

**DESIGNING A FRAMEWORK FOR AN ICT-ENABLED CORRUPTION  
MANAGEMENT INFORMATION SYSTEM IN THE NIGERIAN CONTEXT**

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**Abstract**

*This paper is aimed at designing a framework for Ict-enabled Corruption Management Information System (CMIS) in the Nigerian context. Traditional approaches to fighting corruption have been found to be faulty as a result of not being able to have access to timely and accurate information on the part of the agencies involved, in the process of fighting corruption. Having the foregoing as the background, designing a framework for Ict-enabled Corruption Management Information System (ICT-Enabled CMIS) in Nigeria, is therefore necessary. This initiative will provide real time data for anti-corruption agencies saddled with the responsibility of fighting corruption in order to preserve our democracy. The Proposed System (PS) will serve as an enabler for the anti-corruption management agencies: Economic and Financial Crime Commission (EFCC) and Independent Corrupt Practices Commission (ICPC)) in the daily discharge of their duties. This will be achieved through the provision of user-friendly interfaces, and proper capturing and documentation of information needed as the need arises. Also, the system has a database which will contain the profiles of the citizens. The homepage where all interfaces can be navigated is also provided for queries to be answered when the need arises. Finally, summary, conclusion and recommendations are made.*

**Keywords:** *Information and Communications Technology (ICT), Corruption, Corruption Management Information System (CMIS), Corruption Management (CM),*



## **Introduction**

The wise geek library (<http://www.wisegeek.com>) defines corruption as the abuse of a public office for personal gain or other illegal or immoral benefits. The history of corruption in Nigeria is strongly rooted in the over twenty nine years (29) years of military rule, out of forty six (46) years of her statehood since 1960. Successive military regimes subdued the rule of law, facilitated the wanton looting of the public treasury, decapitated public institutions and free speech and instituted a secret and opaque culture in the running of government business. The result was total insecurity, poor economic management, and abuse of human rights, and ethnic conflicts. Democracy was restored in Nigeria only in May 1999, with the election of the civilian government under the leadership of President Olusegun Obasanjo. **Iliffe, J (2011).**

One cardinal programme of the Obasanjo led administration is the fight against corruption and waste in the public service. This, he demonstrated through the establishment of two major anti-graft institutions, the Independent Corrupt Practices (And Other Related Offences) Commission (ICPC) and the Economic and Financial Crimes Commission (EFCC) in 2000 and 2003 respectively.

### **Problem Statement**

Economic and Financial Crime Commission (EFCC) and Independent Corrupt Practices Commission (ICPC) have faced numerous challenges in tackling corruption in Nigeria, because traditional methods are used. One of such challenges is not being able to have access to timely and accurate information. This problem, to a large extent, has prevented these bodies from getting to the roots of the crimes being committed. It then follows that without timely and accurate data, it is quite difficult for EFCC and ICPC to effectively fight corruption. In essence, it is grossly inadequate, in this current dispensation of information explosion, to rely on traditional methods in the process of fighting corruption. Hence, the need for designing a framework for an Ict-enabled Corruption Management Information System (Ict-enabled CMIS).

### **Objectives of the Study**

This research work will be carried out under the following stated broad and specific objectives:

**Broad Objective:** To design a framework for a Web-Based Corruption Management Information System to enhance and serve as a replacement for traditional ways of fighting corruptions in Nigeria by the anti-graft agencies (EFCC and ICPC). This will provide a knowledge and web-base system for EFCC and ICPC from which information about previously committed crimes can be obtained.

### **Specific Objectives**

The specific objectives are to:

- Design a database model in form of tables, containing all relevant information for all citizens of Nigeria.
- To design a system that will keep electronically criminal records of each citizen.



- Ensure proper management of corruption and its various forms.
- Create a platform where new recruits into EFCC or ICPC can be adequately and properly educated about learning the rudiments of fighting criminal and corrupt acts.
- Provide innocent citizens with appropriate information on the latest forms of corruption and how to avoid it..

### **Research Methodology**

The proposed system will be implemented as a Web –Based Knowledge System (WBKS). PHP (an open source scripting language) will be used alongside with MYSQL database. PHP is chosen because its syntax is simple enough and easy to comprehend. Other advantages of PHP are: Cost – PHP cost nothing. Nothing up front, nothing over the lifetime of the application, nothing when it is over, ease of use – PHP is easy to learn, compared to other ways to achieve similar functionality. PHP doesn't require a deep understanding of a major programming language before one can make a simple database call., Cross – platform compatibility – PHP runs on a variety of operating systems, Speed – The processing time of PHP (i.e. the time it takes to load a web page) is quite short. This is because it is embedded in HTML code.

### **Justification for the study**

Corruption is responsible for perpetual collapse of infrastructure and institutions; in fact, it is the cause of the endemic poverty in Nigeria and Africa as a whole. It is anti-development and principally responsible for cyclical failure of democracy to take its root in Nigeria as well as in the continent of Africa. <sup>[2]</sup>

A WBCMIS in Nigeria is therefore necessary to effectively fight corruption and provide the generations yet unborn with the hope they need to survive and conclude that Nigeria is a better place to live and operate in.

### **Review of related Literature**

The term corruption means the abuse of a public office for personal gain or other illegal or immoral benefit. Political corruption is a recognized criminal offense, along with bribery, extortion, and embezzlement are the three illegal acts often associated with corruption in office. Some forms of corruption may escape legal notice, such as the hiring of relatives for key positions, but they may not escape the scrutiny of voters on Election Day.

Whenever a person accepts a political appointment or wins election to an office, he or she must take an oath to uphold the public trust. While this may sound noble on paper, enforcement of this oath can prove problematic. Very few political candidates successfully reach office without making a few promises along the way. Many of these campaign promises are harmless, such as sponsoring a bill or lobbying for more funding for schools. Other promises, however, may come closer to crossing an ethical line, such as hiring relatives or awarding government contracts to influential contributors.



### **Corruption in Nigeria**

One of the major challenges facing Nigeria over the past years is the issue of corruption and its debilitating ancillaries, such as bribery, graft, fraud and nepotism. Corruption has become so deep-seated in the country that it has retarded growth in all ramifications of the Nigerian economy.. Sad to report that Transparency International (TI), which is an independent global watch on corruption, launched in 1995, ranks Nigeria among the five most corrupt nations in the world. This is not a palatable and welcome development for us as a country. When oil shoved groundnuts and rubber into oblivion and became the nation's main source of earnings, it opened Nigeria to inflow of large sums of money. More money was made from oil in one year than had ever been made from agro based sources for several years. In a bid to harness the new wealth to leverage infrastructures (roads, bridges, airports etc, huge contracts were awarded without regard for following due processes. Government spent money without much control, paving the way for corruption to be properly rooted in the country.

Nigerians suffered because corruption made it hard to run government transparently. Projects were plagued by corruption which even seeped into so many private areas of people's lives. Something has to be urgently done in order for transparency and accountability to be embrace so that corruption can be curbed. Considering the destructive effects of corruption on the Nigerian economy, the President Olusegun Obasanjo led government on receiving the mantle of leadership in 1999, vowed to confront this endemic problem of corruption and fight it to a standstill.

### **Information and Communications Technology (ICT) and Anti-Corruption**

Corruption, according to Transparency International (TI, 2009), entails the misuse of office for personal capacity building (Transparency International, 2009). (Grönlund, 2010). Identified the potentials through the use of Information and Communications Technology (ICT) when it is adopted and implemented in fighting corrupt practices. He stressed that service automation and the creation of online and mobile phone based corruption-reporting channels to the online publication of government transparency information are some of these potentials. In essence, using ICT as a platform, is an excellent tool to effectively fight corruption, not only in Nigeria but in other countries globally.

The ICT interventions, according to Tim, D & Fumega, S (2014), can be divided between **transactional** reforms and **transparency** reforms.

**Transactional** reforms, he explains, seek to reduce the space for corrupt activity by controlling and automating processes inside government, or seek to increase the detection of corruption by increasing the flow of information into existing government oversight and accountability mechanisms. Often these developments are framed as part of e-government.

**Transparency** reforms, by contrast, he further stresses, focus on increasing external rather than internal control over government actors by making the actions of the state and its agents more visible to citizens, civil society and the private sector. In the event that there is no derail in



implementation, ICT intervention is a tested and trusted approach to fight and reduce corruption to the barest minimum..

Thurston (2012), states that there are theories which support ICT-enabled transactional and transparency reforms, the technologies involved can be synchronised. Typical example is the digitisation of information about workers in a particular organisational setting which presupposes that there is available data which can be released and interrogated anytime and any day, using the available data portal that is in existence. In a situation where this is not in place, access to accurate data may be difficult. The connection between transactional e-data and anti-corruption has to be looked into in order to pave way for formation of synergy. A focus on the connection between e-data and transparency is gaining ground in the developed countries,. Kim et. al. (2009); hence Nigeria has to be enlisted in order to speedily restore the lost glory. To effectively fight corruption, access to data should not be restricted by allowing intermediaries or go-between in the process of accessing it. Access to timely information, in theory, should be made directly accessible to citizens, using ICT tools such as computers and mobile devices without interfaces.

Tim, D & Fumega, S (2014), submitted that, in any use of ICTs for anti-corruption, the technology itself is only one part of the picture. Legal frameworks, organisational processes, leadership and campaign strategies may all be necessary complements of ICT tools in order to secure effective change in fighting corrupt practices.. In response to global trend in fighting corruption, ICTs for accountability and anti-corruption have developed in a range of different sectors.

**IMPLEMENTATION PLAN:** The implementation plan of the proposed system is hereby explained:

### **SYSTEM ANALYSIS AND DESIGN**

The system being proposed and developed will be web based; that is, access to it will not be limited to what local area network offers. In essence, inter operability of information system is applicable. Here, an overview of its analysis and design will be provided.

### **OVERVIEW OF THE PROPOSED SYSTEM**

The proposed system is a web based system which will provide flexibility in terms of allowing for uploading of comprehensive information about the citizens into a database. Also, recording of crimes committed by citizens and the searching for information by the anti-graft agencies will be done with remarkable ease.

**USERS OF THE SYSTEM:** The users of the proposed system will be basically the staff of the commissions set up to tackle corruption (EFCC, ICPC and the citizens). This type of user records Crime details, searches for information about a particular citizen, updates citizen's



profiles, logs corruption activities against the affected citizens' records and keep track of a citizen's place of work

**Requirement analysis:**

Requirement analysis is the stage for defining the system's requirements and what the new system must do. Therefore, it involves identifying who needs what information, where?, when? and how?. Also, data, process and interface requirements for the new system are also identified at this stage.

**Functional Requirements of the system:** The Functional Requirements of the proposed system as identified are: Allow anti-graft agencies to submit data, upload corruption related information, record crimes committed, enable database update and respond to queries and search for information about citizens and view their recent pictures

**Non-Functional Requirements.** With respect to non-functional requirements of the system, it must be, secured, easy to use and maintain, implementable with minimum stress, operational within the given time frame.

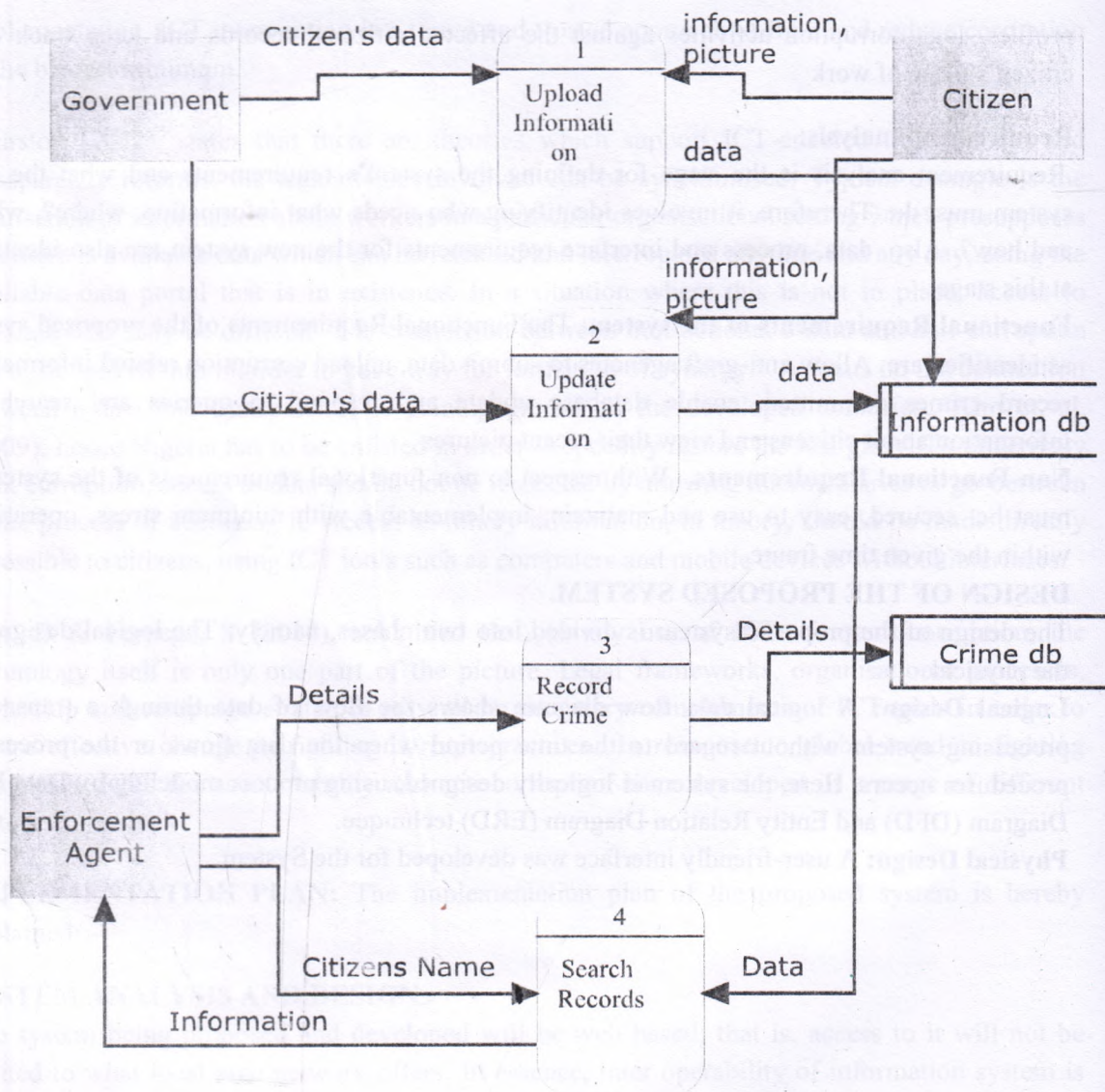
**DESIGN OF THE PROPOSED SYSTEM.**

The design of the proposed system is divided into two phases, namely: The logical design and the physical.

**Logical Design:** A logical data flow diagram shows the flow of data through a transaction processing system without regard to the time period when the data flows or the processing procedures occurs. Here, the system is logically designed, using process modeling by Data Flow Diagram (DFD) and Entity Relation Diagram (ERD) technique.

**Physical Design:** A user-friendly interface was developed for the System.

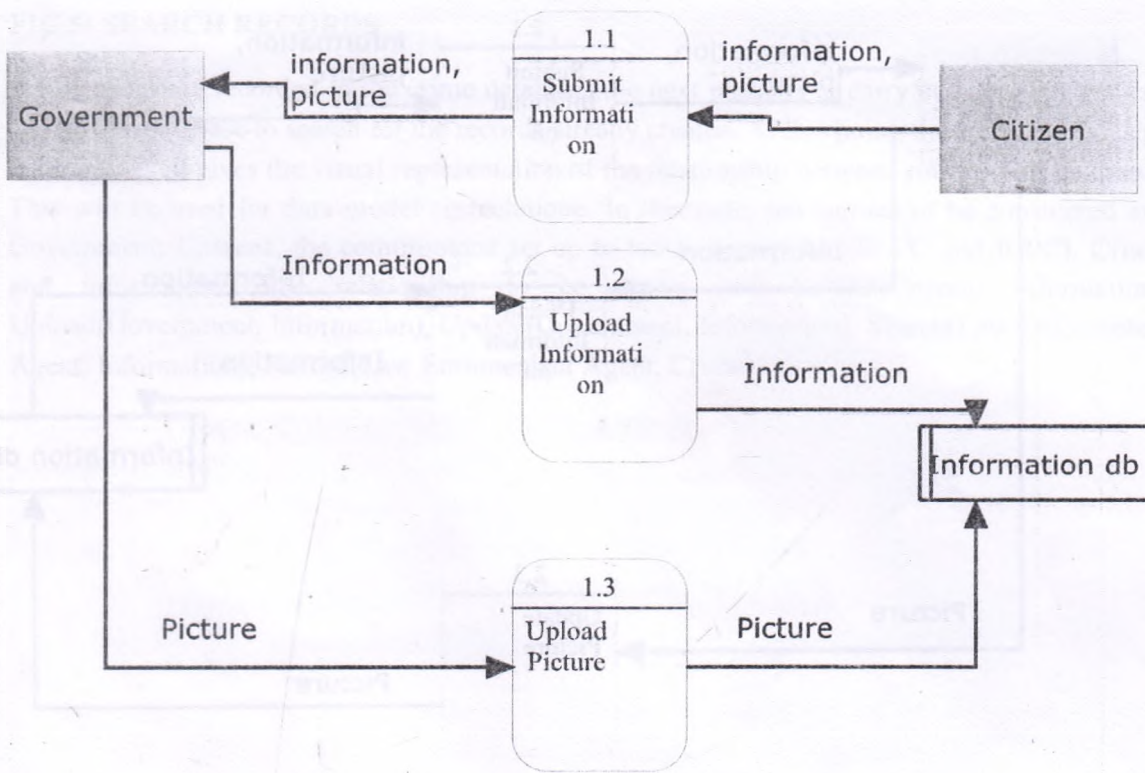




**FIG. 1: DATA FLOW DIAGRAM.**

From FIG.1 above, information is uploaded and updated, crimes are recorded and lastly, the recorded information in terms of records are searched. Each of these functions being performed, as can be seen from the above diagram is detailed below:

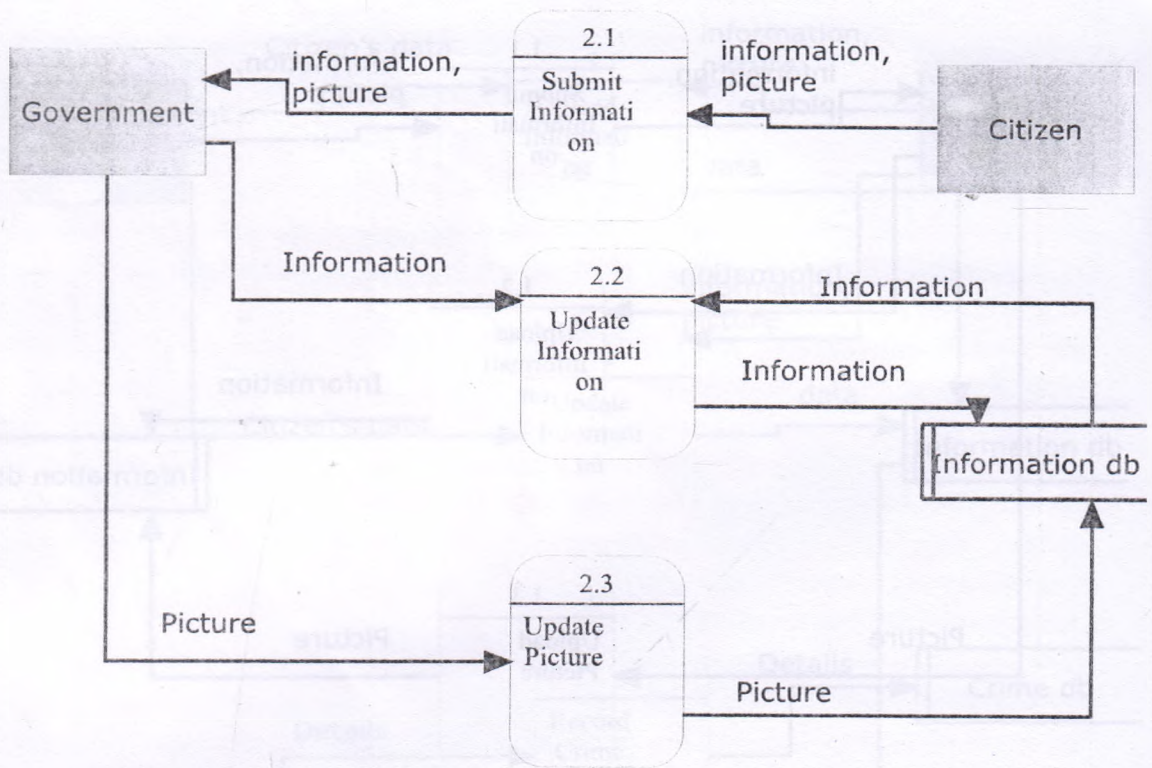




**FIG.2: UPLOAD INFORMATION**

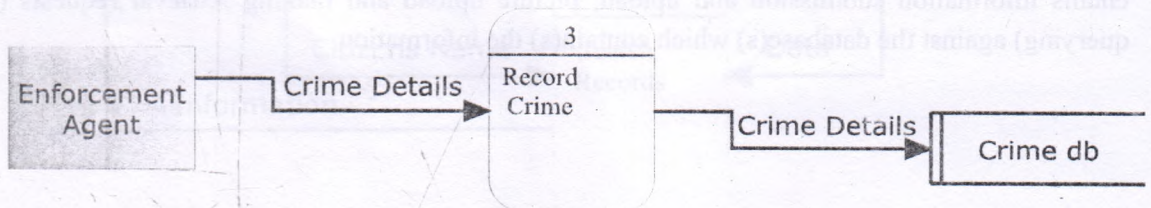
As can be seen from FIG. 2 above, the process of processing information and manipulating same entails information submission and upload, picture upload and making retrieval requests (i.e querying) against the database(s) which contain(s) the information.





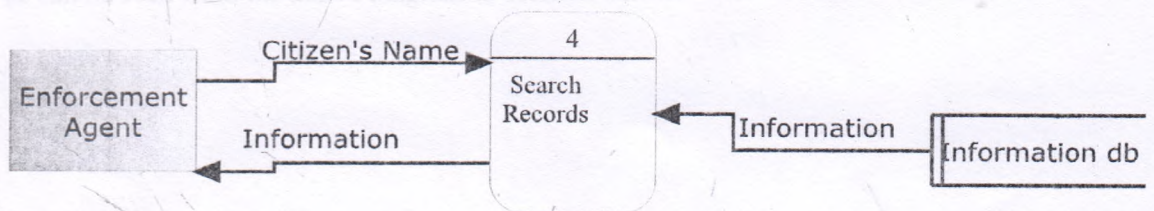
**FIG. 3: UPDATE INFORMATION**

The process of updating information entails, as can be seen from FIG. 3 above, submission of information, change or delete records from the database and update picture with the recent one.



**FIG.4: RECORD CRIME**

The process of recording crime, as can be seen from FIG.4 above entails, EFCC or ICPC (Law Enforcement Agents), getting crime details and recording same in the crime database.





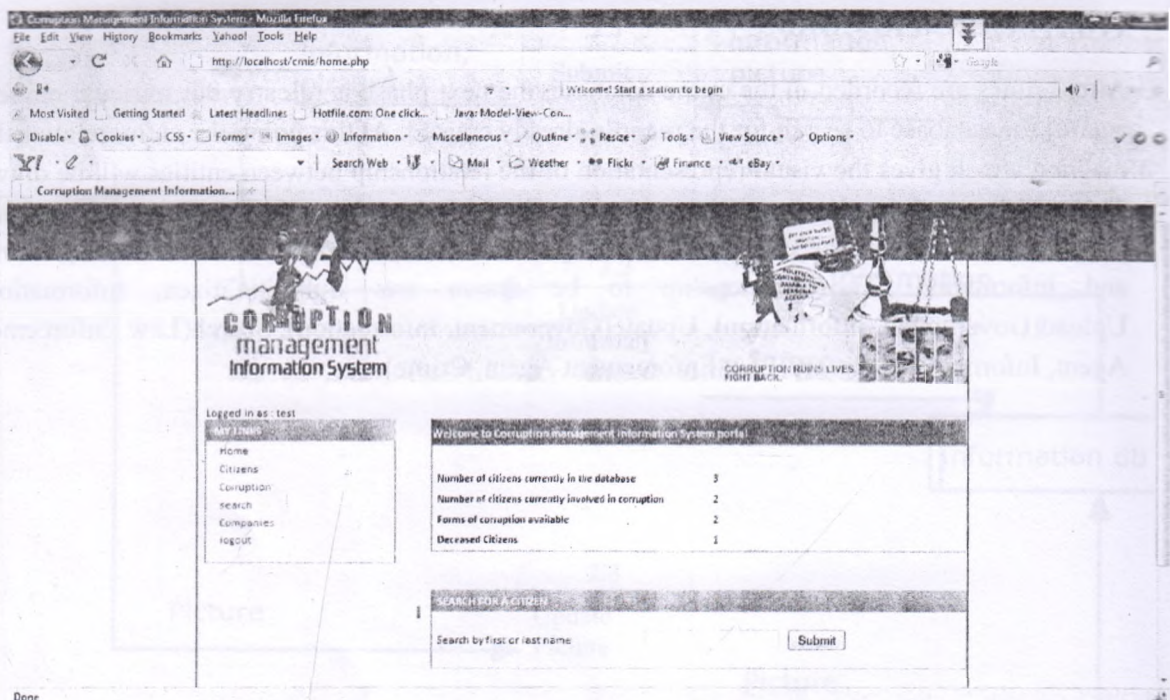
## FIG.5: SEARCH RECORDS

After crimes are recorded in the crime database, the next phase is to carry out retrieval requests against the database to search for the records already created. At this point, the entity relationship diagram which gives the visual representation of the relationship between entities will be drawn. This will be used for data modeling technique. In this case, the entities to be considered are: Government, Citizens, the commissions set up to tackle corruption (EFCC and ICPC), Crime, and information. The relationship to be drawn are: Submit(Citizen, Information), Upload(Government, Information), Update(Government, Information), Search(Law Enforcement Agent, Information), Record(Law Enforcement Agent, Crime).

### The Homepage

To log in to the system, the username is **test** and the password is **testing**.





The homepage summarizes the activities in the system. It shows the number of citizens added into the database. It also shows the number of deceased citizens, the forms of corruption available in the system. On the homepage, there exists links that can be used to navigate the web application. From the homepage also, the following interfaces are accessible for navigation in the event that retrieval requests are to be made.

- Checking for the available citizens in the database
- Viewing the pictures of the citizens
- Knowing crime activities recorded.
- Adding new citizens, pictures and crime activities to the database
- Adding new types or forms of corruptions to the database.
- Searching through the available citizens in the database which takes the first name or last name of the citizen as input and displays the search results. and
- Adding registered companies into the database

### Summary, Conclusion, and Recommendation

In summary, corruption is responsible for perpetual collapse of infrastructures and institutions in Nigeria; in fact it is the cause of the endemic poverty in Africa. It is behind the under



development and cyclical failure of democracy to take its proper root in Africa. A CMIS in Nigeria is therefore necessary to effectively fight corruption. Corruption management information system empowers the law enforcement agencies by providing easy-to-use interfaces through which documentation about criminal and various forms of corruptions can be kept and dealt with. It keeps track of all citizens and their profiles. In terms of criminal activities committed. It creates an environment where new recruits into ICPC or EFCC can learn and understand how to handle criminal and corrupt acts. CMIS also provides a database containing all necessary information for all citizens of Nigeria

### **Conclusion**

The ICT-Enabled Corruption Management Information System, if effectively used, can help law enforcement agencies (i.e. EFCC and ICPC) keep a tag on every citizen of Nigeria thereby provide updated records (whether text or image) for every citizen of the country. It has been established in this paper that, using traditional methods in the process of fighting corruption has been found to be grossly inadequate as a result of its associated challenges which are highlighted. The design and implementation framework for ICT-enabled corruption management information system are presented as well. This, if embraced and faithfully implemented will alleviate the challenges being posed by the traditional approach to fighting corruption which is properly rooted, not only in our country Nigeria, but in African continent as a whole. This will be made possible through the elimination of unnecessary and unwarranted human interfaces being introduced in the course of fighting corruption, using traditional methods. Also, online real-time data can be accessed with remarkable ease, using ICT tools which is aimed at speedy up the process of prosecution with unrestricted access to accurate data.

### **Recommendations**

- The ICT-Enabled Corruption Management Information System that has been developed can further be empowered with a GIS (geographical information system) to track the current location of citizens with corrupt practices.
- If this system will be correctly and effectively implemented, then micro cameras should be installed on every nook and cranny of the country to help monitor corrupt practices.
- Also, more law enforcement agencies should be recruited and empowered with Information Technology skills in order to alleviate the perceived challenges being posed by traditional methods of fighting corruption..



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