

COMPUTERISED DATA BANK SYSTEM FOR SECONDARY
SCHOOL PERSONNEL MANAGEMENT: A CASE STUDY OF
FEDERAL GOVERNMENT COLLEGE, BIDA

BY

OLUWAFEMI MICHAEL OLUWASESIN

MARCH, 1994

A COMPUTERISED DATA BANK SYSTEM FOR SECONDARY
SCHOOL PERSONNEL MANAGEMENT: A CASE STUDY OF
FEDERAL GOVERNMENT COLLEGE, BIDA.

BY

OLUWAFEMI MICHAEL OLUWASESIN
B.Sc. (HONS) MATHEMATICS/STATISTICS (IFE)
M.Ed. (EVALUATION) (IBADAN)

A project submitted TO THE DEPARTMENT OF
MATHEMATICS/STATISTICS/COMPUTER SCIENCE,
SCHOOL OF SCIENCE AND SCIENCE EDUCATION,
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA-
NIGERIA.

IN

PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
AWARD OF POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE

MARCH, 1994.

APPROVAL PAGE

THIS PROJECT HAS BEEN READ AND APPROVED FOR THE AWARD OF
POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE OF THE FEDERAL
UNIVERSITY OF TECHNOLOGY, MINNA.

MR. ABUBAKAR SHEBE
(SUPERVISOR)

Zomb
21/4/94

EXTERNAL EXAMINER

DATE:-----

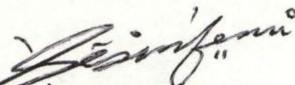
DATE-----

DR. K. R. ADEBOYE
(HEAD OF DEPARTMENT)

DATE; -----

CERTIFICATION

I certify that this research work was carried out by
Oluwafemi Michael OLUWASESIN at the Department of Mathematics/
Statistics/Computer Science, Federal University of Technology,
Minna. Nigeria.



Olufemi M. Oluwasesin
(Students)

Mr. Abubakar Shebe
(Supervisor)

Date: 18/4/94

Date:

iii.

DEDICATION

This work is gratefully dedicated to my wife Grace Oluyinka
Oluwasesin and our children:

Akinwumi Oladipo Oluwaseesin

and

Toluleke Olusakin Oluwaseesin

ACKNOWLEDGEMENT

I owe my success to God, for His mighty grace once again in my life enables me to carry out this study. To GOD BE THE GLORY.

In a special category stands my dynamic supervisor Mr. Abubakar Shebe among who God used as an instrument in bringing this work to fruition. I acknowledge with much gratitude his understanding and devoted attention throughout the process of this study despite his ~~croded~~^{crowded} schedule of duties.

I am sincerely grateful to Mr. and Mrs. Earnest Soje who happily accomodated me throughout my course. May God continue to help them.

I quite appreciate the effort of the following Lecturers in the department; Dr. Bamigbola, Messrs Tunde Bamkefa, S. Sadiq, S. Olalekan, Usman Adamu, Mohammed Goma, Yomi Aiyesimi, and all other staff members.

I thank all my colleagues in the programme who in one way or the other had contributed to the success of this study. May God bless you all.

Lastly, I sincerely acknowledge the support given by my family for the sacrifice of having to stay alone several days without me.

May you all be rewarded abundantly through our Lord and saviour. Amen.

<u>TABLE OF CONTENTS</u>	PAGE
TITLE	I
APPROVAL PAGE	ii
CERTIFICATION	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
ABSTRACT	viii
 <u>CHAPTER ONE</u>	
1.1 INTRODUCTION	1
1.2 SCHOOL RECORDS	2
1.3 THE STATEMENT OF THE PROBLEM	4
1.4 SIGNIFICANCE OF THE STUDY	5
1.5 DEFINITION OF TERMS	6
 <u>CHAPTER TWO</u>	
REVIEW OF RELATED LITERATURE	7
2.1 SOFTWARE DOCUMENTATION	8
2.2 SOFTWARE MAINTENANCE	9
2.3 COMPUTER AND DECISION MAKING	11
2.4 IMPLEMENTING MIS	11
 <u>CHAPTER THREE</u>	
DESIGN AND METHODOLOGY	13
3.1 SAMPLING PROCEDURE	13
3.2 SUBJECT SAMPLE	13
3.3 SYSTEM DESIGN	13
3.4 THE PROGRAM	18

CHAPTER FOUR

DOCUMENTATION, DISCUSSION AND CONCLUSION	27
4.1 DISCUSSION	28
4.2 VERSION OF PROGRAMS	29
4.3 CONCLUSION	29
4.4 RECOMMENDATIONS	30
4.5 LIMITATIONS	30
4.6 SUGGESTED AREAS FOR FURTHER RESEARCH	30
REFERENCES	31
APPENDIX	32

ABSTRACT

This study finds an easier way of assisting the handling of files in the school administration by developing a computerised management information system for personnel management in secondary school.

The subject sample consisted of the staff and students records, Time table, school inventory and Academic records of students.

Database III plus language was used in writing the program that formed the application software package.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The need for developing information system on Educational Administration has been felt and now expressed at this computer race. the central purpose of administration in general is the co-ordination of human and material resources towards the attainment of some pre-determined objectives. All administrative efforts in the context of formal school education are geared towards the enhancement of teaching and learning processes.

A close examination of the administrative functions reveals that in the main, educational administration has to do with more than just what goes on in the classroom. The different functions and related component parts of educational administration are broadly outlined as follows.

- i. the administrative process
- ii. decision - making
- iii. the theory and concept of leadership
- iv. the administrative structure in education and
- v. the tri-dimensional concept of educational administration.

However, the above divisions are not sufficiently comprehensive of what educational administration is all about.

The administration of pupils comprises those administrative and supervisory functions and services other than classroom instruction. These include: admission, registration, enrolment, students organizations, classification of students, provision

of essential services to student, guidance services to students and the comprehension and development of abilities, interests and needs of individuals at various levels of maturity with the school system.

The purposes of a social institution such as the school are achieved through the efforts of people. The persons who constitute the staff of a school largely shape its direction and effectiveness. The principal of a school, who is the head, manager, and administrator of the school is concerned with the social or job behaviour of the staff. To be effective with the staff, the principal must have an understanding of the dynamics of personnel behaviour in an institutional setting. It is the task of the principal to guide the efforts of these people so that their individual and collective behaviours will contribute significantly to the fulfilment of the schools objectives. Much of the principal's impact upon the operation of the school is achieved through his work with the staff. How easy and effective will the principal be able to perform his duty concerning his staff and students is the use of school records.

1.2 SCHOOL RECORDS

The aim of any school record be it statutory or general is to present information. If school records are properly kept they serve as an information bank from which the principal

and his staff can recall stored information when needed. For this purpose the records must be honestly and faithfully kept in order to make them reliable and to serve as a means of diagnosing individual student's problems and recording his achievements. The ability to recall stored information depends on the availability of the records, easy access to the records, a good filing system which guarantees that no pages are gutted out. Statutory records in the school management system are Register of Admission, progress and withdrawals Register of Attendance and fees

Log Book

Time table

Weekly Diaries

Visitors' book

Corporal punishment book

Student cumulative record card

Academic record of student

School Inventory Book

Files for staff

Students Health record book

Transport officer's file

Water and light officers' record

Food master's record

Game master's record

School Project file

For a principal of a school to assess and work on the numerous records above in order to meet his objectives is hard tasking and takes several weeks before a decision is made on a particular record.

Now due to the advent of computer, a system design can

be developed to ease the task.

1.3 THE STATEMENT OF THE PROBLEM

The traditional method of keeping records and filing system in secondary schools need more than one person to handle. For instance, a clerical staff search for the files in the file cabinet (retrieve), add another information i.e. putting another record in the file before forwarding it to the principal for necessary action. This method is not economically and technically feasible. The information is easily exposed to insecurity. Some records can be removed easily. Frustration sometimes occur when a misplaced file or piece of correspondence cannot be found. At times if the clerical officer who knows the filing process is not available, the principal cannot retrieve the information needed at that particular period. There is always delay in decision making.

The problem therefore, is to develop a computerised information system which can assemble data (e.g. facts and opinions) that are processed (e.g. summarized, categorized or projected) in such a way that they result in intelligence (i.e. information) that management can use to make decisions, and that the organisation (the school) can use to attain its goals.

In this study, this system will be planned and integrated according to the systems concepts that have already explored, this is to make the system effective.

1.4 SIGNIFICANCE OF THE STUDY

Nigeria as a developing country is in dire need of scientific and Tehcnological break - throughs in her bid for an industrial revolution, therefore adequate use of computer system is of great help. Realising that the application of computerised information system to personnel management is so essential that computer appears to be one of the most developed mental tool available for filing processes. Although, the government encourage the use of computer and bought quite a number of microcomputer and distributed them to Federal Government Colleges, but has not succeeded in its efforts because of the computer illitracy of the principals. Some principals who attended workshops on computer litracy could not make use the microcomputer system at their disposal due to lack of software package to be used for their school personnel management.

Hence prompt development of software package which is the computerised data bank (information) system is needed so that effective measures is taken to tackle the problem of hard tasking of filing processes in the school management. It is therefore thought that the developed software package in this study would help in overcoming some of such problems, taking into consideration the accurate and rapid processing of data, vast storage and prompt retrievability of information, and performance of computations and logical operations with very high reliability.

1.5 DEFINITION OF TERMS

The operational definition of terms used in this study are as follows:

Data Base: An integrated set of files, tables, arrays and other data structures.

Software: The instructions that direct the computer hardware to carry out certain operations so that some specified result is achieved.

Computer System: The hardware, software, and people that must function together so that a computer can actually process data and generate information.

Updating: The maintenance of computer records or files so that they are current and accurate

Database Management System (DBMS): The set of operational programs that facilitate the use of a computerized database.

Management Information System (MIS): A computer system that integrates equipment, procedures, and organizational personnel to develop information for managerial decision making.

Manual System: A noncomputerized method of processing data.

Personnel System: A business system that maintains complete files of data on the employees that work in an organization

System: An organized way of accomplishing a stated goal or objective.

Feedback: The vehicle by which a system attempts to evaluate its own performance.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

At this race of advance computer technology over the world, education should not produce computer illiterate individuals. The computer literate person understands and utilizes the concepts of computer system in his daily work.

The researcher could not lay hands on any past work done on this study. However, there are past work generally on software development and management information system. These general ideas are being employed for the purpose of this study specifically.

Initially, there were immense problems of implementing and testing large software systems. The problems though not simply proportional to the size of the system, some of them are akin to the problems which arise in large engineering projects management and cost control, personnel management, tool selection, quality control and product design. This was first brought to prominence at a NATO conference in 1968 where the term 'software engineering' was coined.

Sommerville, 1982 made it known that there have been a number of important developments. High level languages have ousted machine languages for many applications, structured programming can increase programmer productivity and improve the readability and reliability of programs.

He went further that low-cost microprocessor systems mean that more and more control tasks will be allocated to computer systems and the need for reliable, low-cost software systems is increasing. Many software systems are still being

produced which are unreliable, over budget, poorly documented and not well suited to the user. Existing, proven techniques are neither widely known nor applied. Software engineering education is of applied. Software engineering education is of paramount importance if this situation is to be improved.

2.1 Software Documentation

The documentation associated with large software system can be classified as either user documentation or system documentation. User documentation is made up of those documents which relate to the functions of the system, without reference to how these functions are implemented. System documentation, on the other hand, describes all aspects of systems design, implementation and testing.

The documentation provided along with the system must describe

- how to use the system - without this, even the simplest system is useless.
- how to install and operate the system
- the overall system requirements and design
- the system implementation and test procedures in order that the system may be maintained.

User documentation provided for system users according to sommerville, is usually the first contact which they have with the system. It should provide on accurate initial impression of the system. This documentation is not sales literature. It should not emphasise the glamorous system features nor should it be optimistic

about the system's capabilities. It should be structured in such a way that the user may read it to the level of detail appropriate to his needs. In his books, Sommerville considered 5 documents

- A functional description, which explains what the system can do.
- An installation document which explains how to install the system and tailor it for particular hardware configurations.
- An introductory manual which explains, in simple terms, how to get started with the system
- A reference manual which describes in detail the facilities available to the user and how to use these facilities.
- An operators guide (if a system operator is required), explaining how the operator should react to situations which arise whilst the system is in use.

Agreeing with Sommerville, these documents may be provided as separate manuals or bound together as one or more volumes depending on the size of the system.

2,2 Software Maintenance

The term 'maintenance' has been applied to the process of modifying a program after it has been delivered and is in use. These modifications may involve simple changes to correct coding errors, more extensive changes to correct design errors or drastic rewrites to correct specification errors or accommodate new requirements.

" This is a gross abuse of the term 'maintenance'.
The addition of a new wing to a building would
never be described as maintaining that building,
yet adding new facilities to a program is
considered as maintenance activity" (Turski, 1981)

However as the term maintenance is widely and generally used,
it will be used here to mean changing a program by correcting
errors and providing new facilities.

Software maintenance falls into 3 categories. These are

- (i) Perfective maintenance which encompasses changes demanded by the user or the system programmer.
- (ii) Adaptive maintenance which is maintenance due to changes in the environment of the program and
- (iii) Corrective maintenance which is the correction of undiscovered system errors.

A survey by Lientz and Swanson (1980) discovered that about 65% of maintenance was perfective, 18% adaptive and 17% corrective.

In general, it is impossible to produce systems of any size which do not need to be maintained. Over the lifetime of a system, its original requirements will be modified to reflect changing needs, the system's environment will change and obscure errors, undiscovered during system validation, will emerge. Since maintenance is unavoidable, systems should be designed and implemented so that maintenance problems are minimised.

2.3 Computer and Decision Making

"While most computer time is still assigned to routine data-processing work, increasingly the computer is being planned (If not used) for higher - level assignments. However, it still has almost unlimited potential for assisting management" (Tomeski, 1979)

There are some decisions which can be programmed. These decisions include such things as automatic determination of when to replenish inventory, and in what quantity, and selection of vendor(s) to supply needed material. Nonprogrammed decisions are difficult to structure and standardise; most of them are thus still made by humans. Examples of nonprogrammed decisions might include determining the impact of political and sociological changes on the school. The computer can perform analyses that provide background information for nonprogrammed decisions, but eventually it is human beings who must appraise the information, and who must factor in subjective and qualitative elements.

2.4 Implementing MIS

The implementation of an MIS assumes that the managers are sufficiently familiar with it to use it meaningfully in making decisions. This assumption implies that management development and training constitute a vital part of the MIS effort. Although MIS can be a substantial aid to decision making, it does not supplant human judgement. furthermore, the formal MIS should be only part of the information flow that will influence managerial decision making.

Designing a management information system (MIS) requires that the manager's information needs be determined on the basis of his responsibilities, authorities, and relationships. Since the school principals who are managers make largely define the kinds of information required, such decisions set the parameters of the system itself. They should be involved in identifying decision patterns when the MIS is designed some decisions, particularly at the higher levels of management, are difficult to anticipate, since they are novel, usually are not repeated, and sometimes are based more on qualitative than on quantitative factors.

CHAPTER THREE

DESIGN AND METHODOLOGY

This is the plan, structure and strategy used in developing the software package conceived as management information system so as to obtain answer to the hard tasking, uneconomic and time wasting traditional filing system in the schools.

3.1 SAMPLING PROCEDURE

This study was conducted using Federal Government Girls College, Bida. It was biasly selected because the developer is working in this school.

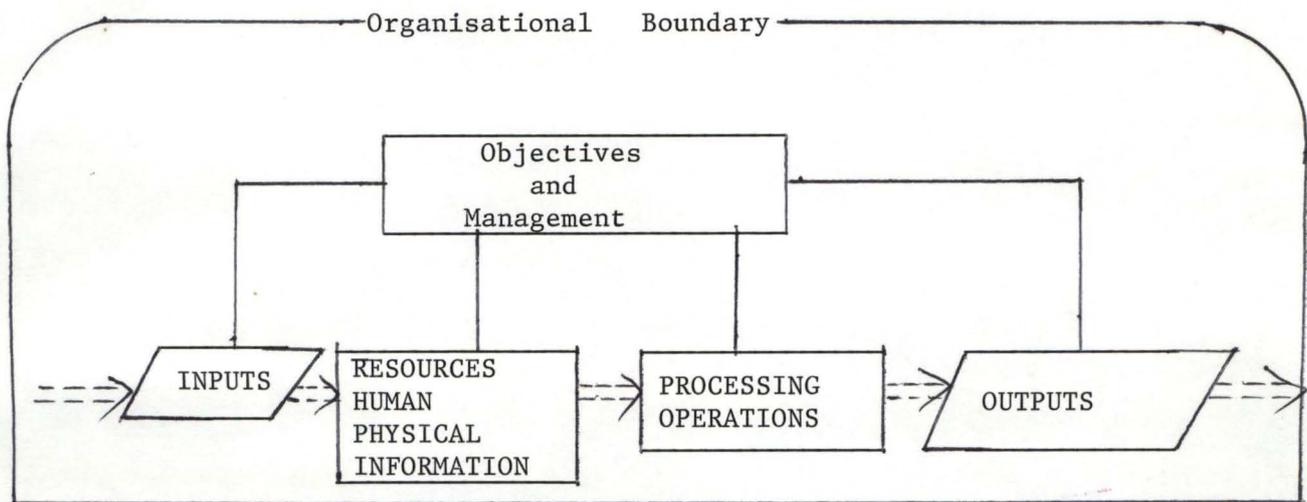
Bida is a town and the headquarter of Bida Local Government of Niger State. The secondary school being a Federal Government College attracts the attention of the Federal government easily to cater for the numerous needs of the school. Hence the objective of the government on the school is expected to be adequately and effectively reached.

3.2 SUBJECT SAMPLE

The subjects for this study were the staff, students, school inventory records, students academic record and Timetable.

3.3 SYSTEM DESIGN

Considering the organisation i.e. the school system, the following model is established.



Legend: ===> Flow of Resources
 - Path of Feedback and control

The objectives are set to provide the school management with direction, and to measure how effective the organisation is being run. by determining how each element is functioning (feedback), management can be responsive and control any element that is out of phase with established objectives.

Each day, numerous management decision process can be viewed as a transformation of information inputs into decision outputs. In this study, the designer concern himself with three aspect of the decision process:

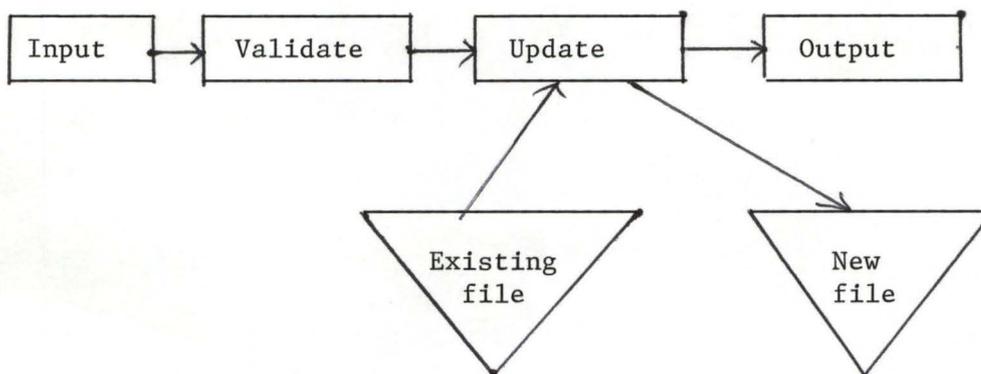
- (i) The information inputs for decision
- (ii) The decision process
- (iii) The decision output and how they result in action.

The language used in writing the program that made up a software parkage is Dbase III plus. Database language was used because it needs no prior vast knowledge of computer as applicable to many principals. It was designed to

service personnel management throughout the school organisation.

- Due to the integrated structure of data base, one transaction may trigger updates in other files. This integration means data can be entered just once, simplifying the stream of input data and improving the overall system's data handling capabilities. Data input to the database is available to the entire school organisation. Database avoids the duplication of files, the reprocessing of data items and repeated handling of data. It was designed to improve the overall efficiency of a computer system that handles sizable amounts of data.

The simple illustration of the basic components of the computer-based information system is shown below



Files containing data are a major component of the information system. The files correspond to the information kept in folders, file cabinets, or note books in a manual information system. Information may be retrieved from a file or the file content may be altered by modifying, adding, or deleting data in the file. The designer is also interested in some types of output from a system that may be a short response to an inquiry request for

computation. Output is produced in many different formats and modes of presentation such as a printed report, a display on a televisionlike screen, or a verbal response.

Specialized modules require important tasks. The systems in this study require at least one version of the following types of programs:

1. Entry routine
2. Append blank routine
3. Retrieval and Edit routine
4. Reports and Forms.

Format files called student fmt, staff fmt, Timetable. fmt, Academic. fmt. and Inventory.fmt were created. The files contain some commands not different from the customised format screen of the Dbase III plus.

These format files were created using the database file structure that was first created as follows:

Structure for database: student dbt.

Field	Field name	Type	Width	dec.
1.	Adm.No	N	6	
2.	S-Name	C	12	
3.	O-Names	C	26	
4.	Date-B	Date	8	
5.	Date-Adm.	Date	8	
6.	P-Name	C	40	
7.	P-Address	C	40	
8.	L-School	C	40	
9.	L-class	C	4	
10.	N-class	C	4	

In the same way Database structure were created for
Teacher.dbf, Academic.dbf and inventory.dbf.

Structure for database: B:teacher.dbf

Number of data records: 2

Date of last update : 04/13/94

Field	Field Name	Type	Width	Dec
1	FILE_NO	Character	6	
2	NAME	Character	25	
3	NATIONALTY	Character	10	
4	STATE	Character	12	
5	LGA	Character	12	
6	BIRTH_DATE	Date	8	
7	POST	Character	10	
8	IN_TRANSF	Date	8	
9	OUT_TRANSF	Date	8	
10	NEWSTATION	Character	40	
11	LAST_PROMO	Date	8	
12	FORMER_GL	Numeric	2	
13	NEW_GL	Numeric	2	
14	INCRE_DATE	Date	8	
15	H_QUALIFIC	Character	30	
16	H_QUALDATE	Date	8	
17	SUBJTAUGHT	Character	15	
18	CLASS	Character	4	
** Total **			217	

Structure for database: B:acadarec.dbf

Number of data records: 3

Date of last update : 04/12/94

Field	Field Name	Type	Width	Dec
1	FILE_NO	Character	6	
2	NAME	Character	40	
3	TYPE_EXAM	Character	20	
4	SUBJECTS	Character	12	
5	TEST	Numeric	3	
6	EXAM	Numeric	3	
7	TOTAL	Numeric	3	
8	POSITION	Numeric	3	
9	R_SUBJTEA	Memo	10	
10	O_POSITION	Numeric	3	
11	R_CLASSTEA	Memo	10	
12	REM_PRINCI	Memo	10	
** Total **			124	

Structure for database: B:inventor.dbf

Number of data records: 2

Date of last update : 04/12/94

Field	Field Name	Type	Width	Dec
1	FILE_NO	Character	6	
2	TYPE_BUILD	Character	20	
3	NO_BUILD	Numeric	4	
4	TYPE_FURNI	Character	20	
5	NO_FURNI	Numeric	8	
6	T_LABEQUIP	Character	20	
7	NO_LABEQUI	Numeric	8	
8	T_HECONEQU	Character	20	
9	NO_HECOEQU	Numeric	8	
10	TYPE_VEHIC	Character	20	
11	NO_VEHICLE	Numeric	8	
**	Total **		143	

The Program

This is set of statement that instructs the computer what to do at a particular time. Menu was first designed to display list of options from which the user can choose.

***** PRINCIPAL PROGRAM *****

```

Set talk off
Set escape off
Set scorboard off
Set status off
CLEA
Do PASS
DO Box with 3,5,23, 75
Set Colo to W/r w +
@ 3,5 clear to 7, 74
Set Colo to w/rg
@ 4,6 clea to 7,74
@ 5,25 say "SCHOOL MANAGEMENT SYSTEM"
Set Colo to r/w
Do box with 7,6, 22, 74
Set Colo to b/rgt
@ 8,7 clea to 20,73
@ 10,20 say "WELCOME TO SCHOOL MANAGEMENT SYSTEM"
12,5 Say "This system is designed to take
        care of ADDING, UPDATING, VIEWING and"
@ 13,5 Say "DELETING Records, and GENERATING
        REPORTS."
Set colo to r/w
Do box with 21, 18, 23, 60
@ 22, 20 say "Press any key to get into the
        MAIN MENU"

WAIT " "
Clea
Set Colo to R/rw
do ycls
Set colo to w/rgt
@ 12,13 clear to 15, 65
@ 13,23 Say "Please you need an Entry PASSWORD"
Set colo to
K = Ø
do while K < = 300
K = k + 1
end do

```

```
do ycls
Do password
Clea
```

```
***** Main Menu *****
```

```
Col = 5
Row = 3
Do while row < = 23
Set colo to W/RG+
Do Box with 2,3, 24, 79
@ Row, col say "WELCOME TO MAIN MENU PLEASE"
Row = row + 1
Col = Col + 2
End do
N = Ø
Do while N < 300
N = N + 1
End do
Do while .T.
```

```
CLEA
```

```
Set colo to W/RG+
```

```
***** Screen format for main menu *****
```

```
Clea
```

```
@ 2,2 say Replicate (CHR (178), 74)
@ 23, 2 say Replicate (CHR (178), 74)
@ row, 2 say CHR (178)
@ row, 3 say CHR (178)
@ row, 75 say CHR(178)
@ row, 76 say CHR (178)
```

```
Row = row + 1
```

```
End do
```

```
*****Screen format Inscription *****
```

```
Set colo to w/r +
```

```
Do box with 1, 30, 3, 44
```

```
@ 2, 30 Say "MAIN MENU"
```

```
Set colo to n/n
```

```
@ 3, 14 clear to 6,26
```

```
Set colo to b/g+
```

```
@ 2,13 clear to 6, 25
```

@ 2,15 say "Academic Staff"

ACAD = "A"

Set Colo to R/W

@ 2, 15 say ACAD

Set colo to n/n

@ 6,20 clea to 10,32

Set colo to W/R+

@ 5,19 clea to 9,31

@5, 21 say "STUDENTS"

STUD = "S"

Set colo to R/W

@ 5,22 say STUD.

Set colo to n/n

@ 9,26 clea to 13,38

set colo to w/b+

@ 8,25 clea to 12,37

@8,27 say "INVENTORY"

Set colo to R/W

INVE = "I"

@ 8,28 say INVE

Set colo to n/n

@ 11,32 clea to 15,44

set Colo to w/g+

@ 10,31 clea to 14,43

@ 10,33 say "TIMETABLE"

SET COLO TO R/+

TIM = "T"

@ 10,34 Say TIM

Set colo to n/n

@14,38 clea to 18,50

set colo to w/rt

@ 13,37 clea to 17,49

@ 13,39 say "REPORT SHEET"

Set colo to R/+

REP = "R"

@13,40 say REP

Set Colo to n/n

@ 15,45 say "QUIT"

set colo t r/+

QUI = "Q"

@ 15, 46 say QUI

Set colo to gr/n

***** Selection of Choice *****

Store space (1) to CHOICE

Do box with 22,24,24,55

@ 23,25 say "Enter your CHOICE (from A to Q)"

@ 23,55 Get choice pict "@ A!"

Read

DO CASE

CASE CHOICE = "A"

MENU

DO TEACHER

CASE CHOICE = "S"

MENU

DO STUDENTS

CASE CHOICE = "I"

MENU

DO INVENTORY

CASE CHOICE = "T"

DO TIMTABLE

CASE CHOICE = "R"

MENU

DO ACADAREC

CASE CHOICE = "Q"

QUIT

ENDCASE

ENDDO

Set talk on

Set Escape on

Set scoreboard on

Return.

*****Password Program *****

```
Set console off
Pas = space (8)
Do while .T.
@ 12,23 say "Enter your PASSWORD"
Accept to pas
IF-UPPER (PAS) = "FGGBPRIN"
EXIT
ELSE
LOOP
ENDIF
ENDDO
Set Console on.
```

***** MENU Program *****

```
Do while .T.
CHOICE = " "
Set colo to W/b+
@ 1,10 to 3,70 double
@ 2,12 say "ADD"
@ 2,18 say "DELETE"
@ 2,26 say "UPDATE"
@ 2,35 say "VIEW"
@ 2,43 say "REPORT"
@2,51 say "EXIT"
    Set colo to R+
@ 2,12 Say "A"
@2,18 Say "D"
@ 2,26 say "U"
@ 2,35 say "V"
@ 2,43 say "R"
    Set colo to W/B+
@12,25 say "ENTER YOUR CHOICE" GET CHOICE PICT "@A!"
Read
```

```

DO CASE
  CASE ANSWER = "A"
    DO ADDRESS
  CASE ANSWER = "D"
    DO DELETE
  CASE ANSWER = "U"
    DO UPDATE
  CASE ANSWER = "V"
    DO VIEW
  CASE CHOICEE = "R"
    DO REPORT
  CASE ANSWER = "E"
    EXIT
  OTHERWISE
  LOOP
  ENDCASE
  ENDDO
  CLOSE DATABASES
  RETURN

```

```

***** ADD RECORD PROGRAM *****

```

```

IF CASE CHOICE = "A"
  Select 1
  Use Teacher
  IF CASE CHOICE = "S"
  If Select 2
  Use students
  IF CASE CHOICE = "R"
  Select 3
  Use Acadarec
  IF CASE CHOICE = "I"
  Select 4
  USE INVENTORY
  CLEAR
  WAIT "Press any key to begin Entering New Records"
  Use TEACHER
  begin = reccount ( )
  Ans = .T.
  Do while Ans

```

```
Clear
Append
Read
@ 22,0 say "*** REcord Entered ***"
@ 24,0 say "Enter Another?(Y/N)" GET Ans
Read
IF UPPER (ANS) = "Y"
    LOOP
ELSE
    EXIT
ENDIF
ENDDO
Clea
@ 11,0 say "You have added " + Ltrim (Str (Reccount ( ) -
begin, 0)); + "Records"
Wait "Press any key to exit Entry"
CLOSE DATABASE
RETURN
```

```
*****UPDATE PROGRAM *****
```

```
IF CASE CHOICE = "A"
    Select 1
    Use Teacher
    IF CASE CHOICE = "S"
        Select 2
        Use students
        IF CASE CHOICE = "R"
            Select 3
            Use Acadarec.
        IF CASE CHOICE = "I"
            Select 4
            Use INVENTORY
```

```
Clear
Want = .T.
@ 10,20 say "DO YOU WANT TO UPDATE A RECORD? (Y/N)"
      GET WANT

READ
Do while want
  clea
  @12,20 clea to 18,60
  @14,22 say "EDIT RECORD"
  @18,22 say "ENTER FILE NUMBER"
    FNum = 0
  @18,25 GET FNUM
  Read
  LOCATE FOR FNUM = FILE-NO
  IF .NOT.FOUND ( )
    @16,22 clea to 17,59
    @17,25 Say "No SUCH RECORD"
      N = 0
  Do while N < = 200
    N = N + 1
  Enddo
  clea
  ?
  ?
  WAIT
  LOOP
  ELSE
  READ
  ENDIIF
  ENDDO
  CLOSE DATABASE

***** VIEW PROGRAM *****
IF CASE CHOICE = "A"
  Select 1
  Use Teacher
IF CASE CHOICE = "S"
  Select 2
  Use Students
```

```
IF CASE CHOICE = "R"
  Select 3
  Use Acadarec
IF CASE CHOICE = "I"
  Select 4
  Use INVENTORY
Want = .T.
@ 10,20 say "DO YOU WANT TO VIEW RECORD? (Y/N)" GET WANT
  Read
Do while want
  Clea
@ 12,20 clea to 18,60
@ 13,25 say "VIEWING RECORD"
@ 16,22 Say "ENTER FILE NUMBER"
  FNUM = $
@ 18,25 GET FNUM
  Read
LOCATE FOR FNUM = FILE-NO
DISPLAY
IF .NOT. FOUND( )
@ 16,22 clea to 17,59
@ 15,28 say "No SUCH RECORD"
@ 18,25 Say "PRESS ANY KEY TO CONTINUE"
WAIT " "
LOOP
ENDIF
ENDDO

*****DELETE PROGRAM*****
IF CASE CHOICE = "A"
  Select 1
  Use Teacher
IF CASE CHOICE = "S"
  Select 2
  Use students
IF CASE CHOICE = "R"
  Select 3
```

```
Use Acadarec
IF CASE CHOICE = "I"
  Select 4
  Use INVENTORY
  Clea
  FNUM = Ø
  @ 12,30 say "ENTER FILE NO. "GET FNUM PICT "999999"
  Read
  Do while .NOT . EoF ( )
  LOCATE FNUM = FILE-NO
  IF found ( )
  Clea
  @12,0
  LIST FILE-NO, S-NAME
  @22m0
  Wait space (19) + "Press Any key to continue"
  Clea
  Ans = Space (1)
  @12,25 Say "Are you sure you want Record Deleted (Y/N)"
    Get Ans PICT "@!"

  Read
  Do While .NOT. Ans & "YyNn"
  If Ans & "Yy"
  DELET
  PACK
  Clea
  @12,30 say "Record Deleted"
  T = Ø
  Do while T<150
  T = T+1
  Enddo
  EXIT
  ELSE
```

```
*****BOX PROGRAM ****
SET TALK OFF
SET ESCAPE OFF
SET ECHO OFF
SET STATUS OFF
CLEAR
*****DRAW A BOX GIVEN THE PASSED PARAMETERS**
PARAMETERS BEGINROW,BEGINCOL,ENDROW,ENDCOL
*CLEAR
@BEGINROW,BEGINCOL TO ENDROW,ENDCOL DOUBLE
*clea
*SET TALK ON
*SET ESCAPE ON
*SET ECHO ON
*SET STATUS ON
*RETURN
```

```
clea
```

```
set colo to w/wr+
@4,7 clea to 22,73
set colo to
@4,7 say replicate (chr(174),67)
@22,7 say replicate (chr(174),67)
row = 4
do while row <= 22
@row,7 say chr(174)
@row,8 say chr(174)
@row,72 say chr(174)
@row,73 say chr(174)
row = row+1
enddo
```

CHAPTER FOURDOCUMENTATION, DISCUSSION AND CONCLUSION

This chapter consists of gathering together, in reference manuals, all relevant documents and records that describe the computer software application already developed for the school principal for their personnel management handling.

Since the principal of the Federal Government Girls College, bida, being the subject sample, is already computer literate with a PC microcomputer at her disposal. There no need to explain how to operate computer especially the booting of computer system.

At computer dot prompt, type principal. This will take the user to the working environment with "Menu of commands" display on the screen. Read this and select a choice out of the alternatives.

After selecting a file, then it will take the user to another 'Menu' where the computer will ask what the user want to do with the file already selected. Indicate a choice and follow the instruction on the screen. It should be noted that this application software does not contain commmands for printing a hard copy. It is just for the principal to know what is inside which file, for the purpose of observing the updated record. She may wish to edit, add, delete or comment on the record. This helps her to make relevant and concrete decision concerning the particular file.

4.1 DISCUSSION

The designer ensured that the following characteristics of an effective information system were permitted.

1. Selection of information that is relevant to particular situations (Management by exception), thus preventing either an excess or scarcity of information
2. Comparison of current information, with plans (feedback) to discover deviations and, if needed , trigger corrective action.
3. Immediate access to informaton to support management decisions in unpredictable situations.
4. Delivery of information in a timely fashion to facilitate decision making.
5. HOrizontal and vertical dissemination of needed information so that all effected persons will be informed properly.

The database was planned and constituted the foundation of the management information system (MIS). The data base contained not only rigorously selected and defined data elements that represent the school's activities, but also pertinent external inputs.

Considerate care was given to making sure that the data elements, which, collectively make up the data base, are accurate, consistent, and up to date.

4.2 Version of Programs

As mentioned in chapter three, the function of each specialised module are stated as follows.

Entry routine is used to enter information into the database file. It involves the creation of formatted screen displays, verification of data, setting of default values, performance of calculations and maintenance of necessary indexes.

Retrieval/Edit routine are different from entry routines because they raise the problem of locating data after the key has been entered into the data file. Retrieval is a good deal more complicated than simple entry because human often forget how the data were entered. The key to retrieve routine is that they should offer the user as much flexibility as possible in finding information stored in the files. And at the same time give room for updating a particular record.

4.3 CONCLUSION

This study indicated its concern over the tedious task involved in the manual filing process in the Federal Government College Bida. The study revealed that with the use of the information system package developed, the hard tasking of school filing system will be of a forgotten issue. However, the study did not change the traditional manual system of file handling, but transfer the manual into a computer system for more effective, fast handling and more security.

4.4 RECOMMENDATIONS

Following the advantages of applying this developed package for the school personnel management, it will ease the Load of work on the principal if they make use of it in their daily personnel activities.

The Federal Government should assist them in financing the cost of maintenance of this system. For a software package to be more durable, it needs maintenance.

4.5 LIMITATIONS

This study could not contain all the personnel records of many files in the school system because it is very wide. The study had to be carried out in a specified period of time, hence the scope was narrowed down to only five files.

4.6 SUGGESTED AREAS FOR FURTHER RESEARCH

In a similar research, more files could be included. Subject sample could be more than one for thorough comparison of manual filing and necessary modification could be made for easier applications to school management.

APPENDIX

REFERENCES

1. Edward A. Tomeski, 1979. "Fundamentals of Computers
i in Business: A system Approach". Holden-
Day, Inc. San Francisco, U.S.A.
2. Henry C. Lucas, Jr., 1985. "The Analysis, Design and
implementation of information systems"
Computer Science series, McGraw-Hill book
Company. New York.
3. Lientz, B.P. & Swanson, E.B., 1980. "Software Maintenance
Management" Reading, Mass: Addison Wesley.
4. Okeke B.S. et al, 1985 "A handbook on Educational
Administration" New Africa Pub. Co. Ltd.,
Oweri, Nigeria.
5. Sommerville, 1982, "Software Engineering" International
Computer Science series. Addison - Wesley
Publishers Limited Bedford Square, London.
6. Tuski, W. 1981, Software stability "Proc. 6th European
ACM Conf. on Systems Architecture", London.

Record No. 1
FILE_NO FNUM
NAME OLUWASEESIN O. M.
NATIONALITY NIGERIAN
STATE OSUN
LGA ILESA
BIRTH_DATE 02/28/56
POST E. O. VIII
IN_TRANSF 05/26/91
OUT_TRANSF 01/22/94
NEWSTATION FED. MIN. OF EDUC. LIASON OFFICE ABUJA.
LAST_PROMO 01/01/94
FORMER_GL 9
NEW_GL 10
INCRE_DATE 01/01/94
H_QUALIFIC M.ED. (EVALUATION)
H_QUALDATE 04/30/93
SUBJTAUGHT MATHEMATICS
CLASS SS3

Record No. 2
FILE_NO SF/002
NAME OLABAYO J. O.
NATIONALITY NIGERIAN
STATE KOGI
LGA MAKONGO
BIRTH_DATE 02/28/54
POST TECH. INSTR
IN_TRANSF 06/23/93
OUT_TRANSF 02/24/94
NEWSTATION FED. GOVT. COLLEGE LOKOJA
LAST_PROMO 01/01/93
FORMER_GL 8
NEW_GL 9
INCRE_DATE 01/01/94
H_QUALIFIC P.GD. COMPUTER SCIENCE
H_QUALDATE 03/30/94
SUBJTAUGHT COMPUTER SCI
CLASS SS2

Record No. 3
FILE_NO 932016
S_NAME OLUWASEESIN
OTHERNAMES AKINWUMI OLADIPO
BIRTH_DATE 04/25/89
ADM_DATE 04/26/93
PARENTNAME OLUWASESIN OLUWAFEMI MICHAEL
PARENT_ADD GOVT. TEACHERS COLLEGE, ZUBA, ABUJA.
LAST_SCHL QUEEN SCIENCE SCHOOL, SULEJA.
LAST_CLASS JS1
NEW_CLASS JS2
INTRANS_FL TRAN01
OUT_TRANSN TRA002
C_LEAVING memo
OCCU_LEAVE STUDENT

Record No. 4
FILE_NO 932017
S_NAME OLUWASEESIN
OTHERNAMES TOLUWALEKE OLUSHAKIN
BIRTH_DATE 09/27/90
ADM_DATE 02/23/93
PARENTNAME OLUWASESIN OLUWAFEMI MICHAEL
PARENT_ADD GOVT. TEACHERS COLLEGE, ZUBA, ABUJA.
LAST_SCHL QUEEN SCIENCE SCHOOL, SULEJA.
LAST_CLASS JSS1
NEW_CLASS JSS1
INTRANS_FL TRAN01
OUT_TRANSN TRA002
C_LEAVING memo
OCCU_LEAVE STUDENT

Record No. 1
FILE_NO 932016
NAME OLUWASEESIN AKINWUMI OLUWASEGUN
TYPE_EXAM SECOND TERM
SUBJECTS MATHEMATICS
TEST 20
EXAM 56
TOTAL 76
POSITION 4
R_SUBJTEA memo
O_POSITION 5
R_CLASSTEAM memo
REM_PRINCI memo

Record No. 2
FILE_NO 932017
NAME OLUWASEESIN TOLUWALEKE OLUBUKOLA
TYPE_EXAM SECOND TERM
SUBJECTS MATHEMATICS
TEST 16
EXAM 53
TOTAL 69
POSITION 7
R_SUBJTEA memo
O_POSITION 8
R_CLASSTEAM memo
REM_PRINCI memo

Record No. 3
FILE_NO 932018
NAME OLADIPO OLUWASEGUN OLUWASOLA
TYPE_EXAM THIRD TERM
SUBJECTS MATHEMATICS
TEST 18
EXAM 44
TOTAL 62
POSITION 9
R_SUBJTEA memo
O_POSITION 9
R_CLASSTEAM memo
REM_PRINCI memo