# CHAPTER 4 A

# SYSTEM ANALYSIS

In a system, the different components are connected with each other, and they are interdependent. Systems analysis is a process of collecting real information, understand the processes involved, identifying problems and recommending feasible suggestions for improving the system functioning. This involves studying the processes, gathering operational data, understand the information flow, finding out bottlenecks and evolving solutions for overcoming the weaknesses of the system so as to achieve the organizational goals.

## 

## Fig.1: Context Diagram of Old System

## 4.2 RESOURCE REQUIREMENT

Various resources must be put in place so that the system is well supported. The technical environment should fit the requirements of the application. The following are the basic resource requirements;

## 4.2.1 HARDWARE

a) Laptop: - with the following specifications:-

• 2GB RAM

• 350 Hard disk drive

• Pentium IV computer with 2GHz processor speed

It will be used for coding, design and final documentation of the system.

b) 5 CD’S – it will be used to back up the system and the documentation for it does not get virus hence the best

c) 8GB flash disk – it will be used for transfer of the system and documentation from one location to another. It can also be used to back up the system and documentation.

## 4.2.2 SOFTWARE

• This system was developed using the following software: Apache, MYSQL, Adobe Dreamweaver as well as Macromedia Flash. However for the system to run effectively on various different platforms, the following software will be required.

* MYSQL
* Adobe Dreamweaver
* Apache

The above software are required to be configured to be able to integrate the system to function in any computer. However, the researcher proposed use of xampp which is an integrated software for database management that is capable of running on a web browser platform. Xampp is composed of MYSQL, Apache, Filezilla, Tomcat and Mercury. The use of xampp makes implementation process easier since no further configuration will be required after installation.

The software that will be required are:-

* **XAMPP**

This is a DBMS software that has MYSQL.

MYSQL will be used to store, manage and manipulate the database records and to facilitate querying of the database.

* **Adobe Dreamweaver**

This is a server side integrated package that supports variety of programming/scripting languages (PHP, JAVA, Notepad etc) used to code and develop computer programs. It is needed for executing the programs running on the web server and connecting to the database.

* **(Mozilla Firefox) Web browser and web server**

To display the web pages on the screen Internet Explorer, Mozilla Firefox or Google Chrome can be used.

The **apache** in xampp is a web server.

* **Operating System (windows based or Linux)**

There will be need for an operating system installed in the computer where the system will run. It offers a platform that allows the computer to take instructions and execute them as required. It is also a platform for the other application software to work efficiently.

The operating system can be; Windows 7, Windows 8, Windows XP or any version of Linux.

# 4.2.3 OTHER REQUIREMENTS

**Stationeries**

• A file- this is to store all the printed things throughout the project to reduce misplacement of the important papers.

• A book- this is to be used during the research to be able to write short notes in from the different sources to be able to create a conclusion.

• Pen – this is used to in the writing during the research process.

a) Printer and printing papers: This will be used to do all the paper work on the project. It will be able to ensure that the document printing is done in time and correctly.

## 4.3 FUNCTIONAL REQUIREMENTS

The proposed system will use a database driven website approach. The system is expected to facilitate the performance of a number of functions such as;

* To store clients and administrators personal details in a database.
* To enable users access therein information in the database as appropriate through the website irrespective of their location. However this will require that the user has internet connection in his/her personal computer in order to access the site.
* Provide security and authentication mechanism to both users and the database.

## 4.4 VALIDATION

The system will provide for validation of input data, by providing error messages for wrong data entry. For example, when you enter wrong format of e-mail, it will display warning message. Validation of data helps in ensuring data integrity.

## 4.5 NON FUNCTIONAL REQUIREMENTS

## 4.5.1 Usability

The system is easy to use by the public

This system is simple and intuitive in a way that it clearly displays all relevant data and their relationships.

The navigation menu is easily navigable by users because each button is descriptive and predictable of what the user expects once the button is clicked.

## 4.5.2 Reliability

The system offers the ability to book a facility and it has an authentication and authorization module which requires a password from the users to avoid any foreign person from changing the data in the system. The system also works in a friendly manner in terms of responding to the user actions.

## 4.5.3 Performance

The system will have minimal downtime because the personnel must not wait for long to complete a certain action.

It will also successfully complete the operations of adding, updating, deleting and generating reports.

Once the user turns on the system, all the functionalities are at his/ her disposal for use in manipulating the records.

## 4.5.4 Supportability

The system is designed and developed to be compatible with most of the major operating systems.

It is also supports additional plugins that may be added in the future for purposes of meeting the dynamic user requirements.

The data stored in the system is portable through the generated reports and can be transferred.

## 4.5.5 Packaging

The system will be able to run on windows 7 operating system and it is also compatible with windows operating systems such as windows 8 and 10.

The packaging will have a manual that details the use of the system and also the instructions on how to use the program