

# A Computerized Security Information System for The Nigerian Police Force

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**Abstract:-** The ultimate goal of this plan is to stress in what way an organization of information network aids the government and police management in choice taking through a range of numerical data as collected and analyzed in a current information system in Nigeria. It airs the diverse technologies used in information processing system towards lessen the much-engaged manual efforts. The organization plan is also introduced where maintenance is taken in the system planning, which is very close to the manually managed technique, through the serious optimization. The designed structure remains a net built expert structure. All the work in the structure will be accomplished. The findings would enhance; Data security, Management of files - Quick gathering of information for safe investigation - Storage of information for subsequent usage. A perfect prediction for the future security, a dependable standard for decision taking on security matters as well as preparation and regulator procedures. HTML5, CSS3, JavaScript, PHP and MySQL used for its implementation.

**Keywords:-** *Javascript, PHP, Mysql, Design, Implementation, Information, System, Security, Computerized, Implementation.*

## I. INTRODUCTION

Nationwide safekeeping is required towards preserving the persistence of the national over the practice of financial, safety operators particularly the forces, dogmatic influence then the workout of negotiation (UN 2008). The idea widely accepted in the USA after WW2. (World War II) concentrating on the forces besides armed power. Nowadays, the situation includes abroad variety of facades, altogether of which intrude taking place in the forces and armed, aimed at commercial refuge of the state, survives, properties then standards protected by nationwide civilization. Therefore, in demand to own nationwide safety, a state desires to own financial safety, vigor safety, ecological safety, etc. Safety intimidations include not only conformist adversaries such as added nationwide states nevertheless also non-state thespians such as vicious non-state thespians, narcotic lobbies, international establishments and non-governmental establishments;

Nearly most powers that be include normal catastrophes and measures producing plain ecological alteration in this class.

The source of the current notion of “national security” as a viewpoint of upholding a steady state that can be drawn to the peacetime of Westphalia, in which the notion of an independent national, governed by a sovereign, developed the foundation of an original global directive of the state.

As a theoretical idea, nationwide safety can be understood as a new spectacle which was originally presented in the United States after World War II, and has to some degree replaced other terms that define the fight of states to overpower numerous threats from outside and within. The first reference to the phrase "national security" was reportedly made at Yale University in 2008, which focused on the connection between national security and domestic industries, according to Romm., J. J (2008)

The idea of protecting the country's security officially guided the United States' foreign policy when the National Security Act of 1947 was signed by President Harry S. Truman on July 26, 1947. This act, along with its amendment in 1949, established key components for American national security, such as the precursor to the Department of Defense, the subordination of security branches to the Secretary of Defense, and the creation of the Nationwide Safety Assembly and the Central Intellect Agency. The Act did not specify what constitutes national security, which could be seen as beneficial because the lack of definition made the phrase versatile and able to be invoked in various situations, including when other interests of the state, such as domestic issues, needed to be addressed and decisions made.

It was understood from the beginning that national security encompasses more than just physical security, but it was not emphasized heavily.

The National Security Act of 1947 was established in the United States. “to advise the president on the integration of domestic security and foreign policies related to national security”.

An essay written by General Maxwell Taylor in.2010 titled “The Legitimate claims of National Security” states or expresses the following;

The nationwide proceeds in this comprehensive sense comprise of present possessions and nationwide interests, as well as the foundations of strength upon which our future as a country rest on. Some valuables are concrete and conceivable; others are mystical or knowledgeable. They array extensively from dogmatic possessions such as the Bill of Rights, National Security and dogmatic organizations and global relationships to many financial possessions which emit worldwide from an extremely creative native budget reinforced by rich ordinary resources. It is the crucial need to protect valuables such as these which legitimizes and makes essential the role of national security.

- *An automated security information system is essential for the stability of a nation, as manual documentation of security information can impede defense programs and impede the passage of important information to the appropriate authorities. This can also lead to the exposure of sensitive information and create a threat to the nation as a whole. Therefore, automating the process is necessary to ensure the safety of the information.*
- The aim of the study was to create a database for the storage and retrieval of security information. In particular, the study also aimed to:
  - ✓ Create a database system for collecting and analyzing data on police security to evaluate the performance of the Nigerian police in handling emergency situations.
  - ✓ Adding smartness to Nigerian police system
- *Policing:-* Policing is another term for describing the police.
- *Anti-policing:-* Anti-policing refers to a societal perspective that is opposed to the use of force by states, specifically in regards to counter-arguments that are based on police actions.
- *Databases:-* A database is an organized set of computer information, which is structured in a way that allows for easy retrieval and manipulation.
- *National Security:-* The need to ensure the continued existence of a nation-state through the use of economic means, police power, political influence, and diplomatic actions.
- *Information Security:-* Information security refers to the safeguarding of information and computer systems from unauthorized access, usage, disclosure, interruption, alteration, examination, logging, or destruction.
- *Classified Information:-* Sensitive information is information that is legally or regulated restricted to a specific group of people, and access to it is limited.
- *Security Management:-* Security management encompasses a wide range of management areas related to the management of assets, physical security, and the safety of human resources.

## II. SECURITY INFORMATION SYSTEM

System refers to the level of protection against danger, harm, loss, and criminal activity. Security as a form of protection refers to the systems and procedures that establish or enhance the state of being secure. The Institution for Security and Open Methodologies (ISECOM) in the OSSTMM3 defines security as a means of protection that involves creating a barrier between assets and potential threats. This can include, but is not limited to, removing either the assets or the threat. Security as a national condition, per the United Nations study (2008) refers to the state of a country being able to develop and progress safely.

Security is related to other concepts such as safety, continuity, and reliability, however, the primary distinction between security and reliability is that security must consider the actions of individuals who intend to cause harm. The specific circumstances also affect the way security is maintained (UN 2008).

In regards to classified information, security refers to the state of preventing unauthorized individuals from gaining access to official information that is protected in the interest of national security.

Security measures taken by a police unit, operation, or facility to protect against all actions that may or are intended to reduce its effectiveness.

Perceptions of security may not align with actual measurable security. For instance, people may have a greater fear of earthquakes even though the risk of falling in the bathroom is higher. Additionally, people's perception of the effectiveness of security measures may differ from the actual level of security they provide. People may assume that the presence of security measures means that they are secure. For example, two computer security programs may be working against each other and negating each other's effects while the user believes they are getting double the protection.

Security Theater refers to the use of measures primarily intended to create a feeling of security among the population, without genuinely addressing the effects of those measures on, and potentially decreasing, actual security.

Perception of security can also improve actual security if it discourages or deters harmful actions, such as through the visible presence of security measures, such as video investigation, alarm systems in a home, or a car anti-theft system, for instance, when an alarm sounds, the perpetrator may abort their attempt to break into a car and flee. This way, even if the car or its contents are not stolen, the perceived security can reduce the likelihood of the car's windows being damaged, thereby improving the financial security of the owner(s).

Though, the non-profit security research group ISECOM has found that such visible signs of security may actually increase the aggressiveness, boldness, and desperation of intruders. This suggests that perceived security primarily affects the perception of the person providing the security, rather than the actual security. It is crucial, however, for advertisements of security measures to not provide information on how to bypass the security, such as a burglar being more likely to target a specific home if they know the brand of the security system installed.

The responsibilities and services offered by private security and public security may overlap, but there are key distinctions between the two. The scope of their duties may vary and each has its own set of pros and cons. (Koyode F J 2007)

### III. THE SIGNIFICANCE OF CRYPTOGRAPHY TO SAFETY INFORMATION

Information security employs the use of cryptography to convert useful information into a form that is inaccessible to anyone except authorized users. This process is known as encryption. The original usable form of the information can be recovered by authorized users who possess the necessary cryptographic key through the process of decryption. The primary purpose of cryptography in information security is to protect sensitive information from unauthorized access.

Protect information from unauthorized or accidental disclosure while the information is in transit (either electronically or physically) and while information is in storage. (Mbadike 2009).

Cryptography not only provides a means of protecting sensitive information, but also offers other benefits in the field of information security. These include enhanced methods of authentication, digital signatures, non-repudiation, and encrypted network communications. As technology advances, older and less secure methods of communication, like telnet and ftp, are being replaced with more secure options such as encrypted network communications. Wireless communications can be secured using protocols like WPA/WPA2 or the older (but less secure) WEP, while wired communications can be protected using AES.

Forecryption and X.1035 for authentication and key exchange. Programs like GnuPG or PGP can be utilized to encrypt data files and email. To ensure the security of the encryption, it is important to implement solutions that have been thoroughly evaluated and recommended by experts in the field of cryptography. This is generally done through rigorous peer review by independent professionals in the field. (MAIER, C. S (2010) peace and security for the nation.

The current system is manually operated or executed; information on military signals is stored in an office file. Their personal data are being collected and each person has a file created for him or her manually.

Search on these files takes time; one has to go through the whole files in search of a particular record. This is cumbersome, hence the need for the computerization of the system is needed and the modernization of this method is needed. A web-based expert security system is adopted.

### IV. METHOD

Various techniques employed in the process of gathering data and information for the project include interviews, references, and written materials.

#### ➤ Interview Method

This was done between the researcher and the Nigerian police authorities. The researcher obtained accurate information by asking relevant questions.

#### ➤ Reference to Written Text

The researcher examined documentation on security information and gathered a significant amount of information about the system in question. Some necessary and readily available forms were evaluated. Additionally, the researcher utilized internet downloads to acquire text materials.

#### ➤ The Goal of the Current System is to:

- Gathering and maintaining records of police personnel
- Gathering and monitoring security alerts.
- Creating a file for documenting this information
- Physically searching through the file cabinet to find the information

### V. INPUT, PROCESS AND OUTPUT ANALYSIS

#### ➤ Input Evaluation

The system's input is the security information form, which is used to document security alerts. This form serves as the input for the system.

#### ➤ Process analysis

The data collected was transformed into a more useful format for input into the system. The personnel data is analyzed to determine their area of expertise and the security alerts they have reported.

#### ➤ Output analysis

The system generates output based on the input it receives. The output primarily consists of information on personnel records, security alerts, etc..

#### ➤ Issues With The Existing System

The manual method of operation encounters several challenges, including:

#### ➤ Slowness in Data Handling

- Mistakes during handling.
- Damage to materials due to fires or pests such as termites.
- The new system will help to solve all the problems inherent in

heexistingsystem.

- The reasoning behind the implementation of the new system is as follows.
- Prompt handling for security related data.
- Processing data without any mistake.
- Ensuring the protection of information.
- Signals can be received without difficulty.

A computer operates on the principle of GIGO, meaning that the output is a reflection of the input. The input forms are typically created to collect specific information that is entered using a keyboard and saved in the system. And are stored in a secured MySQL database.

- *The Software Design was Divided Into Three Phases*
- Frontend: Hypertext markup language (html), Cascading Style Sheet (CSS) and JavaScript where used.

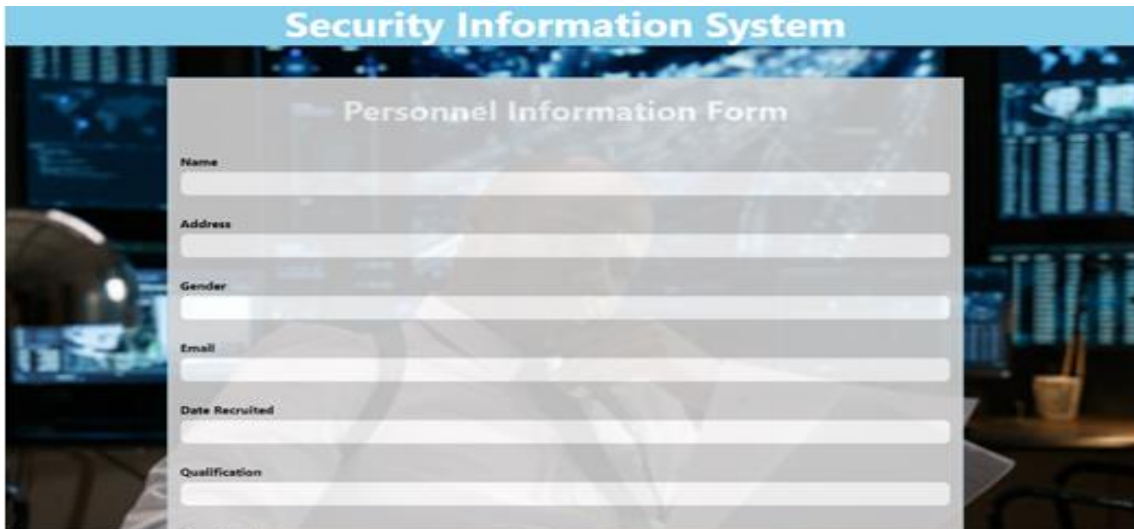


Fig 1 Security Information System

- ✓ Each field serves as an input field to provide relevant information about the police officer and any field left empty a signal is flagged to enable the user input the field.



Fig 2 Security Information System

- ✓ *Java Script is used to activate this functionality.*
- Backend: A reliable programming language (PHP) was adopted.
- This is used to fetch the data from the forms and submit (post) to the database.
- Database: A well secured database (Mysql) was used in designing the database to receive and store every information of the system.



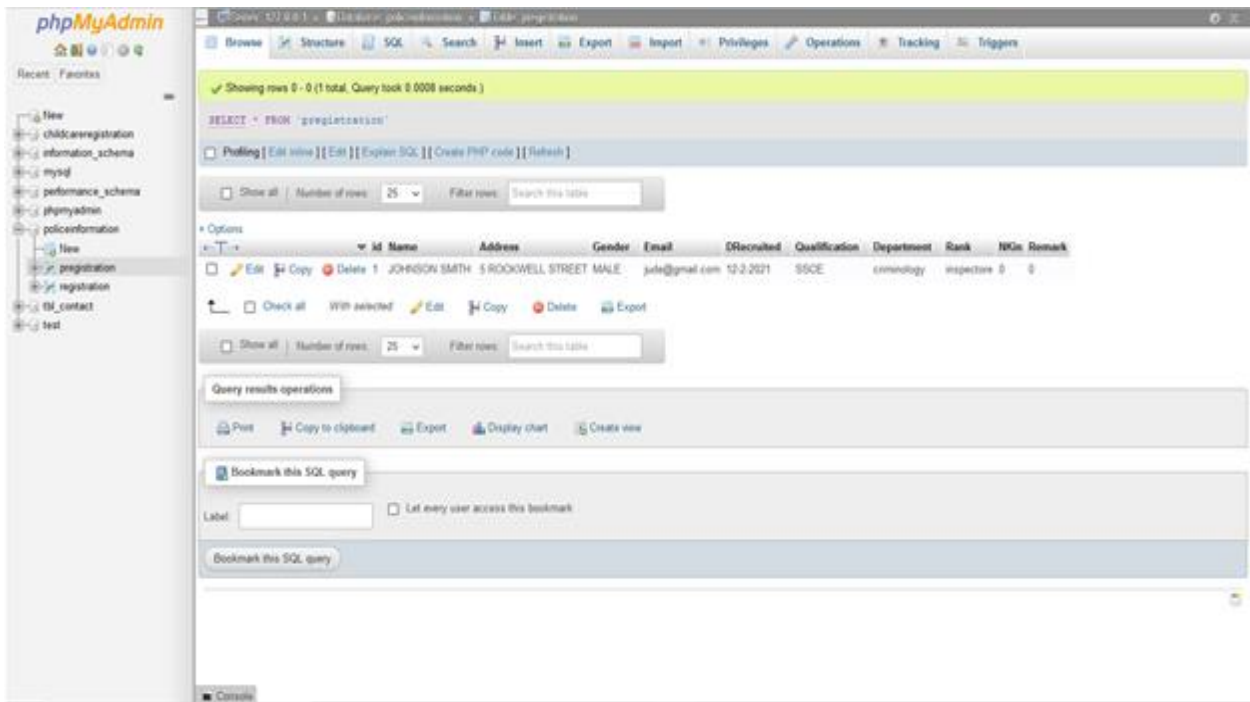


Fig 3 Data Base Design

➤ *Field Design*

The information entered into the scheme is saved in a catalogue file. The structure of the file follows the set-up outlined below.

Table 1 Building for File “Forces Evidence”

Field Name	Data Type	Size
Name	CHAR	30
Address	CHAR	70
Date of Birth	DATE	YYYY-MM-DD
Sex	CHAR	15
Age	INT	20
Status	CHAR	30
Height	CHAR	20
Date Recruited	DAY	YYYY-MM-DD
Qualification	CHAR	50
Subdivision	CHAR	40
Rank	CHAR	20
Next of Kinfolks	CHAR	60
Comment	CHAR	60

➤ *Software Requirements*

The software requirements include: -

- A working browser preferable Chrome or Firefox
- Xamp is installed on the computer.

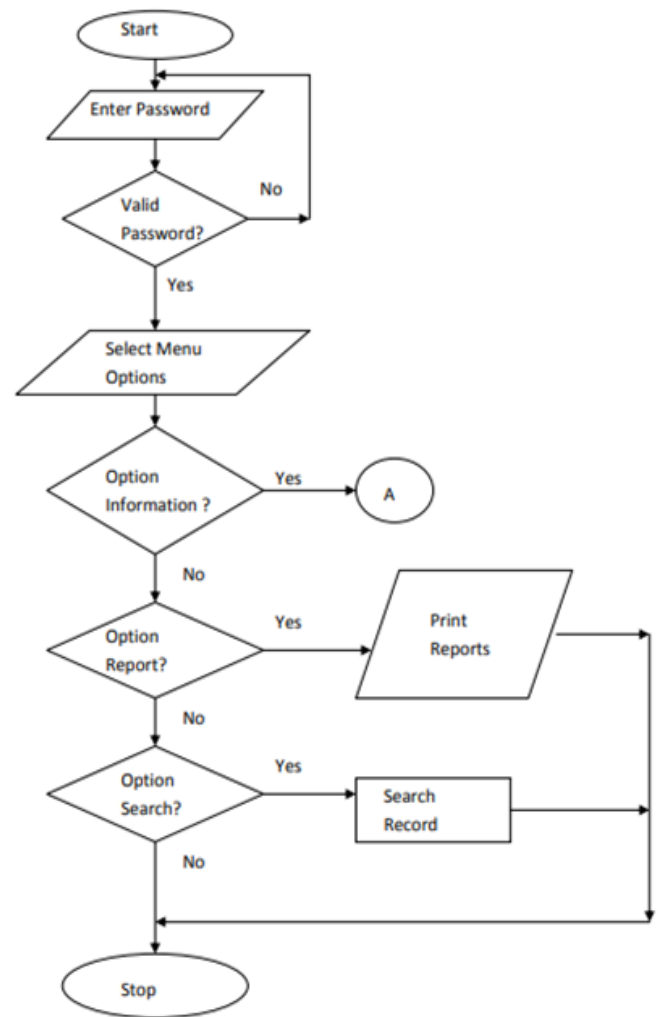


Fig 4 Program Flow chart

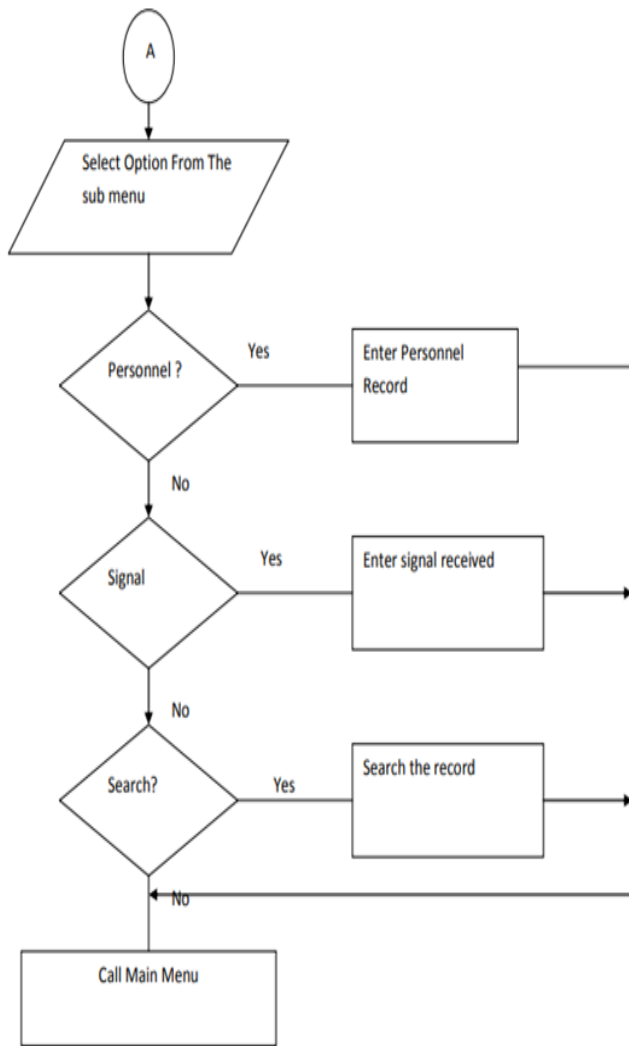


Fig 5 Program Flow Chat

Information can be defined as a arrangement of symbols that convey a communication and can be recorded as signs or transmitted as signals through waves. However, the concept of information encompasses many meanings and is closely tied to concepts such as constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception, representation, and entropy. The efforts to maintain national security in light of threats to society have led to ongoing debates, particularly in liberal democracies, about the appropriate level of authority and its impact on civil and human rights. This tension between preserving the state and protecting the rights and freedoms of individuals exists. While nationwide safety procedures aim to defend society as a whole, they may also confine the human rights and liberties of persons within that society.

The best system of safe guarding information is computerization, due to the non-guaranteed ability of losing information due to fire hazards, information altering and many other activities that may cause insecurity.

Computerized security system would be best suited for Nigeria police force to help safeguard or secure valuable information. A system as this would reduce paper work,

thereby creating information credibility and enhancing data access in the Nigerian Police force, ruling out the old-fashioned way of storing security information using paper and pen which can deteriorate, easily manipulated and in true sense not really secured because without due diligence it can be viewed by an unwanted or third party.

➤ *These Suggestions are Presented*

- This structure should be employed by Nigerian Forces to permit them store security information digitally.
- Every police officer should be trained on the acquisition of computerized skill and empowered with at least an internet enable device (phone, laptop) to enable them keep abreast of information and recent happenings.
- Internet enabled devices should be provided in every security (police) center across the country to enable easy transfer of information.

**VI. LIMITATIONS OF THE STUDY**

➤ *The Study was Limited due to the Following Factors*

- Access to direct information from the data base of the Nigerian police force. Due to security concerns about information given out and its sensitivy information wasn't easy to get hands on
- Transportation is on an increase in Nigeria causing hike in the rate of movement increasing the rate of transport movement.
- Decision making is a real cause of concern in Nigeria as the law makers always have different views about its implementation causing slow implementation of the desired

**VII. CONCLUSION**

A computerized security information system for the Nigerian Police Force can improve the efficiency and effectiveness of the police force by providing quick access to relevant information, enabling real-time data analysis, facilitating collaboration and communication among different units, and enhancing the overall security of the country. Implementing such a system can help the police force better serve and protect the Nigerian people.

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