indicating moderate acceptance by IT experts, with room for refinements to enhance performance and appeal. User Interface. The police officers also express satisfaction with the user interface, with a strong emphasis on ease of use and the overall design.

Recommendations for improving system functionality and security are supported by research that advocates for continuous updates and maintenance of crime reporting systems to adapt to evolving needs and technologies. This is reflected in the synthesis of findings from various studies, including those by Garcia and Lee (2021).

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. The proposed system mitigates the inefficiencies of the existing manual processes in the Nasugbu Municipal Police Station (MPS). As a newly integrated digital platform, it aims to address challenges such as delays in crime reporting, emergency response, and case resolution.
2. Key features such as digitized crime reporting, emergency tools, incident tracking, and hotspot analysis significantly improve accessibility, task coordination, and resource allocation. These functionalities address stakeholder concerns and reflect best practices in crime reporting system development. The integration of stakeholder feedback in the system's design has resulted in a user-friendly and efficient platform, fostering better task execution and coordination.
3. Residents expressed moderate to high satisfaction with the system's convenience and intuitive interface. High ratings were given to the crime reporting features,

while emergency reporting tools and user interface design showed room for improvement, particularly in confidentiality and visual appeal.

Nasugbu MPS officers rated the system for its functionality in emergency reporting and task management. The user-friendly interface has improved operational efficiency yet delays in follow-ups and updates highlight areas for further optimization. The system's potential to enhance law enforcement efficiency aligns with research emphasizing the value of case management tools in policing.

4. IT experts moderately accepted the system, acknowledging its reliable performance, functionality, and security features. However, they recommended continuous updates and performance optimization to keep pace with technological advancements and evolving user needs. These recommendations align with research advocating for regular maintenance and adaptability in crime reporting systems.

RECOMMENDATIONS

Based on the findings of the study, several recommendations can be made to enhance the functionality, user satisfaction, and security of the Guardian Watch system:

1. Real-Time Location Detection of the Resident's Device. Enable response teams to track the resident's device location in real-time using GPS instead

of location mapping only, ensuring accurate and timely response if the resident moves.

2. **Improve Timely Follow-up and Updates.** Implement real-time tracking of report statuses and automatic updates to keep both residents and police officers informed about incident progress.
3. **Enhance User Interface Design.** Improve the visual design and aesthetics of the interface to further boost user satisfaction and overall experience.
4. **Improve Document Uploads.** Implement a system allowing police officers to upload standardized templates for frequently required documents, ensuring consistency and efficiency in processing reports and requirements.
5. **Enhance Password Security.** Revise the password policy to enforce stronger standards, ensuring better security for sensitive data and user access.
6. **Background Notifications.** Implement background notifications to keep users informed about emergencies, even when the app is closed, enhancing system responsiveness.
7. **Improved Emergency Response Actions.** Allow real-time tracking of the emergency response team's location on a map to provide transparency and allow residents to monitor the status of their request.
8. **Multi-Device Support for the mobile application,** extending beyond Android to include IOS and other mobile operating systems.

9. Offline Mode for Emergency Reporting. Allow users to report emergencies offline, with automatic syncing when the device reconnects, ensuring functionality in low-network areas.
10. System Maintenance and Technological Updates. Schedule regular system updates to maintain performance and adapt to evolving technologies.

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APPENDIX

Appendix 1 Detailed Evaluation



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SURVEY QUESTIONNAIRE FOR MUNICIPAL POLICE STATION OFFICERS

GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION

Name (Optional): _____ Date: _____

1. Satisfaction of the Proposed System

This survey aims to gather your feedback regarding the satisfaction and acceptance of the proposed system. Please rate your level of satisfaction with the proposed system in the following areas.

- 5 – Very Satisfied
- 4 – Satisfied
- 3 – Neutral
- 2 – Dissatisfied
- 1 – Very Dissatisfied

Level of Satisfaction of the Respondents on the Proposed System

DIRECTIONS: Read the items below and respond honestly. Choose on the appropriate box using the five-point scale with its corresponding verbal descriptions (5 as the highest and 1 as the lowest).

<i>CRIME REPORTING</i>	5	4	3	2	1
1. The system simplifies the process of reporting incidents.					
2. The system allows quick verification and processing of incidents reports.					
3. The system supports timely follow-up and updates on incidents reports.					

4. The system enhances the organization and management of submitted incidents reports.					
5. The system helps organize and manage incoming incidents reports effectively.					
EMERGENCY REPORTING	5	4	3	2	1
1. The system enables prompt notification of emergencies to the appropriate authorities.					
2. The system ensures accurate detection and reporting of emergency locations.					
3. The system enhances coordination and communication during emergency situations.					
4. The system ensures confidentiality and anonymity for emergency reports when needed.					
5. The system tracks and stores emergency response data for future analysis.					
USER INTERFACE	5	4	3	2	1
1. The system interface is intuitive and easy to use.					
2. The system layout helps find what is needed efficiently.					
3. The design of the interface improves the overall experience.					
4. The system is visually appealing and clear.					
5. The system interface responds quickly to user actions.					

FEEDBACK AND SUGGESTIONS

Please provide further comments about your experience in using “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION”. Kindly identify its Strong point/s to be enhanced and its weak points that need to be addressed for improvements.

Do you have any thoughts on other Features/Functions that can be added to “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION”? Kindly share any suggestions with us so we can better improve it.

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Michael Darren Arroyo

Validated by:

Asst. Prof. Renz Mervin A. Salac
Capstone Project Adviser

Prof. Lorissa Joana E. Buenas
Chairman

Mr. Romeo A. Concepcion Jr.
Panel 1

Mr. Inocencio C. Madriaga Jr.
Panel 2



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SURVEY QUESTIONNAIRE FOR RESIDENTS

**GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT
CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE
STATION**

Name (Optional): _____ Date: _____

1. Satisfaction of the Proposed System

This survey aims to gather your feedback regarding the satisfaction and acceptance of the proposed system. Please rate your level of satisfaction with the proposed system in the following areas.

- 5 – Very Satisfied
- 4 – Satisfied
- 3 – Neutral
- 2 – Dissatisfied
- 1 – Very Dissatisfied

Level of Satisfaction of the Respondents on the Proposed System

DIRECTIONS: Read the items below and respond honestly. Choose on the appropriate box using the five-point scale with its corresponding verbal descriptions (5 as the highest and 1 as the lowest).

CRIME REPORTING	5	4	3	2	1
1. The system simplifies the process of reporting incidents.					
2. The system reduces the time required to report incidents.					
3. The system allows for timely updates on reported incidents.					

4. The app offers clear instructions and feedback throughout the incidents reporting process.					
5. The app makes reporting incidents straightforward and accessible.					
EMERGENCY REPORTING	5	4	3	2	1
1. The system allows users to report emergencies by pressing the "Emergency" button.					
2. A modal view is displayed, recommending the hotlines of Nasugbu MPS.					
3. The user has the option to place a call directly to the hotline.					
4. The system automatically tracks the user's location and provides it to the Admin/Desk Officer or nearby police patrol for immediate response.					
5. The system notifies the user if the authorities are responding to the emergency.					
USER INTERFACE	5	4	3	2	1
1. The system interface is intuitive and easy to use.					
2. The system layout helps me find what I need efficiently.					
3. The design of the interface improves my overall experience.					
4. The system is visually appealing and clear.					
5. The system interface responds quickly to user actions.					

FEEDBACK AND SUGGESTIONS

Please provide further comments about your experience in using **"GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION"**. Kindly identify its Strong point/s to be enhanced and its weak points that need to be addressed for improvements.

Do you have any thoughts on other Features/Functions that can be added to “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION”? Kindly share any suggestions with us so we can better improve it.

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SURVEY QUESTIONNAIRE FOR IT EXPERT

**GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT
CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE
STATION**

Name (Optional): _____ Date: _____

1. Evaluation of the Proposed System

This survey aims to gather your feedback regarding the evaluation and acceptance of the proposed system. Please rate your level of satisfaction with the proposed system in the following areas.

- 5 – Strongly Acceptable
- 4 – Acceptable
- 3 – Neutral
- 2 – Not Acceptable
- 1 – Strongly Not Acceptable

DIRECTIONS: Please evaluate the software quality of the “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION” based on the three characteristics of ISO 25010 Software Product Quality Standards. Choose on the appropriate box using the five-point scale with its corresponding verbal descriptions (5 as the highest and 1 as the lowest).

<i>PERFORMANCE</i>	5	4	3	2	1
1. The case reporting function operates efficiently without delays.					
2. Emergency reporting functions without lag or interruption.					
3. The system provides prompt case tracking and updates.					

4. Notifications are sent out promptly without delays.					
5. Document uploads, downloads, and management are efficient.					
RELIABILITY	5	4	3	2	1
1. Case reporting is accessible and operational whenever needed.					
2. Emergency reports can be submitted at any time with consistent accuracy.					
3. Updates to cases are accurately reflected without system errors.					
4. Documents are accessible without errors and with minimal downtime.					
5. Data visualizations are accurately displayed and consistently updated.					
SECURITY	5	4	3	2	1
1. Access to sensitive data is restricted based on user roles and permissions, ensuring that only authorized individuals can view or modify sensitive information.					
2. Require users to create strong, unique passwords (e.g., a mix of letters, numbers, and symbols).					
3. Restrict access to case reports, document management systems, and dashboard data based on user roles and permissions.					
4. Users can access and manage the data collected about them, ensuring transparency and control over their personal information.					
5. Audit logs track and monitor user activities, including login attempts and data access, to detect potential security breaches or unauthorized actions.					

FEEDBACK AND SUGGESTIONS

Please provide further comments about your experience in using “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION”. Kindly identify its Strong point/s to be enhanced and its weak points that need to be addressed for improvements.

Do you have any thoughts on other Features/Functions that can be added to “GUARDIAN WATCH: DEVELOPMENT OF QUICK RESPONSE AND EFFICIENT CASE MANAGEMENT FOR MINOR CRIMES AT NASUGBU MUNICIPAL POLICE STATION”? Kindly share any suggestions with us so we can better improve it.

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Appendix 2 Detailed Test Case

Residents' Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Residents can register for an account with all required fields.	Residents successfully create an account and receive a confirmation message.	Residents successfully create an account and receive a confirmation message.	Success
02	Verify that Residents can log in using valid credentials.	Residents successfully log in and access the system.	Residents successfully log in and access the system.	Success
03	Verify that Residents can report an emergency using the "Report Emergency" button by clicking any available hotlines of the police stations	The "Report Emergency" button is functional, and the Resident successfully reports an emergency by selecting a police station hotline.	The crime report is submitted successfully, including all required information, and the Resident receives a confirmation notification.	Success
04	Verify that Residents can report a crime with all required details (e.g., crime type, location, time), personal information, and category of crime.	The crime report is submitted successfully, including all required information.	The "Report Emergency" button is functional, and the Resident successfully reports an emergency by selecting a police station hotline. The user's location is tracked by Law Enforcement and Police Patrol.	Success
05	Verify that Residents receive notifications about responses from Police Patrol or updates on their report given by the police assigned to their reported crime.	Notifications are delivered promptly and display accurate updates from the police assigned to their reported crime.	Notifications are delivered promptly and display accurate updates from the police assigned to their reported crime.	Success
06	Verify that Residents can view the status of their submitted crime reports in the system.	The system displays the status updates, such as "Pending," "On-going," or "Resolved."	The system displays the status updates, such as "Pending," "On-going," or "Resolved."	Success
07	Verify that Residents can update their	Account details are updated successfully,	Account details are updated successfully,	Success

	account details, including Username, Successword, and Email Address.	and confirmation is provided.	and confirmation is provided.	
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Police Patrol Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Police Patrol can log in using valid credentials.	Police Patrol successfully logs in and accesses the system.	Police Patrol successfully logs in and accesses the system.	Success
02	Verify that the system displays an error message for invalid login credentials.	An error message, "Invalid credentials. Please try again," is displayed.	An error message, "Invalid credentials. Please try again," is displayed.	Success
03	Verify that the map shows fixed patrol areas for each station	The map displays fixed areas accurately based on the assigned areas.	The map displays fixed areas accurately based on the assigned station.	Success
04	Verify that the system assigns emergencies to the nearest Police Patrol unit.	The system identifies and assigns the closest patrol unit to respond to the incident.	The system identifies and assigns the closest patrol unit to respond to the incident.	Success
05	Verify that the system suggests the fastest route for emergency response.	The system provides the quickest route to the incident location.	The system provides the quickest route to the incident location.	Success

Admin/ Desk Officer Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that the Admin/Desk Officer can log in using valid credentials.	The system allows successful login and access to assigned features.	The user successfully logs in and accesses all assigned features.	Success

02	Verify that new crime reports are visible to the system.	A list of new crime reports submitted by residents is displayed for review.	A list of new crime reports submitted by residents is displayed for review.	Success
03	Verify that ongoing cases handled by Police Investigators are accessible.	The system displays a list of ongoing cases along with the details of the assigned Police Investigators.	The system displays a list of ongoing cases along with the details of the assigned Police Investigators.	Success
04	Verify that the dashboard displays crime statistics by category, monthly crime statistics, and geographic density of emergency reports.	The dashboard should display the following: - Crime reports categorized by type (e.g., theft, assault). - Monthly crime statistics for the year. - A map or chart showing the geographic density of emergency reports.	The dashboard displays crime reports categorized by type, monthly crime statistics for the year, and a map/chart showing the geographic density of emergency reports.	Success
05	Verify that crime reports classified as Barangay cases can be rejected.	The system allows rejecting a report marked as a Barangay case, preventing further action.	The system allows rejecting a report marked as a Barangay case, preventing further action.	Success
06	Verify that Police accounts can be managed.	The system provides options to create, edit, or delete accounts effectively.	The system provides options to create, edit, or delete accounts effectively.	Success
07	Verify that accounts can be created for Police or Law Enforcement personnel.	The system enables the creation of new user accounts for Police or Law Enforcement personnel.	The system enables the creation of new user accounts for Police or Law Enforcement personnel.	Success

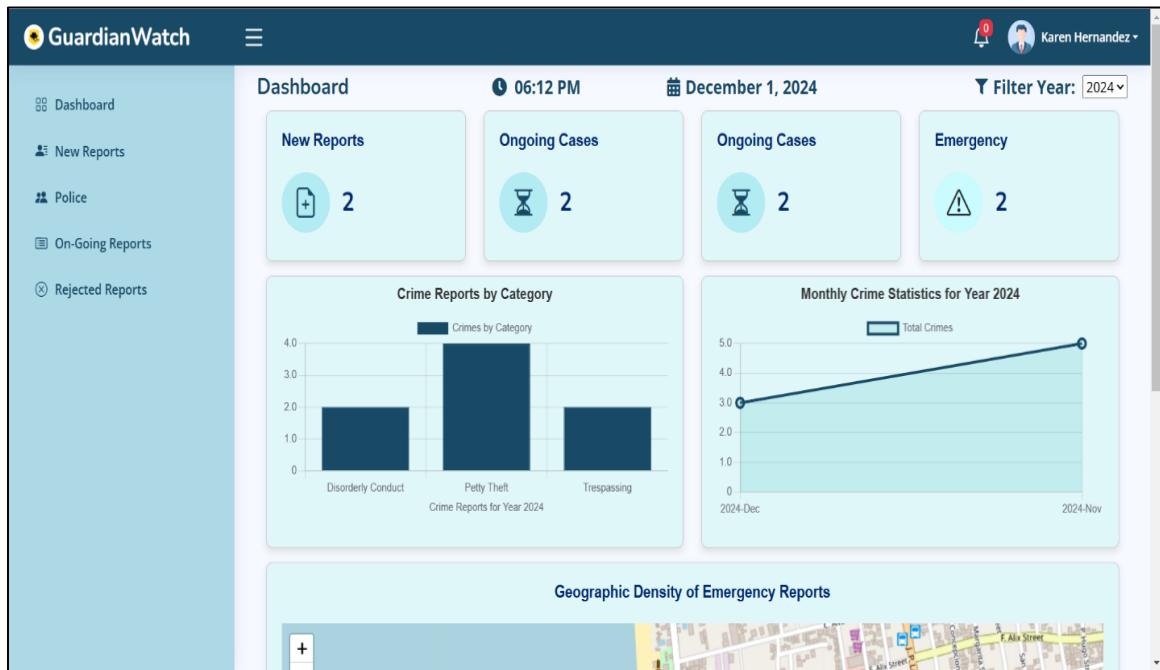
Law Enforcement Test Case

Test ID	Test Scenario	Expected Result	Actual Result	Status
01	Verify that Law Enforcement can log in using valid credentials.	Law Enforcement successfully logs in and accesses the system.	Law Enforcement successfully logs in and accesses the system.	Success
02	Verify that the dashboard displays reported crimes or cases under their investigation.	The dashboard shows only the crimes or cases assigned to the Law Enforcement officer for investigation.	The dashboard shows only the crimes or cases assigned to the Law Enforcement officer for investigation.	Success
03	Verify that new crime reports assigned to Law Enforcement are visible in their system..	New reports assigned to the officer appear in the list for further investigation.	New reports assigned to the officer appear in the list for further investigation.	Success
04	Verify that Law Enforcement can notify residents about the required documents for ongoing cases.	Residents receive notifications about the documents they need to submit to the Municipal Police Station.	Residents receive notifications about the documents they need to submit to the Municipal Police Station.	Success
05	Verify that Law Enforcement can update residents regarding case resolutions or dismissals.	Residents are notified when their cases are resolved or dismissed.	Residents are notified when their cases are resolved or dismissed.	Success
06	Verify that Law Enforcement can view and filter cases by status (e.g., new, in progress, resolved).	The system allows filtering cases by their status for easier management.	The system allows filtering cases by their status for easier management.	Success

Appendix 3 Detailed Screenshots of System

Webpage Interface for Admin (Desk Officer)

Dashboard for Admin



The dashboard for admin gives an easy-to-understand view of the system. It shows the number of new reports, ongoing cases, and helpful charts like a bar chart for crimes by type and a line graph for monthly trends. An interactive map highlights areas with many emergency reports. This dashboard helps admins respond quickly and manage reports better.

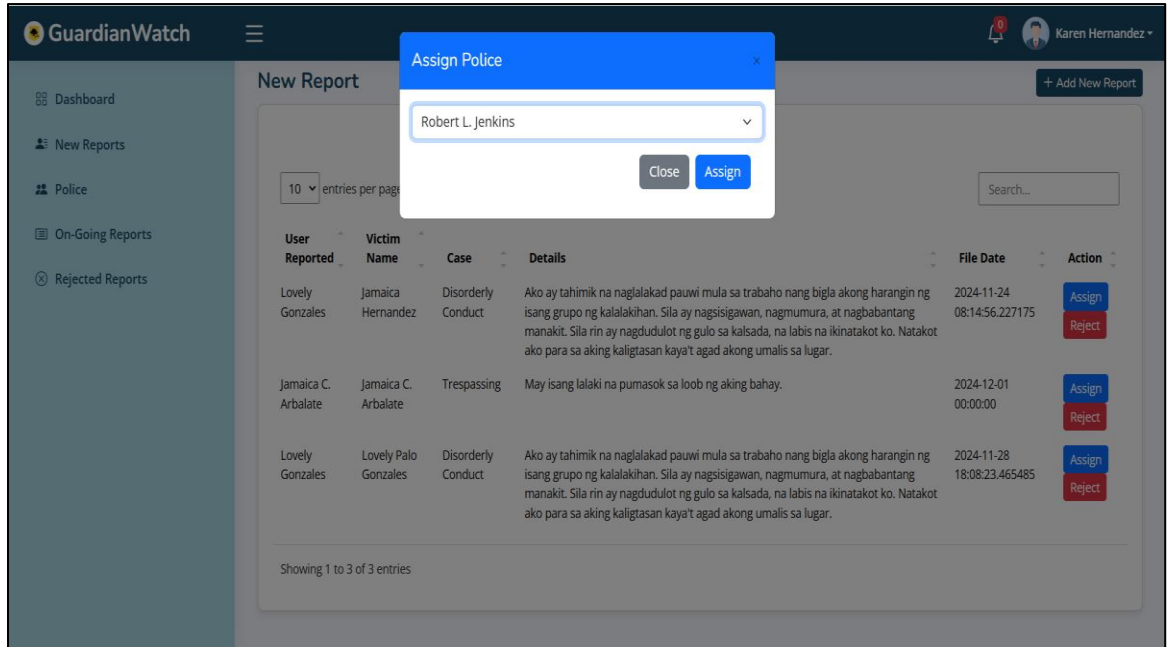
New Reports List for Admin

The screenshot displays the 'New Reports' section of the GuardianWatch admin interface. The header includes the 'GuardianWatch' logo, a menu icon, and a user profile for 'Karen Hernandez'. The left sidebar contains navigation links: 'Dashboard', 'New Reports', 'Police', 'On-Going Reports', and 'Rejected Reports'. The main content area is titled 'New Report' and features a '+ Add New Report' button. Below this, there is a table listing three reports. Each report row includes columns for 'User Reported', 'Victim Name', 'Case', 'Details', 'File Date', and 'Action'. The 'Action' column contains 'Assign' and 'Reject' buttons. At the bottom of the table, it indicates 'Showing 1 to 3 of 3 entries'.

User Reported	Victim Name	Case	Details	File Date	Action
Lovely Gonzales	Jamaica Hernandez	Disorderly Conduct	Ako ay tahimik na naglalakad pauwi mula sa trabaho nang bigla akong harangin ng isang grupo ng kalalakihan. Sila ay nagsisigawan, nagmumura, at nagbabantang manakit. Sila rin ay nagdudulot ng gulo sa kalsada, na labis na ikinatakot ko. Natakot ako para sa aking kaligtasan kaya't agad akong umalis sa lugar.	2024-11-24 08:14:56.227175	<button>Assign</button> <button>Reject</button>
Jamaica C. Arbalate	Jamaica C. Arbalate	Trespassing	May isang lalaki na pumasok sa loob ng aking bahay.	2024-12-01 00:00:00	<button>Assign</button> <button>Reject</button>
Lovely Gonzales	Lovely Palo Gonzales	Disorderly Conduct	Ako ay tahimik na naglalakad pauwi mula sa trabaho nang bigla akong harangin ng isang grupo ng kalalakihan. Sila ay nagsisigawan, nagmumura, at nagbabantang manakit. Sila rin ay nagdudulot ng gulo sa kalsada, na labis na ikinatakot ko. Natakot ako para sa aking kaligtasan kaya't agad akong umalis sa lugar.	2024-11-28 18:08:23.465485	<button>Assign</button> <button>Reject</button>

The New Reports List in the admin panel displays newly reported cases submitted by users. Admins can review each report and either assign it to the police for further action or reject it if the incident falls under barangay jurisdiction. This feature ensures that cases are directed to the appropriate authorities efficiently, helping streamline the reporting process and maintain proper case management.

Assign Reports for Police



The Assign Reports to Police feature lets the admin give reports to police officers to handle. The admin reviews the report details and picks an officer from a list based on the category of crime reported. Once assigned, the officer gets the report and works on it. This helps make sure reports are handled quickly and shared properly.

Add New Reports for Walk-in Residents

GuardianWatch

Dashboard

New Reports

Police

On-Going Reports

Rejected Reports

Add New Report

Search...

File Date

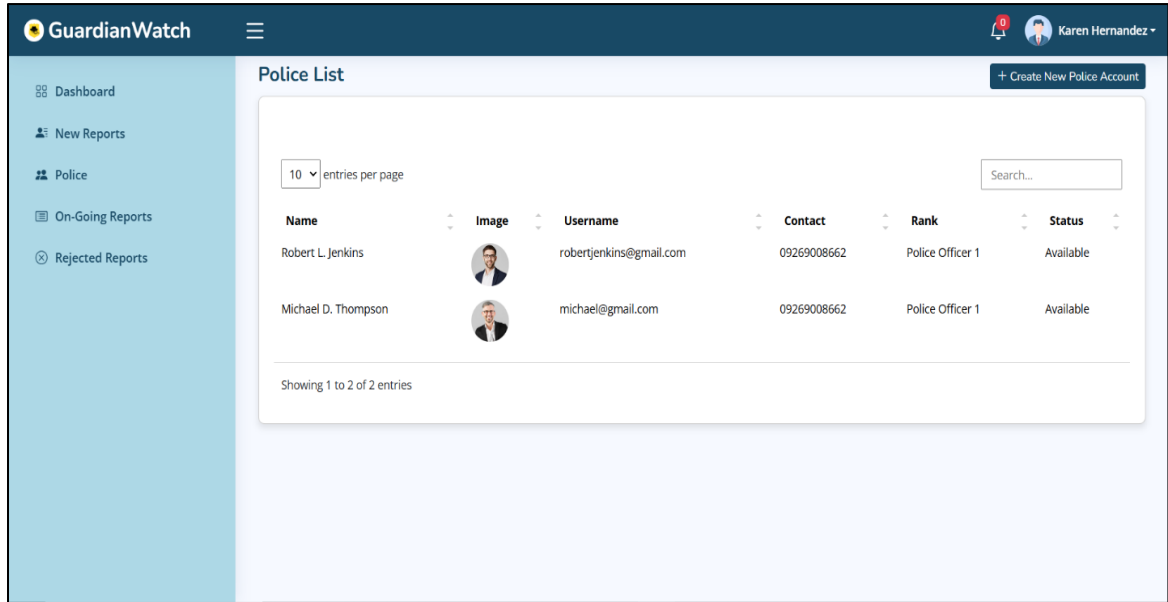
Action

Jamaica C. Arbalate	Jamaica C. Arbalate	Trespassing	May isang lalaki na pumasok sa loob ng aking bahay.	2024-11-24 08:14:56.227175	Assign Reject
Lovely Gonzales	Lovely Palo Gonzales	Disorderly Conduct	Ako ay tahimik na naglalakad pauwi mula sa trabaho nang bigla akong harangin ng isang grupo ng kalalakihan. Sila ay nagsisigawan, nagmumura, at nagbabantang manakit. Sila rin ay nagdudulot ng gulo sa kalsada, na labis na ikinatakot ko. Natakot ako para sa aking kaligtasan kaya't agad akong umalis sa lugar.	2024-12-01 00:00:00	Assign Reject
Lovely Gonzales	Lovely Palo Gonzales	Disorderly Conduct	Ako ay tahimik na naglalakad pauwi mula sa trabaho nang bigla akong harangin ng isang grupo ng kalalakihan. Sila ay nagsisigawan, nagmumura, at nagbabantang manakit. Sila rin ay nagdudulot ng gulo sa kalsada, na labis na ikinatakot ko. Natakot ako para sa aking kaligtasan kaya't agad akong umalis sa lugar.	2024-11-28 18:08:23.465485	Assign Reject

Showing 1 to 3 of 3 entries

The Add New Reports for Walk-In Residents feature lets the admin create reports for residents who come in person to report an incident. The admin fills out the details, such as the type of report, date, location, and description of the incident. This ensures that walk-in reports are recorded in the system, just like online reports, so all cases are tracked and handled properly.

Police Officers List



The Police Officers List feature allows the admin to view and manage a list of all police officers registered in the system. It includes key details such as the officer's name, position, contact information, and the cases they are currently handling. The admin can add, update, or remove officers from the list as needed. This feature helps ensure that the system keeps track of police personnel and their assigned tasks, enabling efficient case management and assignment.

Add New Police Account

The screenshot displays the GuardianWatch application interface. A modal window titled 'Add New Police Account' is open in the center. The modal contains the following fields: Full Name, Email Address, Username, Password, Rank, and Profile Image. The Profile Image field includes a 'Choose File' button and the text 'No file chosen'. At the bottom of the modal are 'Close' and 'Add New' buttons. In the background, the 'Police List' table is visible, showing two entries: Robert L. Jenkins and Michael D. Thompson. The top right of the interface shows the user 'Karen Hernandez' and a '+ Create New Police Account' button.

Contact	Rank	Status
09269008662	Police Officer 1	Available
09269008662	Police Officer 1	Available

The Add New Police Account feature allows the admin to create new accounts for police officers in the system. The admin fills in details such as the officer's name, rank, contact information, and login credentials. Once the account is created, the officer can access the system, view assigned cases, and perform their duties. This feature helps ensure that the police team is properly registered and able to manage their tasks within the system.

Ongoing Reports

User Reported	Victim Name	Case	Details	Witness Name	File Date	Police Assign	Action
Karen Hernandez	Karen Gutierrez Hernandez	Petty Theft	Nobyembre 30, 2024, bandang 6:30 PM sa loob ng kanyang sari-sari store. Isang binatilyong nasa edad 16-18 ang pumasok sa tindahan at nagkunwaring bibili ng soft drinks. Habang abala ako sa pag-abot ng produkto, mabilis na kinuha ng binatilyo ang tatlong pakete ng sigarilyo na nagkakahalaga ng P150. Pagkatapos nito, mabilis itong tumakbo palabas ng tindahan.		2024-12-01 05:48:49.101444	Michael D. Thompson	View
Jamaica Arbalate	Jamaica Cabulang Arbalate	Trespassing	Noong November 01, 2024, 10:19pm. May isang lalaki na nakasuot ng itim na sumbrelo, green na damit at naka short na kulay blue ay nagtangkang pumasok sa loob ng aming teritoryo sa Banilad Nasugbu Batangas. Hindi namin ito kilala pero matatandaan ko ang kanyang mukha. Siya ay maputi at singkit ang mata.		2024-11-28 14:21:08.805601	Robert L. Jenkins	View

Showing 1 to 2 of 2 entries

The Ongoing Reports feature shows a list of all reports currently being handled by the police. Each case includes details like the report type, assigned officer, status, and last update. Admins can track the progress of these cases, update their status, or reassign them if needed. This feature helps ensure that all active cases are monitored and managed efficiently until they are resolved.

Webpage Interface for Police Officers (Office police personnel)

Dashboard for Police Officer



The Police Officer Dashboard gives officers a clear view of their tasks and updates. It shows the total number of assigned and resolved cases, lists updates on ongoing cases, and highlights urgent reports needing immediate attention. An interactive map displays the locations of assigned cases for better situational awareness. This dashboard helps officers stay organized, prioritize tasks, and manage cases efficiently.

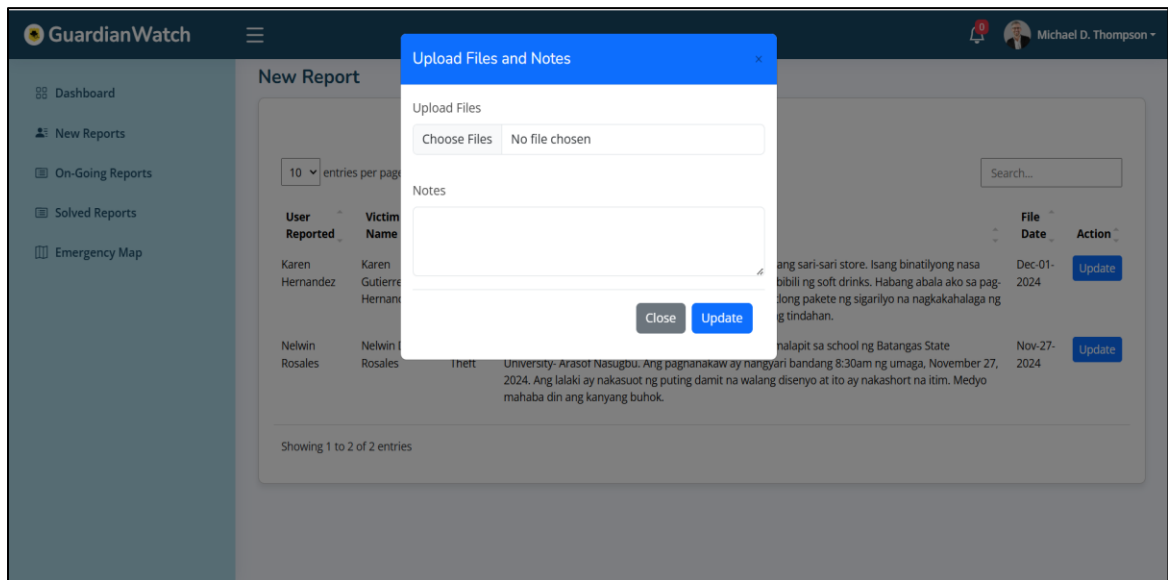
New Reports List

The screenshot shows the 'New Reports' section of the GuardianWatch application. The interface includes a sidebar with navigation links: Dashboard, New Reports, On-Going Reports, Solved Reports, and Emergency Map. The main content area is titled 'New Report' and features a table of reports. Above the table, there is a dropdown for 'entries per page' set to 10 and a search bar. The table has columns for 'User Reported', 'Victim Name', 'Case', 'Details', 'File Date', and 'Action'. Two reports are listed, each with an 'Update' button. The first report is from Karen Hernandez, reporting a petty theft on December 1, 2024. The second report is from Nelwin Rosales, reporting a petty theft on November 27, 2024. At the bottom of the table, it says 'Showing 1 to 2 of 2 entries'.

User Reported	Victim Name	Case	Details	File Date	Action
Karen Hernandez	Karen Gutierrez Hernandez	Petty Theft	Nobyembre 30, 2024, bandang 6:30 PM sa loob ng kanyang sari-sari store. Isang binatilyong nasa edad 16-18 ang pumasok sa tindahan at nagkunwaring bibili ng soft drinks. Habang abala ako sa pag-abot ng produkto, mabilis na kinuha ng binatilyo ang tatlong pakete ng sigarilyo na nagkakahalaga ng P150. Pagkatapos nito, mabilis itong tumakbo palabas ng tindahan.	Dec-01-2024	Update
Nelwin Rosales	Nelwin Digma Rosales	Petty Theft	Kaninang umaga may lalaking nag nakaw ng aking bag malapit sa school ng Batangas State University- Arasof Nasugbu. Ang pagnanakaw ay nangyari bandang 8:30am ng umaga, November 27, 2024. Ang lalaki ay nakasuot ng puting damit na walang disenyo at ito ay nakashort na itim. Medyo mahaba din ang kanyang buhok.	Nov-27-2024	Update





The New Reports List feature allows police officers to view freshly assigned cases that require their attention. Each report includes key details like the type of incident, location, date, and any attached evidence or description. Officers can review the report, update its status, and begin working on it. This feature ensures that new cases are addressed promptly and systematically.

Upload Files and Notes



The Upload Files for Reports feature allows police officers to add supporting documents, images, or other files to a case. Officers can upload evidence, progress reports, or final case summaries directly through the system. These files are securely stored and linked to the specific report, ensuring all case-related information is organized and easily accessible for future reference.

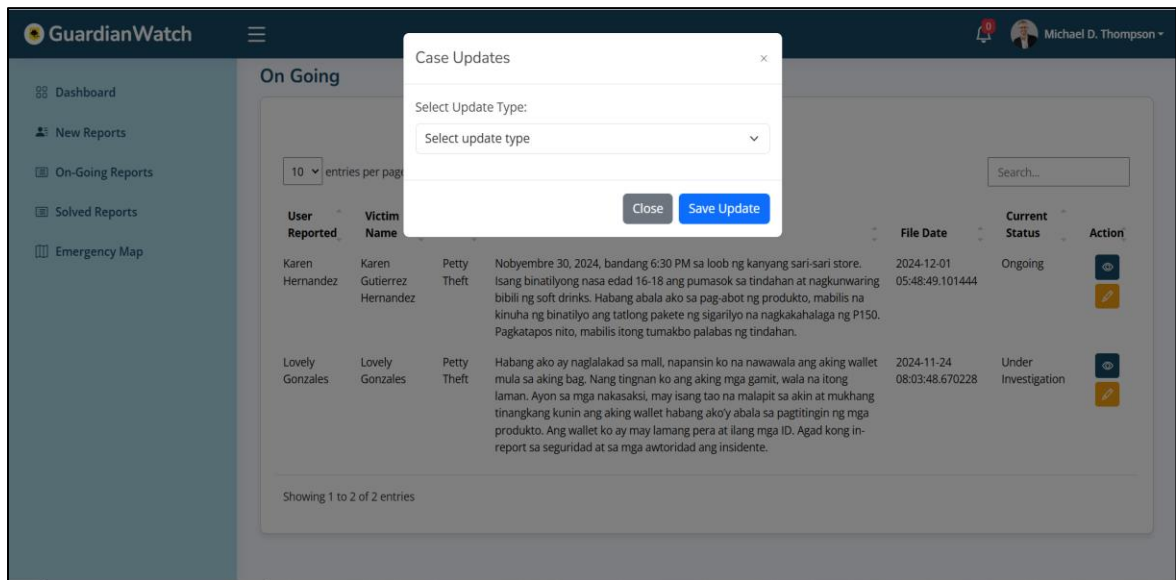
On Going Reports Lists

User Reported	Victim Name	Case	Details	File Date	Current Status	Action
Karen Hernandez	Karen Gutierrez Hernandez	Petty Theft	Nobyembre 30, 2024, bandang 6:30 PM sa loob ng kanyang sari-sari store. Isang binatilyong nasa edad 16-18 ang pumasok sa tindahan at nagkumwaring bibili ng soft drinks. Habang abala ako sa pag-abot ng produkto, mabilis na kinuha ng binatilyo ang tatlong pakete ng sigarilyo na nagkakahalaga ng P150. Pagkatapos nito, mabilis itong tumakbo palabas ng tindahan.	2024-12-01 05:48:49.101444	Ongoing	 
Lovely Gonzales	Lovely Gonzales	Petty Theft	Habang ako ay naglalakad sa mall, napansin ko na nawawala ang aking wallet mula sa aking bag. Nang tingnan ko ang aking mga gamit, wala na itong laman. Ayon sa mga nakasaksi, may isang tao na malapit sa akin at mukhang tinangkang kunin ang aking wallet habang ako'y abala sa pagtitingin ng mga produkto. Ang wallet ko ay may lamang pera at ilang mga ID. Agad kong in-report sa seguridad at sa mga awtoridad ang insidente.	2024-11-24 08:03:48.670228	Under Investigation	 

Showing 1 to 2 of 2 entries

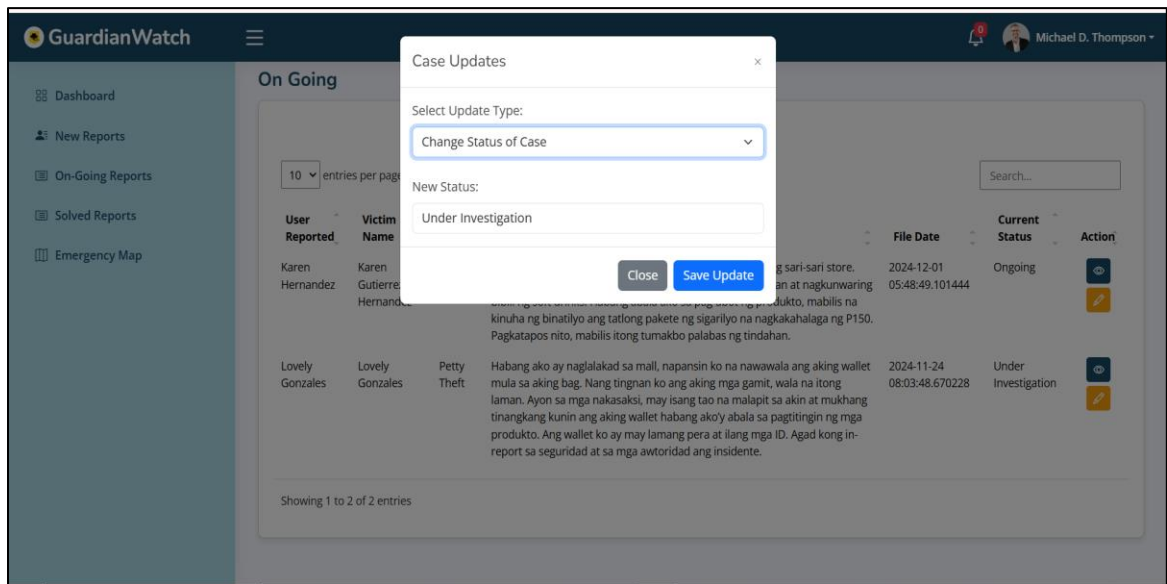
The Ongoing Reports feature allows police officers to track and manage reports they are currently handling. It displays a list of active cases with key details like report type, location, date, and status. Officers can update the progress of each case, upload files, and communicate updates to the admin if needed. This feature helps ensure cases are handled efficiently and remain organized until they are resolved.

Case Updates (Selecting update type)



The Case Update with Select Update Type feature allows police officers to choose the type of update they want to provide for a case. Update types may include Change Status, Interview and Court Dates, Case Resolution or Request for Requirements. This ensures that each update is categorized clearly, making it easier for admins and other officers to understand the status and next steps. This feature streamlines communication and improves case management.

Case Updates (Change Status of Report)



The Case Update for Change Status feature allows police officers to update the status of a case as it progresses. Officers can change the case status to options like In Progress, Under Investigation, Resolved, or Closed. This ensures that both the officer and the admin are always informed of the current state of the case, helping maintain clear communication and efficient case tracking throughout the process.

Case Updates (Interview Schedule or Court Dates)

The screenshot displays the GuardianWatch application interface. A modal titled 'Case Updates' is open, allowing users to update case information. The modal includes a dropdown menu for 'Select Update Type:' with 'Interview Schedule or Court Dates' selected. Below this, there is a text input field for 'Enter schedule details'. Further down, there are two date/time selection fields: 'Select Date:' with a placeholder 'dd/mm/yyyy' and a calendar icon, and 'Select Time:' with a placeholder '--:-- --' and a clock icon. At the bottom of the modal are 'Close' and 'Save Update' buttons. The background shows the 'On Going' section of the dashboard with a table of cases.

User Reported	Victim Name	File Date	Current Status	Action
Karen Hernandez	Karen Gutierrez Hernandez	2024-12-01 05:48:49.101444	Ongoing	[Edit] [Delete]
Lovely Gonzales	Lovely Gonzales	2024-11-24 08:03:48.670228	Under Investigation	[Edit] [Delete]

The Case Update for Interview Schedule or Court Dates feature allows police officers to add and update scheduled interviews or court dates related to a case. Officers can enter specific details such as the date, time, location, and individuals involved in the interview or court session. This feature ensures that all key events in the case are tracked and that everyone involved is informed and prepared, helping maintain an organized and timely case management process.

Case Updates (Case Closure Summary)

The screenshot displays the GuardianWatch application interface. A modal titled 'Case Updates' is open, allowing a user to update a case. The modal contains the following elements:

- Select Update Type:** A dropdown menu with 'Case Closure Summary' selected.
- Closure Summary:** A text input field with the placeholder 'Enter closure summary'.
- Reasons for Resolution:** A text input field with the placeholder 'Enter reasons'.
- Buttons:** 'Close' and 'Save Update' buttons at the bottom right of the modal.

The background shows the 'On Going' section of the dashboard with a table of cases:





User Reported	Victim Name	File Date	Current Status	Action
Karen Hernandez	Karen Gutierrez Hernandez	2024-12-01 05:48:49.101444	Ongoing	[Edit] [Close]
Lovely Gonzales	Lovely Gonzales	2024-11-24 08:03:48.670228	Under Investigation	[Edit] [Close]

Showing 1 to 2 of 2 entries

The Case Updates for Case Closure Summary feature allows police officers to provide a detailed summary when closing a case. Officers can document the outcome, actions taken, evidence reviewed, and the resolution achieved. This summary becomes part of the case record, ensuring transparency and accountability. It helps admins and other stakeholders understand how the case was resolved and provides a clear reference for future needs or audits.

Case Update (Follow-Up Requirements)

The screenshot displays the GuardianWatch application interface. A modal titled 'Case Updates' is open, allowing a user to update a case. The modal includes a dropdown menu for 'Select Update Type:' with 'Follow-Up Requirements' selected. Below this is a text input field labeled 'Enter follow-up requirements'. At the bottom of the modal are 'Close' and 'Save Update' buttons. The background shows the 'On Going' section of the dashboard with a table of cases.

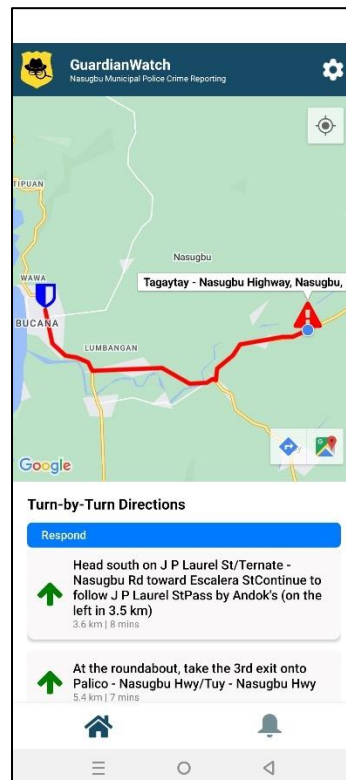
User Reported	Victim Name	File Date	Current Status	Action
Karen Hernandez	Karen Gutierrez Hernandez	2024-12-01 05:48:49.101444	Ongoing	 
Lovely Gonzales	Lovely Gonzales	2024-11-24 08:03:48.670228	Under Investigation	 

Showing 1 to 2 of 2 entries

The Case Update for Follow-Up Requirements feature allows police officers to document and track additional steps needed to progress a case. Officers can specify requirements such as collecting more evidence, scheduling another interview, or obtaining approvals. These follow-up actions are logged in the system, ensuring that no critical tasks are overlooked and that the case moves forward efficiently. This feature helps maintain clear communication and accountability for pending actions.

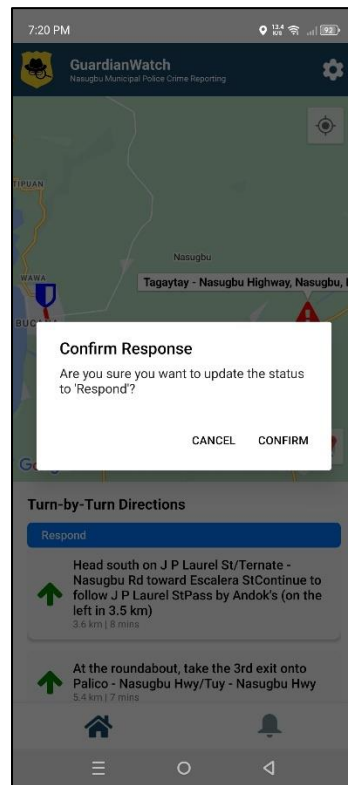
Mobile Application Interface for Police Officer (Response Team)

Emergency Report Marks



The emergency report system shows the location of incidents on a map with markers. Each marker gives basic details like the location of emergency without showing who sent it. The system also helps police or response teams find the quickest way to get there using the shortest route. This makes it easier and faster for them to respond to emergencies and helps them handle the situation better.

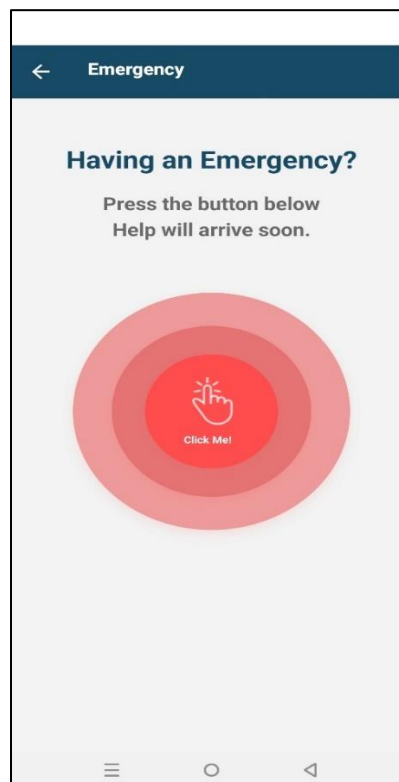
Responding to Emergency



The Respond button is used by the police to mark an emergency report as handled. When clicked, it updates the status of the report in the system to show that a response has been made.

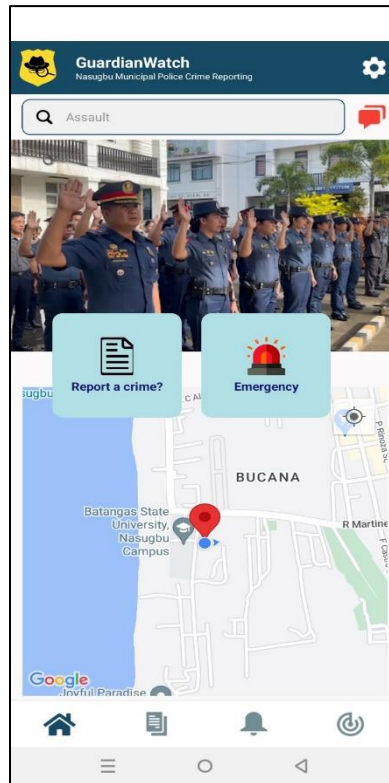
Mobile Application Interface for Residents

Emergency Report



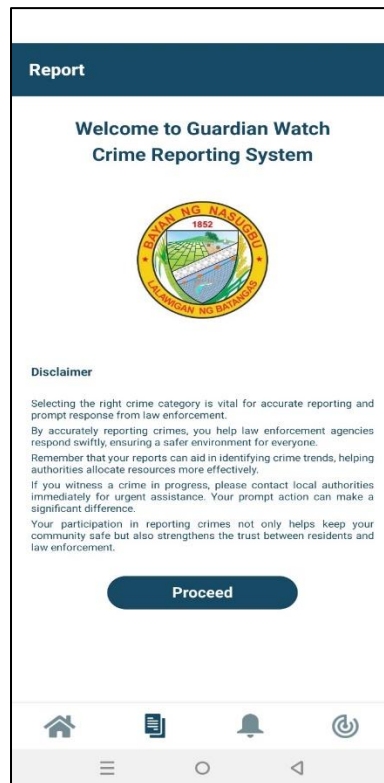
The Emergency Report for Residents feature allows users to quickly report urgent incidents directly through the system. Residents can submit essential details such as the type of emergency and their location, which is automatically detected using location detector for accuracy. The report is immediately sent to the admin and police officers for prompt action. This feature ensures fast and efficient handling of emergencies, prioritizing the safety and security of the residents.

Home Screen of Residents



The Home Screen for Residents serves as the main hub for users, providing easy access to key features of the system. It displays options for submitting new reports, viewing the status of ongoing reports, and reporting emergencies. The screen may also show notifications for updates on their cases and safety tips. With its user-friendly design, the home screen ensures residents can quickly navigate the system and access important features with ease.

Click Proceed to Start Reporting



The Proceed button feature allows residents to begin the process of submitting a report easily. When users tap the "Proceed" button, they are guided to a step-by-step form where they can provide details about the incident, such as the type of crime, location, date, and any additional information.

Step 1: Select a Category (Incident Type)

The screenshot displays a mobile application interface for incident reporting. At the top, a dark blue header bar contains a back arrow and the title 'Category Selection'. Below the header, a progress indicator shows four steps: '1 Select Category' (highlighted in dark blue), '2 Victim Details', '3 Crime Information', and '4 Submit Report'. Underneath the progress bar, the text 'Select a Category' is followed by a dropdown menu with the placeholder 'Select Category'. At the bottom of the screen, a dark blue button labeled 'Next' is visible. The bottom of the screen also shows standard Android navigation icons.

The Select a Category for Incident Type feature allows residents to choose the type of incident they are reporting from a list of predefined categories, such as theft, vandalism, assault, or other crimes. This step helps ensure that the report is categorized accurately, enabling faster processing and assignment to the appropriate authorities. It simplifies the reporting process and ensures consistency in how incidents are logged in the system.

Step 2: Fill Up the Information Needed for Report

← Personal Information

1 Select Category 2 Victim Details 3 Crime Information 4 Submit Report

Pangalan ng Biktima

First Name Last Name
Karen Hernandez

Middle Name Suffix Name (Optional)
Gutierrez (e.g., Jr.)

Kasarian:

☐ Male ☒ Female

Contact Number (Biktima o Kamag-anak)

09551664331

Tirahan ng Biktima

Barilad Centro

☐ Do you have a Witness?

Previous Next

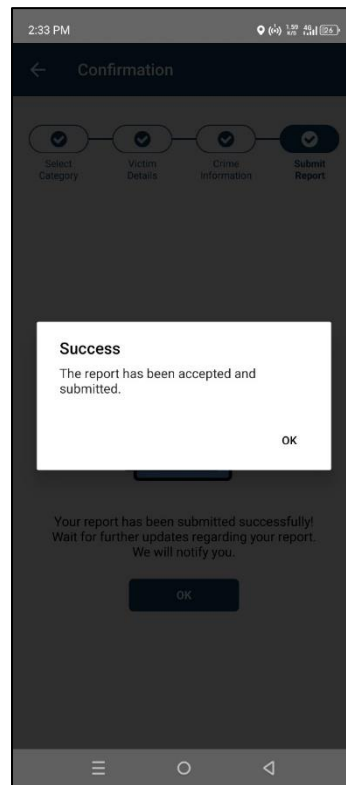
This feature guides residents to provide all necessary details for submitting a complete report. Users are prompted to enter information such as the date and time of the incident, location, a brief description, and any additional notes or evidence. This step ensures the report is accurate and contains enough details for authorities to take appropriate action, improving the efficiency of the reporting and resolution process. If you have witness, just click the checkbox for adding witness name and contacts.

Step 3: Input Crime Information Needed (Especially the Details or Story)

The screenshot displays a mobile application interface for reporting a crime. At the top, a dark blue header bar contains a back arrow and the text "Crime Information". Below the header, a progress indicator shows four steps: "Select Category", "Victim Details", "Crime Information" (the current step, highlighted with a blue circle and the number 3), and "Submit Report". The main content area includes three input fields: "Petsa ng Pangyayari (Date of Incident)" with a date picker set to "12/4/2024", "Oras ng Pangyayari (Time of Incident)" with a time picker set to "2:32:00 PM", and "Pahayag ng Biktima (Statement of the Victim)" with a text area containing a sample statement in Tagalog. At the bottom, there are two buttons: "Previous" and "Submit". The device's home indicator bar is visible at the very bottom.

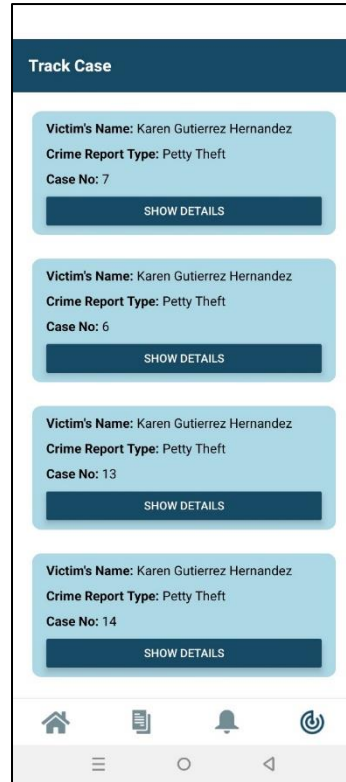
The Input Crime Information feature allows residents to provide detailed information about the incident, including a description or story of what happened. Users can enter specifics such as how the incident occurred, who was involved, and any other relevant details.

Step 4: Submit your Report



This feature allows residents to finalize and send their incident report to the system. After reviewing the details they've entered, users can click the "Submit" button to ensure their report is logged and sent to the appropriate authorities.

Track Screen for Reports



The Track Screen for Report feature allows residents to monitor the progress of their submitted reports. It displays the current status of each report, such as "Pending," "Under Review," or "Resolved," along with updates and any actions taken by authorities. This feature provides transparency and keeps residents informed about the handling of their cases, ensuring they feel engaged and supported throughout the process.

Notifications from Police



The Notifications from Police feature keeps residents updated on the progress of their reports and any actions taken by the police. Residents receive alerts for important updates, such as when their case is being investigated, when additional information is needed, or when the case is resolved. These notifications help residents stay informed and ensure timely communication between them and the police.