

**AUTOMATED DATABASE MANAGEMENT SYSTEM FOR
LOCAL GOVERNMENT AREA REVENUE UNIT
(A CASE STUDY OF ETSAKO WEST LOCAL GOVERNMENT AREA,
AUCHI)**

BY

OMOIGUI EHIZOGIE

MAT NO: ICT/625180324

**A PROJECT WORK SUBMITTED TO THE DEPARTMENT
OF COMPUTER SCIENCE, SCHOOL OF INFORMATION
AND COMMUNICATION TECHNOLOGY AUCHI
POLYTECHNIC, AUCHI**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF HIGHER NATIONAL DIPLOMA
(HND) IN COMPUTER SCIENCE**

FEBRUARY, 2022.

CERTIFICATION

We, the undersigned certify that this project work was carried out by **OMOIGUI EHIZOGIE** with a Matriculation Number **ICT/625180324** of the Department of Computer Science.

We also certify that the work is adequate in scope and quality in partial fulfillment of the requirement for the award of Higher National Diploma (**HND**) in Computer Science, School of Information and Communication Technology Federal Polytechnic, Auchi.

MR. AKHETUAMEN, S.O
(Project Supervisor)

DATE

MR. AKHETUAMEN, S.O
Head, Department of Computer Science

DATE

DEDICATION

This project work is dedicated to God Almighty for His endless grace and protection upon my life.

ACKNOWLEDGEMENT

My deep appreciation goes to God Almighty who in love and infinite mercies saw me throughout my stay in Auchi Polytechnic. May His name be praised.

Special thanks goes to my project supervisor, **Mr. Akhetuamen, S. O** for the time taken out of his tight schedule to read through my project work. I am very grateful for making this project a reality, May the Almighty God reward you.

My heartfelt and sincere gratitude goes to **Mr. Akhetuamen, S.O** Head, Computer Science Department and all lecturers in Computer Science Department, who through their ways of life and course offered have added meaning to my life and installed knowledge in me, May God continue to shower His blessings upon you all.

I own a debt of gratitude to my Father in heaven and also my ever-loving parents **Mr. and Mrs. Omoigui** for their immense contribution to my life. And also to my lovely brother and sisters, for their encouragement and interest over my progress, I love you all.

I cannot forget my lovely friends in school who in one way or thppe other have supported me for the success of my study. I love you all and God bless you all, Amen.

TABLE OF CONTENT

Title Page.	-	-	-	-	-	-	-	-	-	-	i
Certification	-	-	-	-	-	-	-	-	-	-	ii
Dedication	-	-	-	-	-	-	-	-	-	-	iii
Acknowledgement	-	-	-	-	-	-	-	-	-	-	iv
Table of Content.-	-	-	-	-	-	-	-	-	-	-	v
Abstract.	-	-	-	-	-	-	-	-	-	-	vi

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study	-	-	-	-	-	-	-	-	-	1
1.2 Statement of Problem	-	-	-	-	-	-	-	-	-	2
1.3 Purpose of problem	-	-	-	-	-	-	-	-	-	3
1.4 Significance of the study	-	-	-	-	-	-	-	-	-	3
1.5 Scope of the Study	-	-	-	-	-	-	-	-	-	4
1.6 limitation to the study	-	-	-	-	-	-	-	-	-	5

CHAPTER TWO: LITERATURE REVIEW

2.0	Relevant Theories of The Review	-	-	-	-	-	7
2.1	History of Design And Maintenance of Database	-	-	-	-	-	8
2.2	Object of Database Management System	-	-	-	-	-	10

2.3 Organized Database System	-	-	-	-	-	-	-	10
-------------------------------	---	---	---	---	---	---	---	----

2.4 Computerized Organized Database System-	-	-	-	-	-	-	11
---	---	---	---	---	---	---	----

CHAPTER THREE: SYSTEM ANALYSIS AND DESIGN

3.0 Research Methodology	-	-	-	-	-	-	-	21
--------------------------	---	---	---	---	---	---	---	----

3.1 Research Design	-	-	-	-	-	-	-	21
---------------------	---	---	---	---	---	---	---	----

3.2 System Design Analysis--	-	-	-	-	-	-	-	23
------------------------------	---	---	---	---	---	---	---	----

3.3 File Design--	-	-	-	-	-	-	-	24
-------------------	---	---	---	---	---	---	---	----

3.4 Input/Output Design Specification-	-	-	-	-	-	-	-	27
--	---	---	---	---	---	---	---	----

3.5 Problem Specification-	-	-	-	-	-	-	-	28
----------------------------	---	---	---	---	---	---	---	----

CHAPTER FOUR: PROGRAM IMPLEMENTATION

4.0 Choice Of Programming Language	-	-	-	-	-	-	-	29
------------------------------------	---	---	---	---	---	---	---	----

4.1 Program Specification-	-	-	-	-	-	-	-	30
----------------------------	---	---	---	---	---	---	---	----

4.2 Program Flowchart-	-	-	-	-	-	-	-	32
------------------------	---	---	---	---	---	---	---	----

4.3 Input/Output--	-	-	-	-	-	-	-	34
--------------------	---	---	---	---	---	---	---	----

CHAPTER FIVE : SUMMARY,CONCLUSION AND RECOMMENDATIONS

5.0 Summary-	-	-	-	-	-	-	-	-	36
--------------	---	---	---	---	---	---	---	---	----

5.1 Conclusion-	-	-	-	-	-	-	-	-	36
-----------------	---	---	---	---	---	---	---	---	----

5.2 Recommendations-	-	-	-	-	-	-	-	-	37
----------------------	---	---	---	---	---	---	---	---	----

References--	-	-	-	-	-	-	-	-	38
--------------	---	---	---	---	---	---	---	---	----

CHAPTER ONE

INTRODUCTION

1.00 BACKGROUND OF THE STUDY

Going through the annals of history, it could be inferred that wall and floor inscription were the first attempt made early men to keep account of their records but it was really unreliable as it got smeared with time due to direct contact with various filths. Since men knew how to read and write, much as be made to ensure that records are written in form of document that can be transferred or transformed to in future. These are always in form of letters, memos, financial record, policy documents etc. this is also unreliable as the document do get torn when not properly kept and managed. However with time, filing document was used which involved the arrangement and keeping of document in a safe place. These documents were cared for and do not tear easily, get lost or dirty. The filing system serves as a central record keeping system for an organization. It helps the organization to be organized, efficient and transparent it also helps people who should be able to access

information to do so easily. Hiccup associated with these is that it does not permit large amount of data, fast retrieval of data for different users.

1.02 STATEMENT OF THE PROBLEM

Before the advent of computer, income and disbursement of fund in large corporation and enterprise were recorded by hand in paper ledgers. Request to spend relatively sums required.

I am motivated to carry out this project work to alleviate if not completely eliminate the problems encouraged by the manual process of keeping revenue record in Etsako West Local Government Area.

These problems include:

- Time consuming owing to manual processor of searching for particular file inside a huge file cabinet
- Database created will hold revenue data for statistical analysis and giving recommendation can be done easily using computers.
- To reduce the fraudulent act of some workers or group of persons in the local government.

- Eliminate time wasting during the computation of the revenue.
- To enable revenue information to be retrieved easily for further analysis.

1.03 PURPOSE OF STUDY

The purpose of the study is to design automated database management system for local government area revenue unit, to manage and store the entire records for the revenue unit. It should be able to supply information such as Firstname, Surname, Othername, Employee ID etc.

1.04 SIGNIFICANCE OF THE STUDY

A DBMS is a set of software programs that controls the organization, storage, management, and retrieval of data in a database. DBMS are categorized according to their data structures or types. It is a set of prewritten programs that are used to store, update and retrieve a Database. The DBMS accepts requests for data from the application program and instructs the operating system to transfer the appropriate data. When a DBMS is used, information systems can be changed much more easily as the organization's information requirements

change. New categories of data can be added to the database without disruption to the existing system. Designing an Automated Database Management System For Local Government Area Revenue Unit will help to keep track, update, easy retrieval and storage of records.

1.05 SCOPE OF THE STUDY

The scope of the study is carried out to cover the various stages of database creation and its management process. This deals with the description, story, retrieval and manipulation of revenue details in a database. The scope of the study also includes such as data presentation. Analysis of data, implementation of this program, as well as review of the program. The Etsako West Local Government Area Revenue Unit has been chosen as the case study of the project to create and manage a database for its revenue unit so as to correct the errors that has been bringing loss of money, quicken the retrieval of revenue information and to provide printed report on a weekly and monthly preparation of the revenue details as may be demanded by the local Chairman or government it is therefore restricted only to the revenue collection unit of the local government area the

application program will be implemented with Database SQL version IV.

1.06 LIMITATION TO THE STUDY

Due to human errors and other shortcoming during the course of this project work it is realized that 100% performance cannot be guaranteed and the reasons are outline below:

- The fear of exposing details about the Etsako West Local Government Area.
- Lukewarm and indifferent attitude of workers in the revenue unit to reveal details about their works.
- Unavailability of textbooks in the library for research and analysis especially on the subject at hand.
- Problem of mobility and transport
- A lot of inconveniences were encountered during journey to and from the local government council, in to get all the required information for the study.
- The unavailability of fund to get i[important things for the study.
- Space, time and money constraints to finance this research, work.

1.07 DEFINITION OF TERMS

DATABASE: Database is collection of related records for the purpose of quick retrieval, access, and better management of data.

SYSTEM: is a set of interacting or interdependent components forming an integrated whole or a set of elements often called components and relationships which are different from relationships of the set or its elements to other elements or sets. Database system

SQL: Often referred to as (Structured Query Language) is a programming language designed for managing data in relational database management systems (RDBMS).

MANAGEMENT SYSTEM: is the framework of processes and procedures used to ensure that an organization can fulfill all tasks required to achieve its objectives.

CHAPTER TWO

LITERATURE REVIEW

2.00 OVERVIEW OF RELEVANT THEORIES

The earliest known use of the term database was in November 1963, when the system development corporation sponsored a forum under the title development and management of a computer centered database.

The advent of huge, multinational off shore and offshore projects, iron steel and automobile industries in the past decades and recent challenges in the timely with the budget delivery of these project finds these industrial grappling with how to bring balance to the planning and execution of these development in terms of effective contracting, coordination, risk allocation and conflict resolution (James: 1998). Many in these industries have determined that more effective database and interface management (IM) meaning the proactive avoidance or mitigation of any project issues, including design conflicts, installation dashes, new technology applications, regularly challenges and contract claims would enhance the successful delivery of database of mega projects.

2.01 HISTORY OF DESIGN AND MAINTENANCE OF DATABASE

This section looks in greater detail and depth at the relational database model. The theory that underpins this model is discussed and its application to various different query languages shown. The concept of normalization is intended to include fourth and fifth normal forms and some advanced data modeling concepts introduced. It focuses on the necessary techniques for the implementation of the database in the context of a database management system (DBMS). Security and integrity, transaction management, recovery and concurrency control and query processing and optimization will be discussed in depth. There follows an in-depth study of distributed database system (DDBMS).

Garret Swart, 2003.

Integrated data store (IDS) was among the earliest of the database developed by general electric in 1964. The integrated data store (IDS) was not as compiled as the modern day data from the program that was made.

It was shortly after the advent of IDS that Conference and Data System Language (CODASYL) recognized list processing abilities and capacities could be required; if the existing computer language were to handle large volume of data structure that needs auxiliary storage. It was in the early 1970's that commercial database management/administration system software was introduced in the market. However, in the recent years good number of digital (dedicated computer) commonly called "ORGANIZERS" that are manufactures by some of the leading computer hardware corporation such as SONY, CANON and SHARP just to mention a few that can be used for design, maintain and administration of data and also work some way as an organized database system.

These are commonly used by individuals and co-operate professional organization to store their schedules of jobs and operation such as address, names, phone numbers, etc. the definition of the digital equipment is that its memory and storage capability are very limited. Some also have adding machine calculators installed in them do simple calculation and computation.

2.02 OBJECT OF DATABASE MANAGEMENT SYSTEM

The object of database management system meant solution for the enterprises or organizations application in the environments. This brings reliable and efficient performance in memory speed to new or existing application in single process, small foot print version of object of enterprise. An object database management system brings reliable services in

2.03 ORGANISED DATABASE SYSTEM

According to **Hector Garcia-Molina, 2000**, says that data occur to us on a daily basis to individual and organization, but how to manage the enormous data that have been acquired over the years is one of the greatest challenges facing man today. This is because information management has become a central aspect of modern life irrespective of the profession one find his/herself. However, such data need to be handled properly and processed so as to satisfy our information requirement, organized database management system is an integrated system; a database management integrated system that handles the collection and association of data occurring to an

organization cost. Effectively, such constrain includes access time flexibility of storage, security, auditing and revering.

Access time is the time that elapses between the instances when a request for data is made and the time the date required is retrieved.

To examine the above definition, it will be realized that database management system can be implemented in different ways; basically, there are two types of database management system depending on the access time. (i.e. Manual and Automated).

2.04 COMPUTERIZED ORGANIZED DATABASE SYSTEM

A Computerized ODBS is a database management where data collection, storage and retrieval are done using the computer. In addition, the computer as a system is used to generate report and perform all other database operation. The advantages of such system include;

- i. High speed of operation
- ii. Accuracy
- iii. Reliability

A database is a collection of logically related information. In a database, data is stored as tables. Tables maintain data in rows and columns. The task of maintaining databases, to ensure that information is readily available, is known as database management. The software required to perform the task of database management is called a Database Management System (DBMS). DBMSs are designed to maintain large volumes of data.

Types of Database Management Systems

DBMSs support both single-user and multi-user systems. They ensure that the data stored is in a systematic and orderly manner. Therefore, DBMSs help users locate and retrieve data easily. In addition, DBMSs help users recover data during a system failure. The different types of DBMSs are:

1. RDBMS
2. ORDBMS

RDBMS

Relational Database Management System (RDBMS) is the most popular type of DBMS. It was introduced by Dr. E.F.Codd in 1970. Sybase, Microsoft Access, Ingress, Oracle, and SQL Server are

some examples of RDBMS. An RDBMS is a collection of related data. In an RDBMS, each attribute is considered as a columns and each record is considered as a row in a table. A table can be related with one or more than one table based on a single column or multiple columns. Consider a situation where the company details such as employee details, department details, product details, and client details are store in a database. These tables are related because each employee will surely belong to one of the departments in the company. Each employee detail is stored as separate rows in the table containing the details of the employees. The attributes or columns in the table storing employee details would include the employee name, employee address phone number of the employee, designation of the employee, qualifications of the employee, and the number of years of experience of the employee in the company.

ORDBMS

Object Relational Database Management System (ORDBMS) is a recent concept of database management system that integrates an object-oriented front-end with an RDBMS. Let us discuss the

concept of Object orientation before we discuss about Oracle9i as an ORDBMS.

*** OBJECT-ORIENTED CONCEPTS**

In an object oriented approach, systems are considered as a collection of real-world objects. These objects can be categorized as classes. A class is a set of objects that share common attributes and behaviors. Consider a situation where you may have to store the detail of students. Students can be categorized as full-time or part-time. In this situation, student will be a class with full-time students and part-time students as the objects. The Student class will have attributes such as Student Name, Roll No, and Score. Therefore, object-oriented programming can be defined as a method of implementation in which programs are organized as collections of objects where each object represents an instance of some class.

• The features of the object-oriented approach are as follows:

Abstraction

Abstraction focuses on the essential characteristics of an object. Abstraction enables developers to represent only the essential features of objects without including the background details or

explanations. For example, I when you drive a car, you are concerned only with the essential features of driving a car, such as shifting the gear, using the steering and the accelerator, and applying brakes. It is not essential for you to know how a car runs.

Inheritance

Inheritance is the concept of acquiring the capabilities or properties from another class. A class that inherits the properties of another class is called a subclass and the class from which the properties are inherited is called the base class. Consider the example of a class named Vehicle, which has some, attributes, such I as wheels. Automobiles and Pulled vehicles also have wheels. Therefore, cars and bused are types of automobiles that have some common attributes and some unique attributes. Therefore, Car and Bus can be classified as subclasses of the Automobiles class. A subclass inherits the attributes of the base class. In addition, a subclass may have some specific attributes.

Encapsulation

Encapsulation is concept of hiding specific behaviors and attributes from a user. It is a method of implementing data abstraction. In

object-oriented programming, the data in objects can be accessed only through the member functions or methods of an object. For example, in an organization, data of a particular department is available to employees of that department only. Employees of another's department cannot access the data of other departments directly. Therefore, the data related to a department and the department employees is encapsulated into a single entity, the department.

Polymorphism

Polymorphism refers to the concept of an object of a class behaving differently under different situation. Polymorphism is the ability of data to be processed in more than one form. For example, the same wood can be used to create different types of furniture according to the customer's requirement. Wooding this example depicts polymorphism.

Features of Oracle9i

Oiacle9i is an ORDBMS that has been evolved to support both object-oriented concepts and relational database concepts. An ORDBMS provides features' to developers for transferring and

integrating data between an RDBMS and an object-oriented program. Software companies, such as IBM, Informix, Microsoft, Sybase, and Oracle, have released object-relational versions of their products. Universal server developed by Informix and Oracle9i developed by Oracle are examples of an ORDBMS.

The features of Oracle9i are as follows:

1. In Oracle9i, you can use Structured Query Language (SQL) or an object-oriented programming language, such as Java, to access data.
2. In Oracle9i, you can use built-in data types and store data in relational tables as in any other RDBMS. In addition, you have the option of using the object-oriented features of an ORDBMS.
3. Oracle9i stores complex structures as single entities. Such entities are treated as single units of related objects that can be easily transferred or shared across networks easily. This helps in enhancing the network performance.
4. Oracle9i uses the inheritance feature of an ORDBMS. Therefore, a table or data type created can inherit the

properties of another table or data type. The properties inherited by a table or a data type include structure, indexes, and constraint definitions.

5. In Oracle9i, you can create many functions with the same name. However, the same function may have different input arguments. This ensures reusability of functions.
6. The extensibility feature of Oracle9i enables a user to define new data types for storing complex data like images, audio, video, and large text documents.
7. The object view mechanism in Oracle9i allows the creation of object views. These views are an abstract of the object tables. The data from these object views can be accessed in a way similar to the way you access data from tables. The advantage of using object views is that applications can be developed using these views without altering the actual data stored in the tables.

- **Database Design Considerations**

A well-designed database is the foundation for maintaining information that can be accessed in an effective and easy manner.

The factors to be considered while designing a database are:

1. Objective of creating the database
 - a. Business functions involved
 - b. Expectations of the customers
 2. Performance of the database in an application
 3. Easy maintenance of the database
 4. Cost that will be incurred in creating the database
 5. Easy update of the database in case of changes to the design at a later stage.
- Collecting information and understanding expectations of customers are the initial steps in creating a database design. Data models can be used to explore ideas and understand the database design. These models help in understanding and categorizing the different components involved in a database. In addition, data models help in describing the relationship among data and any constraints that have to be defined on the data. The entity relationship model is one that satisfies the requirements of a data model. Peter

Chen introduced this model in 1976, and since then, several people have added value to it. The entity relationship model is based on a real-world perception that comprises a collection of objects or entities and the relationships among these objects or entities.

• **Entity Relationship (ER) Diagram**

The entity relationship model uses the technique of diagrammatically representing the logical structure of a database. This diagrammatic representation is known as the Entity Relationship (ER) diagram. An ER diagram lists the various components of a database and depicts the relationships between the components. An ER diagram can be considered as the blue print of a database.

Guidelines for Drawing an ER Diagram are:

- Identify the entities.
- Identify the attributes of the entities
- Identify the relationship between entities.
- Start with unique entities

CHAPTER THREE

SYSTEM ANALYSIS AND DESIGN

3.00 INTRODUCTION

It entails fact finding analysis of facts gathered to see and understand the weakness and strength of the existing system with a view to improve upon the existing systems to create a new system. It also involves the execution of the existing system to identify problem area. It includes suggestion on how to solve identified problems.

3.01 RESEARCH DESIGN

Investigation on the existing system of managing revenue data in the revenue unit of Etsako west local government area. Two methods have been used in the gathering of facts or data in order to get an accurate result as it relates to the strength and weakness of existing system in revenue.

Primary Source

Oral Interview with the employee's revenue unit of Etsako west local government area was employed, and it was an unstructured

one, but it was employed to help gather in-depth information concerning details of their revenue. In all, the fact finding techniques used in this research work is interview method and observation methods. The interview method involves a face to face contact with the interview as questions are being asked verbally. The interview method is effectively in the sense that it provides me opportunity to use the existing system and overcome possible resistance to change. On the other hand, the operation of the existing system. This techniques offers the opportunity to discover points that were less apparent during the interview stages.

3.1.1 Constraint of the existing system

- File management are sometimes not well documented, in such case, tracing rate is problematic.
- Filing method stored in cupboard, drawer and cabinet of different types is taking as it requires human efforts for keeping aid retrievals.
- Shortage of file and other materials have worn out file jacket non fine resistance drawers.

3.1.2 Problems of the existing system

- Handling updated revenue files could be hidden by messengers or destroyed.
- Inaccuracy of computed revenue
- No revenue data security since the file is not restricted
- Poor storage and retrieval.

3.02 SYSTEM DESIGN ANALYSIS

This focus is on the specification of the new system which aimed at improving the old system.

3.2.1 Overview of the New System

The proposed system consists of several components including computer hardware and software. It is a database information system which is computer oriented and is aimed at handling records efficiently.

It will be automated consequently; revenue data stored in hard-disk and back-up will be stored in removable drives, CD-ROMs and diskettes.

The method used for designing the proposed system is called the modular design method. It is sometimes referred to as the top down design.

In this modular design, the problem is divided into sub problems (Called Modules) which are then tackled individually. Each module contributes to the overall functioning of the entire system.

3.03 FILE DESIGN

File design is related to input and output. Input is process against a file to produce the necessary output. Consideration involved in designing the file for the proposed systems which includes:

- Storage Media
- Method of File organization and access
- Security
- Integrity

The file designed for the research work is done in MsSQL. It is relational database management system that provides special means for creating a database and tables and queries within the database.

Table 3.3.1 This stores personal data of the customers/client and their details within the Etsako West Local Government Area. It is the layout of the tables as it was designed in MsSQL.

S/N	FIELD NAME	DATA TYPE	WIDTH
1.	Client Number	String	15
2.	Last Name	String	15
3.	First Name	String	15
4.	Date of Birth	Date	8
5.	Property Levied	String	12
6.	Date Levied	Date	8
7.	Property	String	15
8.	Number of Properties	Integer	15
9.	Total Amount levied	Integer	15

Table 3.03. Client Detailed Table.

This table stores information about client properties and the amount levied Etsako west local Government Area.

S/N	FIELD NAME	DATA TYPE	WIDTH
1.	Client Name	String	15
2.	Client Number	String	15
3.	Govt. Subvention	String	15
4.	Transport Levy	Date	8
5.	School Fee Levy	String	12
6.	Slaughtering Levy	Date	8
7.	Market goods levy	String	15
8.	Hotel License Levy	Integer	15
9.	Bakery Levy	Integer	15
10.	Guest House Levy	String	15
11.	Land Levy	String	15
12.	Total levy	Integer	20
13.	Amount paid	Total levy	20
14.	Amount Owned	Total levy	20

Table Name: Client Properties table.

3.04 INPUT/OUTPUT DESIGN SPECIFICATION

3.4.1 Output Design Specification

Output design consist of the signal result of data processing, it is necessary to consider which required form the proposed system before designing the output as the signal output of the system determines the nature of the input data. In this research work, the output includes report about revenue computation, levied items, payer/client listing etc.

3.4.2 Input Design Specification

Input design specification refers to the items that are needed by the proposed system in order to function appropriately. The revenue data for the proposed system are obtained, arranged into the computer system for processing in order to produce desired output. Data for the proposed system comes in various source documents like client from the monthly levied sheet etc. the revenue data captured is handle effectively through good from design in visual basic.

3.05 PROBLEM SPECIFICATION

System program specification defines all the requirement of the proposed system about to be build for the new system to achieve its aims and objectives, the system should be able to:

- Accept input from source document. Handle the storage and effective retrieval of revenue information.
- Provide security to guard access to information by unauthorized persons.
- Computer client revenue accurately on monthly basis.
- Generate report to facilitate payment levies of client properties.
- Program has been written to generate each of the required output.
- Only system administration can effect deletion and addition to the database as to ensure integrity.

CHAPTER FOUR

PROGRAMMING IMPLEMENTED

4.00 CHOICE OF PROGRAMMING LANGUAGE

The new system was implemented using Microsoft Visual Basic programming language. This is because the programming language has the advantage of easy development and flexibility. It also has the ability of providing the developer/programmer with possible hints and equally produces a graphical user interface.

Visual Basic is an event driven, graphical user interfaced object oriented programming environment. Structured programming allows the program to be developed in presented module, either by using a top-down or bottom-up method.

The hierarchy of object is in visual basic and it runs the objects, (such as controls) which are placed in frames (another object which group other objects virtually together), and can be placed on the form (windows which open up to display information, or receive input from the user). These forms are linked together by code modules to create a finished visual basic application.

Forms being objects have their own properties and methods attached to them as well, amongst which are caption (which displays text centered at the top of the form, the control box, (which allows one to minimize, maximize, remove, resize, restore or close the form) and the desktop. There exist also two boxes which allow the desktop to change the colour of the form. The toolbox which allows one to design the screen by choosing various options from it such as label text, checkbox and command button is also present.


4.01 PROGRAM SPECIFICATION


- **Pseudocode**

This is one of the ways of representing algorithm. It means English-like expression and mathematical notation to describe a step by step method of solving a problem. Pseudocode for the program flowchart is below:

 Display welcome message

 Select Password program

 Select main menu option

 Display Addition

✚ Display nominal roll form for client

✚ Exit to main program

✚ End

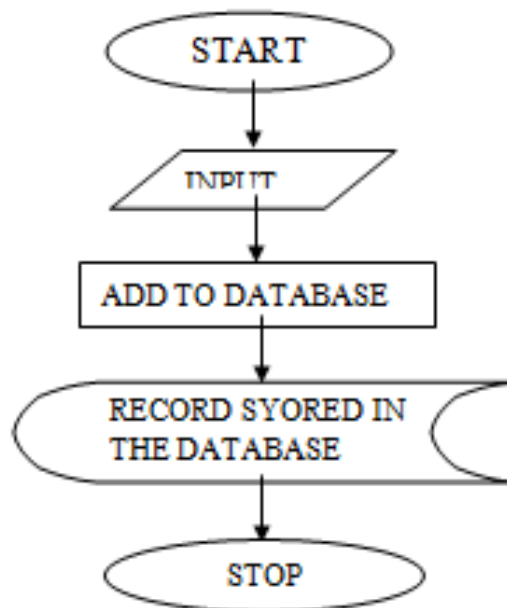
The method used for designing the program for the new system is the module design method. This method was also used in designing the system. It splits the entire program into small program that are easy to debug and maintain in case of error and review respectively. Thus it's a problem occurring during testing. It is possible and easy to locate the module (sub program) that is faulty.

- **Program Testing**

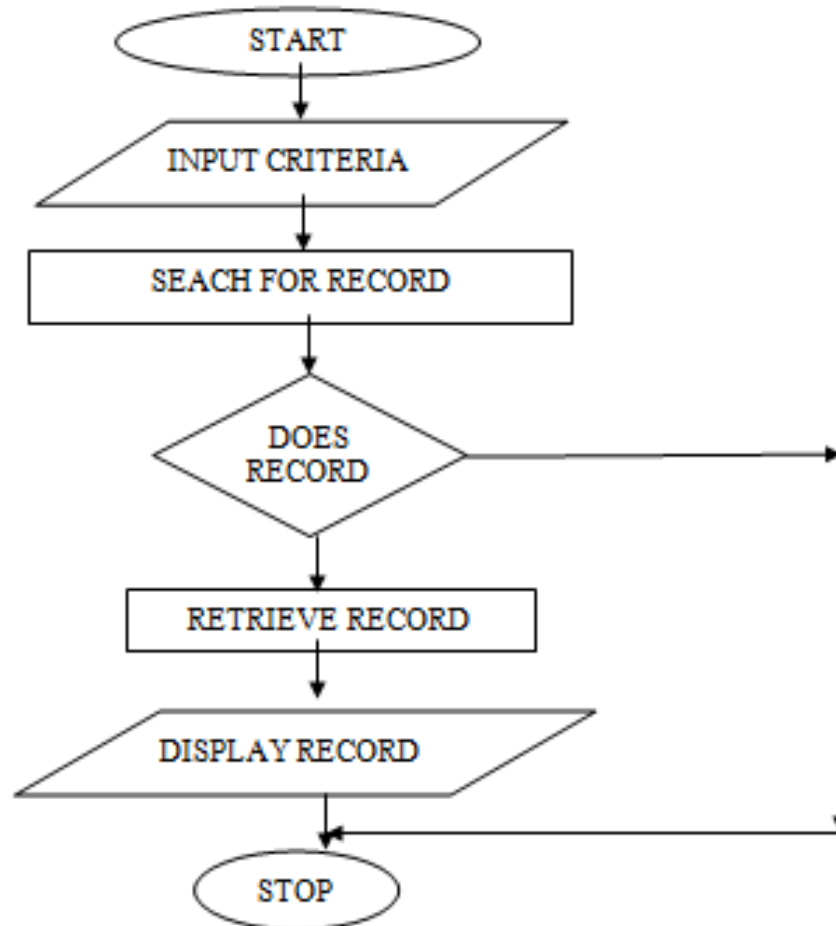
It involves executing the programs with samples of data and correcting both syntax and logic errors. The primary objectives of testing are generate accurate information. The sample data revenue unit of the council. The final testing after debugging errors confirmed the programs are essentially reliable.

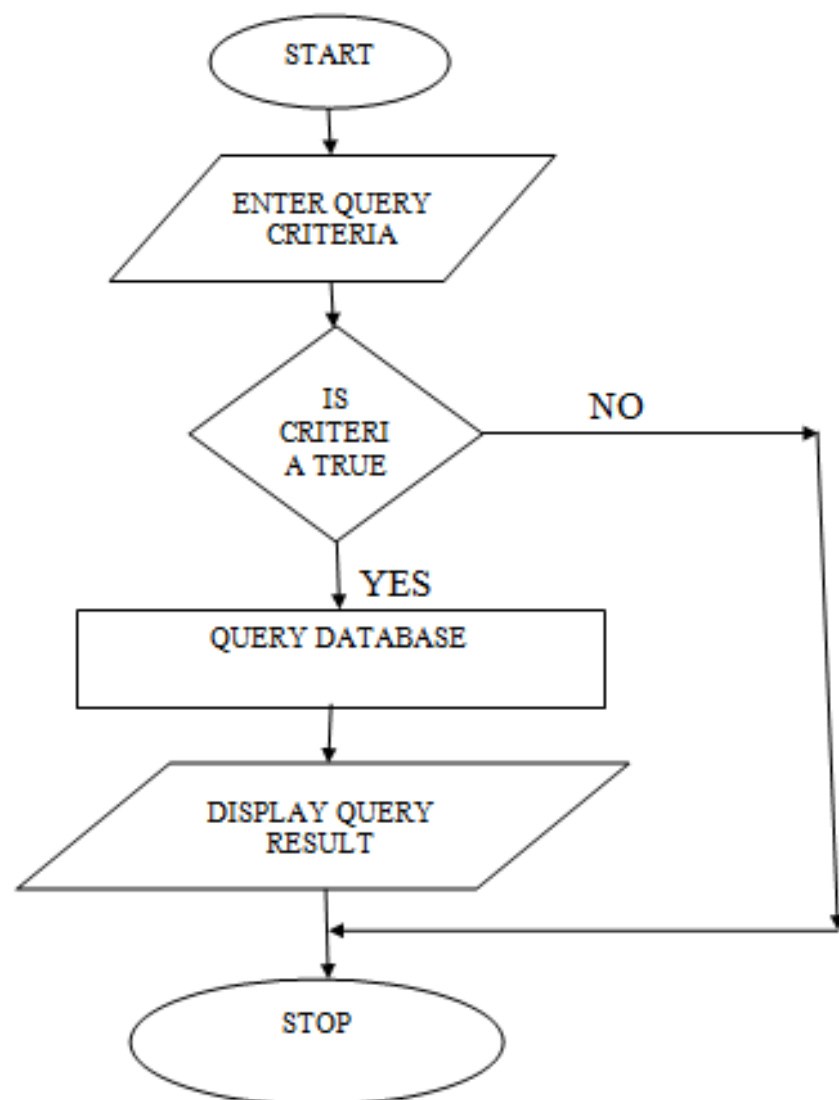
User

4.02 PROGRAM FLOWCHART

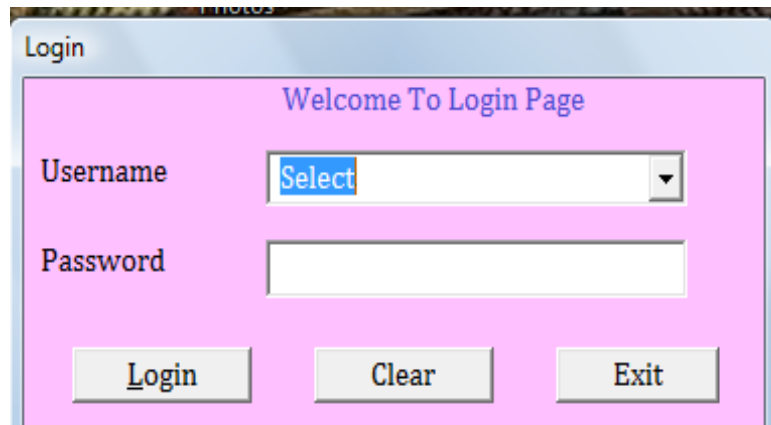


TO RETRIEVE INFORMATION





4.03 INPUT/OUTPUT



A screenshot of a 'Login' window. The window has a title bar labeled 'Login'. Inside, there's a pink background with the text 'Welcome To Login Page' in blue. Below this, there are two input fields: 'Username' with a dropdown menu showing 'Select' and 'Password' with a text box. At the bottom, there are three buttons: 'Login', 'Clear', and 'Exit'.

Fig. 4.03 the login page

2. The employees' registration screen: this is where a new employee is entered into the database.



A screenshot of an employee registration screen. The screen is divided into two main sections: 'Bio Data' and 'Passport'. The 'Bio Data' section contains a date field set to '19/09/2011' and a list of fields for employee information: STAFF ID (12000005), FIRST NAME, LAST NAME, ADDRESS, DEPARTMENT (dropdown), GRADE LEVEL (dropdown), Bank Of Staff, Bank Account, BANK BRACH (Text1), BASIC SALARY, EMPLOYEE ID (12050006), Phone Number (Text1), and Email (Text1). The 'Passport' section contains a 'Browse' button and a 'Cancel' button. At the top of the 'Bio Data' section, there are 'Submit', 'Update', and 'Back' buttons.

Etsako West LGA Payroll System

Bio Data

STAFF ID 12000002
SURNAME Paul
OTHERNAME Emasogbe
ADDRESS Auchi
DEPARTMENT Treasury
GRADE LEVEL 13
Annual Salary 180000
Bank Of Staff Zenith
Bank Account 12000936
BANK BRACH Auchi
BASIC SALARY 15000

Passport

Browse

Cancel



OFFICIAL...

UTILITIES ALLOWANCE	750
MEAL ALLOWANCE	1500
HAZARD	1200
OVER TIME ALLOWANCE	1500
RENT ALLOWANCE	750
TRANSPORTATION ALLOWANCE	1500
Union Dues	450
TAX	1500
TOTAL DEDUCTION	1950
TOTAL GROSS PAY	202200
NET AMOUNT PAYABLE	200250

19/09/2011

Move First

Move Next

Move Last

Submit

Calculate

Delete

Back

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.00 SUMMARY

This project is an automated database management system for a local Government Revenue Unit. The manual storing and tasking inefficient time consuming, unsecured and prone to data error. The project is aimed at integrating all Revenue data in the council into a Database. The Database system will equally provide for a network environment where revenue details can be accurately recorded and managed. The design takes into account the sources of the Revenue, properties levied, defaulters and methods of collections. The choice of database model is carefully detailed along the line of suitability and that which is most economically to the Etsako Local Government Area.

5.01 CONCLUSION

The pace of computer technology has provided a viable cost-effective alternative system for data processing. There is also the pressing need to process revenue record quickly for LGA but also to

reduce drudgery in data processing work both the council and school level furthermore, one way LGA revenue unit can demonstrate quick revenue report and to save as data processing centers for other LGA therefore, the head of revenue section must overcome computer phobia and adopt automated database.

It is hoped that automated database would serve as a challenge and catalyst to get LGA in the federation to evolve a computer base systematic approach to revenue data processing.

5.02 RECOMMENDATION

This research work explores the possible ways in which information technology (computer) can benefit the processing and computation of revenue database in Etsako West Local Government Council. After carrying out the feasibility on the revenue unit of Etsako West Local Government Area, some associated problems with manual methods of database information processing like increased labour cost, error manipulation fraudulent acts of some employees were discovered. It appears obviously that processing of revenue record of the council is becoming too cumbersome and

large for a present manual system. I therefore recommend that a database approach to information management is adopted in favour of the conventional to users who need it; it offers security confidentially, integrity and data independent. Besides, the automated (like system Development in this research) should be introduced in all aspects of information processing. This helps track all information required, enhances the effective use of the database record.

REFERENCES

Agboile C. (1998): Comprehensive Guide to Computer Science.

Ambik Press Benin City. Pp 21-33

French C.S. (1971): Computer Science. Arnold Publishers Pp 66-77.

G.O Farayola :(1987): *Guide to Nigeria Taxes*, Allcrowns Nig. Ltd. Lagos.

John Harrison and Ron Dowber :(1976): *Clerical Accounting*, Don Martins Publishers, London.

K.S. Carmichael :(1966): *Income Tax and Profits Tax*, HFL Publishers, London.

Simeon Ibitoye :(1985): *Budgetary Control Report*, Garham Burn Publishers, Leighton Buzzard, Bed, U.K.