**ONLINE POLICE RECORDS MANAGEMENT SYSTEMS**

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**A project proposal to the Faculty of Physical sciences, Engineering and Technology in Partial fulfillment of the requirements for the award of Diploma in Information Technology.**

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# DECLARATION

I hereby declare that this project is based on my original work expect for citations and quotations which have been duly acknowledged I also declare that it has not been previously and concurrently submitted for a degree or any other award in any other educational institution .

Student Name:

……………………….

Signature:

…………………..

Date:

……………………

**APPROVAL**

This project proposal conducted under our supervision and is submitted with our approval as university supervisor.

Supervisor Name:

……………………..

Signature

………………………

Date: …………………

# DEDICATION

The work is dedicated to :

The sake of Allah, my creator and my master,

My great teacher and messenger, Mohammed(Peace be upon Him) who taught us the purpose of life.

And to my parents who have never failed to give me financial and moral support, for giving all my needs during the time I developed my system and for teaching me that even the largest task can be accomplished if it is done one step at a time.

I dedicate this project to all the people who have worked hard to help us complete this project proposal.

# ACKNOWLEDGEMENTS

Thank you to my supervisor , sir Francis for your patience , guidance and support. I have benefited greatly from your wealth of knowledge and meticulous editing . I am extremely greateful that you took me on as a student and continued to have faith in me over the years.

Thank you to the institution for allowing me to have this opportunity to study here and last but not least my interviewees, who so generously took time out of their schedules to participate in my research and make this project proposal possible .

# ABSTRACT

This project explored the relevance of management systems to contemporary society where computers have made tasks easier, more efficient and organized . Online Police Management System is a planned system of the storage processing and dissemination of data in the form of information needed to carry out various which comes to simplify the tiresome manual way of reporting and writing details on papers . There is a need for an automated record management system that is currently been used. The manual system has some few challenges that include the increasing paper load work , difficulty in enforcing access control as well as cases of missing files and information.

The main objective regarding the project is to come up with an application that will be used to automate the manual management of Kenyan criminal records . Being a web based application : there is an assumption of users been connected to the internet. The scope of this project cut across administrators and 2 types of clients : police officers and other clients: including private investigators , lawyers and other personalities seem fit by the administrator to handle an account.

The research methodology that will be used in this project will be system development lifecycle , using iterative method simply because the project was small and there are no uncertain requirements. At the end of each phase, a review takes place to determine if the project is on the right path and whether or not to continue or discard the project .

The design was majorly aided by the dataflow context diagram s which are often used as a preliminary step to create an overview of the system. Use-case diagrams and activity diagrams also helped in coming up with the database class diagrams which we used to develop a database.

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## CHAPTER ONE : INTRODUCTION

### 1.0Introduction

This chapter presents work done by other authors that are relate to the topic Online Police Management Systems . It entails the background information of this study.

### 1.1 Background of the Study

The use of computer today is in peak point and each and every field uses computer for the fastest processing and security of the data . Management systems are one of the fields where computers have made tasks easier, more efficient and organized . Online Police record management system is planned system of the storage processing and dissemination of data in the form of information needed to carry out various functions . Simply this system ensures that the criminal activities are reported by the police and any other clients authorized to use the system are feed into the system in real time in the same time , maintaining the confidentiality and available of data in the system.

In the technology advancement , computers have greatly contributed to the simplification of the way we do things as it has contributed to various automation of activities we engage in on day today activities. According to [1] Technology advancements has changed the world into a small village thanks to communication channels around the globe(Chan,2001)

[2]There have been rapid changes in technology that have occurred over the last decade in security and policing sector. Koper, Lum &Hibdon (2016) noted that information Technology has brought important development in the mobile phone , closed circuit television(CCTV), video surveillance systems that have far-reaching effects on law enforcement agencies . Given this, the police agencies are investing a lot of technology in order to enhance the efficiency and effectiveness [3].

According to the National Police Service Act (2014) of the Republic of Kenya , thee National Police Service is mandated to provide assistance to the public in need , maintenance of law and order, preserve pace , protect life and property , investigate crimes, collection of intelligence , prevention and detection of crime, apprehension of offenders, enforcement of all laws as directed by any other law. Information Technology offers significant opportunities on how policing departments can improve the services they offer to the general public. A study by Tosun (2016) found out that application of Information Technology in policing can help in quick decision making , facilitate sharing of information and offers office automation to increase organization efficiency.

Elsewhere in Australia , Queensland police department improved there processes by applying information technology and were able to create online reporting applications in which the public can report real time or at their own convenient time hence improving on service delivery . Despite the numerous benefits a policing department can acquire from implementation of Information Technology, Kenya Police service falls short in adopting new technologies to improve in service delivery. According to National Task Force on Police Reforms (2009), this failure has limited the institution from operating to its maximum potential. The institutions lack basic Information Technology knowledge and skills , equipment and infrastructure, furthermore there was lack of an effective electronic network and communication systems , which connects police stations .

This, in turn , undermines the ability of the police to use technology to preserve information and data that may help them track criminals as well as assisting in case management . Gottschalk(2006) observed that in incorporating information technology into police works could enhance police work as well as improve the performance and quality of service in the law enforcement departments.

The opportunities information technology offers in the 21st century need to be tapped and enhanced to boost the police in information policing . It is important to explore elements that affect the police officers acceptance on technology in the fight against crime in order to realize it’s benefits. This can assist in creating a system to enable managing information in a better way to curb criminal activities .

### 1.2 Problem Statement

Crime is a challenge that impairs the general growth of nations , undermining the spiritual and material wellbeing .It also compromises human dignity while promoting a climate of fear and violence. Modernization of the service continues to get keen government focus in an effort to the address the insecurity of the country . This modernization entails the adoption of Information Technology in crime prevention approaches which have so far not made the Kenya society free from danger and fear as envisioned by our development blueprint of Vision 2030 thereby creating a gap which ought to be filled (Kenya vision 2030,2007)

Kenya as a developing country still faces challenges in terms of adoption of technology in policing , most of the information recorded in the police station when a crime is reported is still done manually , this manual system is getting challenges as few problems are experienced has hinders the police’s efficiency in the police station . The problem the police case information system seeks to solve is the difficulty in the retrieval of information stored in this files.

### 1.3Objectives

### 1.3.1General Objectives

The purpose of this study is to develop a police case information system that manages information system that manages information used in police stations.

### 1.3.2Specific Objectives

1. To develop a system that will store and manage crime and criminal records in a centralized location .
2. To develop a system that will ensure that access to the police sensitive information is managed .This means that only authorized users(those in possession of login credentials provided to them the system admin )can gain access to the system.
3. To develop system that ensures that criminal activities are reported in real times. This is achieved since the system will enable the police and clients to report cases anywhere in real time.

### 1.4 Research Questions

1. How do police RMS improve efficiency and accuracy of data entry and retrieval compared to traditional paper-based systems?
2. How well do police RMS integrate with other law enforcement and public safety systems?
3. What are the primary security measures in place to protect sensitive information within the police RMS?
4. What are the common user experience challenges faced by officers using RMS?

### 1.5 Significance of the Study

Upon the completion of the completion of designed system , the various users of the system will benefit from it. The general public will benefit through Improvement of security since the system ensure that criminal activities are reported in real time. Also the system will reduce the incidences of missing files that has been experienced in the Kenyan court when finding files of criminal records in police departments to be used in the court of law as evidence, finally the system will reduce the incidences of missing files since the system replaces the current manual system that is much of paper.

### 1.6 Scope

The idea of police case information system is to be used in Tharaka-Nithi county. The information the police handle is very sensitive , the system is meant to capture all crime details reported and enable users to retrieve the same when required. The users of the system will be police situated in police stations in Tharaka-Nithi.

The system will capture how reports are going to be done on real time basis.

### CHAPTER TWO: LITERATURE REVIEW

### 2.0 Introduction

This chapter presents work done by other authors that are relate to the topic Online Police Management Systems and how it has influenced the habits in the policing sector in dealing with criminal activities.

### 2.2Review of Related Works

The Kenya Police are a critical component in the criminal justice system , one of the roles of the police is to investigate and present suspects to court of law with supporting evidence for prosecuting but this is not always the case as police officers face a lot of challenges in their day to day activities such as:s

### 2.2.1 Corruption

According to Hyun (2008) Police corruption is a specific form of police misconduct designed to obtain financial benefits , personal gain , or career advancements for a police officer(s) in exchange for not pursuing , or selectively pursuing an investigation or arrest. Kenya police is ranked the most corrupt institution by transparency International(2017)at a score of 83% compared to 2014 score of 68

### 2.2.2 File Management

According to[1] Using and Maintaining Records, includes document control; files and filing equipment management; identification and maintenance of vital records including disaster recovery and rights and interests records, quality assurance records, and records requiring protection for national security reasons. Electronic records, such as e-mail and word processing documents, must be maintained in an approved Electronic Records, Temporary electronic systems, such as Instant Messaging, cannot be used for conducting official departmental business

File management system in police stations were observed to be in deplorable state as most police stations case files were found lying open shelves and desks . The police officers further lacked adequate writing materials including paper, pens , photocopy machines office desks and chairs(Usalama Reforms Forum,2018).

### 2.2.3 Transport and Vehicle

### [4]police stations were observed not have enough vehicles for policing work hence inhabiting police works, moreover it was also noted that where the vehicles were available they lacked appropriate maintenance and many of them were broken down . this in turn hinders the police officers from arriving at the scene of crime in time to carry out investigation or able to assist victims.

### 2.**2.4 Time To Carry Out Investigation**

One of the challenges has to do with aspects of the new constitution . The constitution of Kenya (2010)enumerates and guarantees the rights of an arrested person . Under the constitutional dispensation a police officer is required to take a suspect to court within 24 hours of been arrested . Officers argue that 24 hours is insufficient to prepare and produce evidence for court prosecution .In accordance [5] to Githigiro.

2.3Conclusion

The system will provide for the storage , retrieval , retention ,manipulation ,archiving and viewing of information ,records , documents or files pertaining to law enforcement operations.

The system covers the entire life span of records development- from the initial record generation to record completion.

### 2.4 Conceptual Frame work

When a person reports a case at the police station he/she will be able to choose the case type they are reporting , the victim’s biodata details will be taken and the description of the case be reported , if there is a suspect their biodata will also be taken .

The details entered on the case report will be used by the investigative officer during crime case investigation where if the case is termed as positive the results of the investigation will be forwarded to the prosecutor to aid in the trail of the suspect.

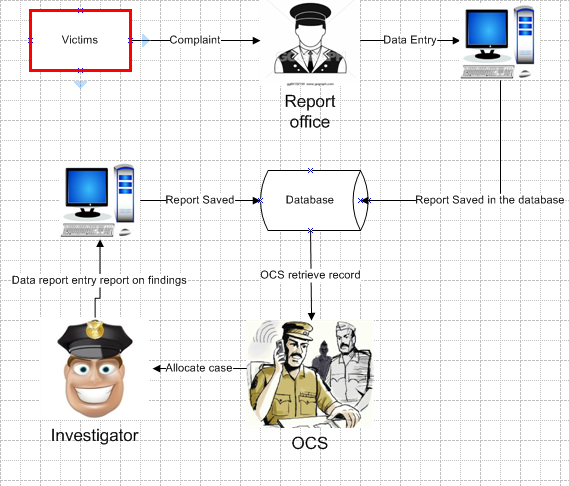


Figure 1:Conceptual Framework

# CHAPTER 3: RESEARCH METHODOLODY

# 3.0 Introduction

A system development methodology refers to the frame work that is used to structure ,plan and control the process of developing an information system.

[6] There is main methodologies used system analysis and design is Structured System Analysis and Design(SSAD) and object Oriented Analysis and Design (OOAD). the development of police record information system will use object oriented analysis and design as it allows changes to be made easily to suit user’s need( Satzinger , Jackson Burd , 2012)

The project will be implemented by use of prototyping model methodology . This is a specialized system development methodology which involves building an early prototype and then testing and reworking on until an acceptable product is achieved . Prototyping will be used because the system will be web-based .

# 3.1 Research Design

[7] This project will adopt to prototyping model is a development in which a model is quickly constructed to test or illustrate design features and ideas in order to gather user feedback Dennis , Wixom &Roth(2012). Subsequent models are created by refining earlier versions , with the aim of convergence on the desired end product. This design methodology is sometimes known as evolutionary design or incremental development . Different versions of prototyping since it is most useful in the development of online systems with a high level of user interaction.

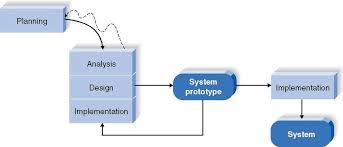


FIGURE 2:PROTOTYPING MODEL(DENNIS, WIXOM&ROTH ,2012)

# 3.1.1 Planning

The planning stage , determination of the problem is identified in this stage ,furthermore, the stage involves determining how the problem would be solved . Which is carried out in this proposal writing .

# 3.1.2 Analysis

The process of studying a procedure in order to identify its requirement and create systems and procedures that will achieve them in an efficient way.

#### 3.1.3 Design

[8] System design in software development involves defining the architecture of a system to satisfy specified requirements . This includes components , modules , interfaces and data for a system . There will be a couple of diagram s that will be used in design in this project .

1. User cases- which will be used to define the roles between action and system in order to meet a given requirement .
2. Entity relationship diagram- will be used in the definition of database structure and the perspective relationships.
3. Sequence diagram – will be used to map up the processes involved in the system .
4. Database schema- explains the relationship of entities in the database.

# 3.1.4 Build Prototype

The first prototype of the new system is constructed from the preliminary design. Then the next prototype builds on the improvements of the previous prototype . This is usually a scaled down system and represents an approximation of the characteristics of the final

# 3.1.5 Testing

The functionality of the prototype is checked amid this stage . The point is to discover mistakes and enhance a few functionalities of the system assuming any . The deliverable of this stage is a functional prototype.

# 3.1.6 Implementation

The final implementation of the system with final changes and improvement will follow the release of the prototype and the application be released for public use.

# 3.3 System Development Tools and Techniques

This is for explaining the tools that will be used in the development of the system during this project in order to meet the stated objectives . The tools will include but not limited to

1. Star UML- it will be used in the process of drawing and designing stated diagrams in the project
2. Sublime Text3- A programming tool that will be used in coding HTL, CSS, PHP and MySQL
3. PHPMyadmin- This is the database tool that will be used for this project
4. Programming languages –HTML , CSS, PHP version 7 and MySQL.
5. Google Chrome- will be used as default browser used to display the web pages
6. Microsoft Word –is used during the system documentation.

# 3.4 Data Collection Methods and Tools

For data collection various methods are going to be used:

1. Surveys and Questionnaires-will be used to gather feedback from officers , staff and the public.
2. Observations- direct observation of police operations and interactions .
3. Administrative data- data from police records reports and databases.
4. Technological tools- this includes the use of body cameras and CCTV footages , GPS and real time data from police vehicles.

For the tools to be used are:

1. Electronic data management systems- the centralized databases for storing and managing police records.
2. Mobile data terminals- In-vehicle computers that allow officers to access and input data in real time.
3. Body worn cameras- this are the cameras worn by the police officers

# 3.5 Data Analysis

This will involve processing and interpreting data due to improve law enforcement operations and public safety. The key aspects include descriptive analysis to summarize data , diagnostic analysis to identify causes of trends , predictive analysis to forecast future events and prescriptive analysis to recommend actions. The process involves data collection and integration , cleaning and preparation, exploratory data analysis, model building and validation , visualization and reporting and implementation and monitoring. Effective analysis aids in crime prevention ,resource allocation and strategic decision making.

# APPENDICES

# APPENDIX 1:QUESTIONNAIRE

**User Information:**

Name :

Rank/position :

Department:

Year of service:

Contact information:

**Current practices**

How do you currently manage and record police activities?

* Paper-based records
* Standalone computer systems
* Mixed methods(specify)…………………………………………………………………………..
* Other (please specify)…………………………………………………………………………….

What challenges do you face with the current management practices?

* Inefficiency
* Data loss
* Difficulty in accessing records
* Poor communication
* Other (please specify)…………………………………………………………………………

How do you communicate and share information within your department?

* Verbal communication
* Email
* Paper memos
* Other (please specify)…………………………………………………………………………..

**Expectations of the new system**

What features do you expect in an online police management system?(select all that may apply)

* Incident reporting
* Case management
* Criminal records data base
* Communication tools
* Other (specify)…….

What benefits do you hope to achieve in a new system?(select all that apply)

* Increased efficiency
* Better data management
* Improved communication
* Easier access to records
* Enhanced security
* Other (please specify)…………………………………………………………………………

**Readiness and training**

How comfortable are you with using computers and online systems?

* Not comfortable at all
* Somewhat comfortable
* Comfortable
* Very comfortable

What type of training do you think will be necessary for you to use the new system effectively?

* Basic computer skills
* Specific training on the new system
* Regular refresher courses
* Other (please specify)……………………………………………………………………………..

How much time would you be able to allocate to training for the new system?

* Less than 1 hour per week
* 1-2 hours per week
* 3-5hours

APPENDIX 2:BUDGET

|  |  |  |  |
| --- | --- | --- | --- |
| ITEM | DESCRIPTION | COST(USD) | REMARKS |
| Software development | Custom development or purchase of the management system | $60,000 | One-time cost |
| Hardware(servers ,computers) | Severs , workstations and peripherals | $35,000 | One-time cost |
| Network equipment | Routers , switches, cabling | $12000 | One-time cost |
| Installation and configuration | Setup and configuration of hardware and software | $8,000 | One-time cost |
| Initial training | Training for staff for the new system | $5,000 | One-time cost |
| Data migration | Transferring existing data to the new system | $10,000 | One-time cost |
| Miscellaneous | Contingency fund for unseen expenses | $5000 | One-time cost |

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# APPENDIX 3: GAUNT CHART

|  |  |  |  |
| --- | --- | --- | --- |
| PLANNING |  |  |  |
| RESEARCH |  |  |  |
| DESIGN |  |  |  |
| IMPLEMENTATION |  |  |  |
| FOLLOW UP |  |  |  |

# 

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