COMPUTERIZATION OF PERSONNEL MANAGEMENT SYSTEM

CASE STUDY:

RAW MATERIALS RESEARCH AND DEVELOPMENT COUNCIL, ABUJA

BY

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PGD/MCS/2001/2002/1110

A project presented in partial fulfillment for the award of Post Graduate Diploma in Computer Science.

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NOVEMBER 2004

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CERTIFICATION

This is to certify that this project, COMPUTERIZATION OF PERSONNEL MANAGEMENT SYSTEM, was carried out by A.O Ajibowo of the department of mathematics and computer science. Federal University of Technology, Minna.

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EXTERNAL EXAMINER DATE

DEDICATION

This project is dedicated to my loving wife, Olulaja and other members of the family Tolulope and Mopewa.

ACKNOWLEDGEMENT

I am particularly indebted to my supervisor, Dr Y.M Aiyesimi for his academic guidance, professional advice and the time to go through my work despite his tight schedules.

I also wish to appreciate the effort of the Head of department, Dr L.N Ezeako, Dr N.I Akinwande, Dr Abubakar, Alh Audu Isah, Mr N Peter, Mal Mohammed Jiya, Mal A M Bashir, Mr Victor Akinola, Mal A I Enagi, Mal A Ndanusa and other lecturers in the department.

My sincere thanks and appreciation goes to my wife, Olulaja Omolara for her care and support in achieving my academic goal.

My sincere gratitude goes to members of staff of the computer services department, R.M.R.D.C, Abuja, especially the director, Dr Ayo for allowing me use their computer facilities.

I also owe my colleagues in the office, Paschal Oborguh and Omowunmi Aina a lot of appreciation for being there for me whenever I have to be away on this course.

Above all, adoration and praises to the almighty God for guiding my life affairs all the while.

ABSTRACT

The importance of an efficient storage, quick retrieval and effective communication of personnel's record from one personnel manager to another cannot be over emphasized especially in the provision of accurate statistics of personnel in an organization. One of the most economical way of achieving these objective especially where a large amount of information is involved is through the use of computers, with this in mind, a computer based personnel management system is developed, and implemented, and it's design and implementation is the subject of this write up. The computerized personnel management system was developed using FoxPro (version 2.6) programming language and has structure design which consist of a main module which is capable of calling other modules as required. The 'menu driven' technique employed to implement the modules made the system easy and self educating for the personnel department staff it was designed for. The system has facilities for storing, updating, enquiring, deleting and generating report as the need arises. Also provided is an audit trail facility for the security of the system and the records contained in it.

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CHAPTER ONE

1.0 INTRODUCTION

THE NEED FOR COMPUTERIZATION

A computer is an electronic device which process information, perform routine operations and carry out complex analysis of facts and evaluation of plans far more quickly (the time required for a computer to sort and process information varies from micro second to billionth of a second) and accurately than large teams of clerical and administrative staff.

Thus the importance of developing a system became more apparent when viewed in the computers ability to work at immense speed and with absolute accuracy and so produce very rapid analysis and forecast extrapolations that would take so long by manual methods as to be almost not worth the effort.

The computer can take over the handling and processing of a vast amount of information that has come to occupy so much human time and effort. It is said that the management revolution is in progress and that the computer is the 'tool' of greatest importance in carrying it through. It has also been stated that a computer enable an industry to rethink it's organization and to re-organise it's thinking and that they are the key stone to effective planning and control of a business.

Thus, with the aid of computerization, much can be done which otherwise would not have been possible manually.

1.1 DATA BASE SYSTEM

The introduction of computers in organizations and the ever- increasing sophistication of data processing systems have highlighted the Importance of data as one of the most valuable organizational resources. It is from the manipulation and interpretation of data that information is generated and in turn used in the decision making process.

The realization of the importance of data meant that there is need for proper management and efficient organization of data. It is also important that data are not locked away so that they can easily and efficiently be accessible by the software used.

Since late 1960's users have been investigating the mechanism that provides facilities for successful organization and accessing data. The mechanism is known as Database system, a term that has come to mean both the organization of data and the software that is needed in order to manage these data.

Thus, a database can be define as a mechanized shared and centrally controlled collection of data used in an organization. It is regarded as the collection of useful information organized in a systematic and consistent manner.

Database can also be regarded as an organized concrete collection of data stored in a logical order. In relational database such as those created using Microsoft access, FoxPro, dbase iv, etc. you store information about different objects in separate tables.

These separate tables then form a record. The collection of separate records form what is known as a file. Finally ,the collection of different files is what constitutes what is finally known as database system.

1.2 HISTORICAL DEVELOPMENT OF DATA SYSTEM

The milestone of early database system software was the common Business Oriented Langauge (COBOL). This application was found to need a number of additions in the control of report writers (a program that provides many facilities for coding, totaling and formatting data and performing other related tasks). In addition to these, there was need for powerful sort utilities or packages. A search for these led to the development of sort packages and report writers which where handy in program report generation.

By the late1960's and early 1970's, there was improvement as high level language file organization emerged to alleviate the mismatch between the increasing, complex multitask into retrieval system. The solutions to the programs of basic access methods on operating system via sequential, direct, indexed- sequential methods were developed. Data dependency become serious as well as increase in the system and the problems of relating records.

As a result of this a file management system evolved. In a file- processing environment, data of the same type are grouped together into a file with each file having it's own application for processing of data. Files and records are designed in such a way as to satisfy individual operational needs, thus imposing

operational barriers with regards to the data. However, in most information systems, it is desirable to have ability to jump over those imposed barriers and access data right across the organization. This led to the introduction of data base environment in data processing.

In database processing environment, data are viewed as a whole irrespective of their type. Furthermore, the integrated data of different types are linked by logical relationships through complex software known as Database management system.

The overall objective for the development of database technology has been to treat data as an organizational resource and as integrated whole system. Database management system allows the data to be protected and organized separately from other resources e.g hardware, software and other programs.

1.3 DATABASE MANAGEMENT SYSTEMS

Database management system (DBMS) is a complex software that constructs, expands and maintains data contained in a database. It also provides the link or inter face between the user and the data in such a way that it enables the user to record, organize, select, summarise, extract, report on and otherwise manage the data contained in a database.

DBMS programs keep information in files, and within each file is collection of related information. The data in a file are organized into rows and columns with

operational barriers with regards to the data. However, in most information systems, it is desirable to have ability to jump over those imposed barriers and access data right across the organization. This led to the introduction of data base environment in data processing.

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DBMS programs keep information in files, and within each file is collection of related information. The data in a file are organized into rows and columns with

each row making up a record. A column of data is known as a field and the column heading is a field name. The content of a field determines the field type. The usual field types are numeric, character, memo, date, and logical etc.

Some of the programs used under the Database management system, are described below:

DBASE III PLUS:- Dbase III PLUS from Ashton- Tate corporation is one of the leading database programs, such as keeping names and address or inventory records. It can also be used to create complex applications such as general ledger, accounts receivable and account payable, payroll and so on.

It also enables you to construct your own database application. A large number of built-in functions are provided, including mathematical functions, string manipulation functions etc.

DBASE IV:- This is an advanced version of dbase that provides a full relational database environment to users. Improvement over dbase IV Plus include a large of memory variables, user definable functions, up to 99 files can be opened at one time. There is also an improved indexing, a large command line buffer, and an improved line editor, improved printer handling capabilities and execution.

CLIPPER:- Clipper is a software development system that provides all the facilities necessary to create complex application program. Clipper was originally design as a compiler for dbase language but has since greatly expanded the basic dbase command set and capabilities. Clipper allows the dbase instructions to

execute much faster since a clipper compiler converts text-base instructions into instructions closer to the machine's languages.

One of the major advantages over dbase is the ability of clipper to generate the executable file to be executed from the DOS prompt.

FoxPro: - FoxPro is a database package developed by Fox software company. It is a database software that offers a host of features and tools for software developers along with the speed and ease that end users demand. Foxpro is a leading package in terms of innovation, power and speed. The handy on-screen calculator, calendar and even an ASCII chart compliment the standard menus. The important feature of FoxPro is it's interface with window applications.

1.4 PROBLEM IDENTIFICATION

The method of keeping personnel record simply involves the filling of form by a new employee. This form which contain provisions for the employee's name, date of birth, next of kin information, and schools attended e.t.c is called staff emolument form. This form and other relevant papers about an employee are then kept in a file jacket. Each personnel in the organization has his own file which is kept in an office called the record room. The problems of this method of personnel's record keeping are as follows:

i. Lack of enough storage facilities such as file cabinets, shelves as well as office space.

ii. The loss of information due to the nature of materials used in making the papers that make them susceptible to wear and tear.

iii. Files are easily misplaced due to carelessness of the record officers.

iv. Great deal of time is taken in the preparation of statistical report and staff audit.

iii. Lack of proper security to the files kept in the record room.

1.5 STATEMENT OF OBJECTIVE

The objective or aim of this work is to develop a soft ware (computer program) on personnel information system that will provide the following to the council's personnel department:

i. Rapid retrieval of personnel's record

ii. Provide an up to date report on each personnel thereby helping in the detection of ghost workers.

iii. Fast and easy preparation of statistical report and personnel audit.

iv. Access to database is controlled by the use of passwords so that only authorized personnel can gain access to the system.

1.6 FEATUTRES AND CAPABILITIES OF THE PROPOSED SYSTEM

The proposed system when developed will have the following features:

(a) On-line data capture through a Network and display screen in addition to standard information about employees such as employee's name, file number etc.

(b) Printed reports on request through terminals will be available. Reports can also be copied into files or disks for later printing.

(c) Updating and output of information from user terminal.

(d) On-line help will be available as the user keys in the data.

(e) Security will be incorporated at the following levels:

i. Pass word security: - All users will have names and passwords that they must always enter correctly before they can have access to the software package.

ii. Data access security: - The system will be equipped with a way of knowing which access to what information, by module and users level.

iii. Update security: - The system will have the capability of restricting the type of update the individual user can make, based on a predefined access definition.

iv. Activity security: - Certain activities can be restricted by the system administrator.

v. To help keep vigil of the security, the system will be equipped with a built-in AUDIT TRIAL. The report will show the descriptions of all task users have performed and when they have performed them.

(f) Effortless data maintenance: - A powerful feature to make it easy to maintain information will be incorporated into the system. These are:

i. Transaction based design:- The system will be event oriented, that is, you simply pick an option or task you want to perform such as `Add Record' and the system guides through the entire process.

ii. Interface between system: - This will be provided both internally and externally.

CHAPTER TWO

2.0 THE IMPACT OF COMPUTERS ON EMPLOYMENT

Historically, technological innovation has benefited workers. The Introduction of automated machines (computers) in organizations, factories, e.t.c., was meant to relieve about 70% of the work force from the back breaking, dawn-to-dusk work that once occupied almost everyone.

Although technology innovation was meant to improve the lot of workers as a whole, it has sometimes spelled disaster for particular groups of workers whose jobs were eliminated due to the introduction of automated machines.

So far, automation has created as many jobs as it has eliminated. If automated equipment eliminated jobs in a factory, new job were created to design, manufacture, sell, install and services the automated equipment.

As late as 1981, a study carried out in the United State of America (U.S.A.) showed no net loss due to automation. Yet it is far from clear how long this situation will continue. As more and more jobs are taken over by machines, a cross over point must be reached at which jobs are been lost faster than they can be created. Even if the net number of jobs remain the same, the nature of the job market is changing in a ways that are already producing social problems. Unskilled workers are usually the first to be replaced by machines, since their jobs are the easiest for the machines to accomplish.

The machines, however, are complex, high-tech devices that require substantial skill to manufacture, install, operate and maintain. The net result is

that there are fewer positions for unskilled workers and more positions for skill workers. The affluent and the educated have little trouble getting jobs, but unemployment is high among the poor and the uneducated. Precisely such unemployment patterns are observed today, and the situation is likely to set steadily worse in the future.

To date, then, involuntary technological unemployment has not been a major public issue. The total number of jobs and the affluent of workers have continued to increase. Workers whose jobs were eliminated have rarely been fired; rather, they were either retained for other jobs or allowed to remain on old jobs until normal attrition and retirement reduced their numbers to the desired levels. Economic forces such as recession and foreign competition have resulted in more workers being discharged than has automation. Yet we cannot be complacent about the future. We cannot turn our back on increasing unemployment among the educationally disadvantaged or in segment of the economy, such as manufacturing. As more and more jobs are taken over by computers, increasing numbers of people will find their education and skills inadequate. An example is the United Bank of Africa, (U.B.A.), that laid off some of there workers sometimes ago because of the inadequacy of their skill amd education.

Hence it is suggested that radical social and economic changes will be needed to counter the treats of automation and to realize its benefits. Following are some measures that may taken to combat the problems of automation, as

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well as some naturally occurring changes that may work to alleviate those problems.

(i) Changes in population make up: one way of looking at unemployment is that there are too many workers for the available jobs. Thus, government would have to advocate an increase in birth control measures as a means of reducing unemployment and achieving other goals. Such an approach would probably not be politically accepted in Nigeria, but if existing trends continue, the make up of the population may of itself change in ways that will lesson the adverse effect of automation. Also, a shift in job preference away from manufacturing and towards service industries (e.g tourism) is likely to reduce the working population in the industries that are likely to automate first. Indeed, some industries will be forced to automate because they lack qualified workers.

(ii) Reducing the workweek: In the mid 19th century the average workweek was 70 hours. Over the years this figure has dropped to its present value of about 40 hours. Further reductions in the workweek would increase the demand for workers and so combat unemployment. If, in addition, workers hourly wages were increased so that there take home pay remained the same (or increased) as the workweek decreased, this would provide a means by which some of the income generated by automated equipment could be passed on to the workers who were displayed.

(iii) Restrictions on Automation: one approach that many may find attractive is to restrict the use of automation machines. Aside from explicit legal restrictions, taxing and regulatory polices might be adjusted to encourage investment in labour-intensive industries. Taxes on automated equipment or union contracts preventing displaced workers from been discharged may also discourage automation by reducing the amount of money that it will save. If carried out world wide, restricting automation might be feasible, although of course he the benefits of automation (greater leisure time, for example) would be thrown out along with its pitfalls. It would be economic suicide, however, for one country to restrict automation while its economic competitors did not, for with lower manufacturing costs the countries that did not restrict automation could sell their product at lower prices than the country that did.

In summary, automation seems to have created at least as many jobs as it has eliminated. The situation is likely to change, however, as automation becomes much more extensive in the future. Also the jobs created by automation usually require much higher skill than the jobs that were eliminated. The average level of skills required by the job market is thus steadily increased, providing extensive unemployment among the unskilled and poorly educated.

Because of the reluctance on the public and government to accept the radical social and economic changes that automation demands, a number of stopgap measures are likely to be proposed for combating unemployment. Though many of these measures may be effective for moderate levels of

automation, non-would seems able to cope with the ultimate situation when all work is automated.

Eventually, ways must be found for distributing the wealth generated by the machines to the people that the automated system replaced.

2.1 PERSONNEL DATABASE SYSTEM AND ITS RELAVANCE

Beyond a simple function within an organization, e.g. personnel planning – the question of installation of computer has to be viewed against the background of the total business environment and the organization's place within it.

Small firms may decide against the purchasing of computer equipment – they would do well, however, to investigate the possibilities offered by business centers – but it is clear that where it can be used in a logical and economical feasible way (in comparison, to continued use or extension of human and/or mechanical methods) it will be adopted. In this government departments, private and public industries are pointing the way.

There is to be seen the increasingly widespread development of, or progress towards computerized personnel information systems as more organizations seek the means of examining their current manpower situation; of examining changes within it; of dealing rapidly and effectively with many factors and process involved. As a company growing in size and its organization increases in complexity the conventional personnel file (perhaps backed up by some sort of machine or card record system) became unwieldy and inadequate. The information it contains if up-to-date and accurate is usually inaccessible and often meaningless, inconsistent and undisciplined.

Very simply, the personnel database system once developed and installed will give immensely improved flexibility and effectiveness through out

the area of personnel administration. The data base system be reorganized as not so much a challenge but as an opportunity to rationalize methods, to make documentation more self consistent, to examine the whole range of activities so that consistent and uniform flow of information may be available for the computer to process.

The development of computerized personnel planning system and it's attendant forecasting process has emphasized the vital need for basic information and for the ability to read it rapidly and accurately across many areas within the total company or organization manpower situation.

The personnel information system has great potentials in the following areas- personnel and skills inventory, personnel auditing, the assembly and calculation of data on wastage and survival, for example.

The relevance of database system to management may be summarized as:

(a) It removes the drudgery, slowness and inaccuracy inevitable in the compilation of statistics by through its ability to produce digested and analysis of data.

(b) It makes possible a considerably increased availability of quantities of data.

CHAPTER THREE

SYSTEN ANALYSIS AND DESIGN

3.0 FEASIBILLITY STUDY

The main aim of carrying out this feasibility studies is to carefully study the manual way of keeping and maintaining the personnel's record in the council. This is with a view to determine weather it should be enhanced or and entirely new system is developed.

The study was conducted with the maximum co-operation of record office of the council.

3.1 FEASIBILITY METHODOLGYT

The following methods were used in carrying out the investigation:

(i) Interview: Asking the record office staff some questions.

(ii) The physical inspection of personnel's file and records.

(iii) Observation: Studying the existing system, to see how records and files are organized and kept. Observation also involve seeing how the system operates in general.

3.2 FEASIBILTY REORT

The feasibility consists of the report on the analysis carried out on the old system and an analysis on the proposed automated system.

3.3 THE EXISTING SYSTEM

The method of keeping personnel record simply involves the filing of a form by an employee. This form which contain provisions for the employee's name, file number, date of birth, next of kin information, qualification etc. Is called staff emolument form.

This form and any other relevant papers on the employee are then dept in a file jacket. Each staff of the council has his/her file, which is kept in the record office.

Before a file is stored away in the record office, it is given a number which is known as the employee file number. Any report to a particular file is made with reference to the file number.

The methods of allotting numbers to the flies is as follows:

The number is allotted serially department by department, for example the file number: RMRDC/AF/s. 03 simply means the personnel with this number is with the department of Administration and Finance and has the serial number (13) in the department.

Similarly, the number RMRDC/ CSD/s. 14 means the employee with this number is in the computer services department.

Any other information about an employee such as query lettered reply to such query and kept in the file

3.4 PROBLEM WITH THE EXISTING SYSTEM

The problems associated with the existing system of keeping personnel records are identified as:

(i) Lack of enough storage facilities like files, shelves, cabinets and office space.

(ii) The file jackets easily wear and tear resulting in the lost of vital records.

(iii) A great deal of time is taken in preparing statistical report.

(iv) There is slow response to inquiring about personnel files.

(v) Human errors are made in the preparation of report either due to carelessness, tiredness, or stress, as there are too many files to work on.

3.5 RECOMMENDED COMPUTERISED SYSTEM

The re commended computerized system is designed so that a casual or a novice user, who has little knowledge of what is excepted of him/her will be able to handle it, the user has only to acquire relatively simple sequence of computer operations since the processing operations are menu driven.

The dialogue type has been adopted in the recommended system:

(i) Menu selection: Menu selection dialogue involves presenting the user with a number of alternatives, (modules), on the screen and allowing him to select one of them the alternatives are displayed as push buttons. An alternative is selected by keying in a code or alphabet for the required alternative or by clicking the desired alternative with a mouse, for

example, to enter a new employee record press 'R' for record update, 'A' for add record then press 'enter' and the screen for registration of new employee appears.

(ii) Record update: In the data input process the user work with a screen based image of a form, this has blanks into which data are entered. This is similar to a paper form. This module takes care of all forms of data that are to be entered.

(iii) Report module: This module keeps abreast of all forms of reports to be generated by this system. It is important that this system contain ready made and up-to date information on all the employees working for the council in a given time.

(iv) Enquiry module: This module allows the user of the system to find information about a particular staff from the database. It enable the administrative staff to find out information with reference to any personnel.

(v) System administrator module: This module is very crucial to this system because it has to do with personnel records and as such need security. This module generates report, which are restricted to the user only. This module consists of the following:

- Initialized tables
- User maintenance
- Add user
- Delete user.

(vi) Help module: This module provides help on how to use the system to the user. It describes all features of the system and their uses. It serves as a user manual.

(vii) Exit module: This module takes the user out of the computerized package entirely.

3.6 WORK STATION FOR THE PROPOSED SYSTEM

(a) A personal computer with the following features is recommended:-

(1) Processor ..... Pentium

(2) Memory expansion ..... Standard

(3) VDU ..... coloured graphics/enhanced graphic adapter

(4) Mass storage option ..... 1.2MB, 5(1/4)/3.5 diskettes drive.

(5) Hard Disk 80MB

(b) Printer ....Dot matrix/lesser jet printer

(c) Scanner ..... scanner

(d) Stabilizer/U.P.S. ..... Stabilizer Va/U.P.S.500VA

(e) Software required: Disk operating system (MS-DOS 6.0) or Windows (windows 95 or 98).

(f) Database management system package: FoxPro (version 2.6)

3.7 COST BENEFIT ANALYSIS OF THE PROPOSED SYSTEM

The cost benefit analysis for the proposed automated system is divided into two sections, which are cost and benefits of the system.

(a) THE COST:- The cost is also divided into development cost and operating cost.

(i) DEVELOPMENT COST	N	K
System analysis cost (2 months; N7500/month)	15,000 :	00
System development cost (6 months; N7500/month)	45,000 :	00
Database management system package	15,000 :	00
Sub total	75,000 :	00

(ii) OPERATING COST OF THE NEW SYSTEM	N	K
Maintenance cost (per annum)	12,000 :	00
Personnel cost (per annum)	9,000 :	00
Sub total	21,000.	00

Total cost of the system is N96,000:00 only.

(B) THE BENEFITS:- The benefits derived from implementing the new system are in three (3) basic categories.

(1) Direct saving:- These are the cost which are reduced or eliminated as a result of the new system. They include the following:-

a. Reduction in clerical personnel

b. Elimination of some specific cost for example the cost of buying files and printing forms. also cost of creating more shelves are eliminated

(2) Measurable benefits:- There is a direct decrease in the money spent by the council since there is reduction in stock level (e.g. files, printed forms, shelves, etc.)

2. Intangible benefits:- This includes the following:-

a. Security:- The security of the system is taken into cognisance such that facilities are provided only for authorized users to have access to the system.

b. Flexibility:- The system is designed to operate in a dynamic environment.

c. Efficiency:- The system is designed to ensure the best use of personnel and equipment and to device the designed output within the most reasonable time.

d. Volume:- The system is designed to handle a large amount of data.

CHAPTER FOUR

SYSTEM DESINGN

4.0 DESIGN CRITERIA

A well-designed system must have the following features:-

(a) **Acceptability:-** It must be accepted by the personnel who is to use the system.

(b) **Decision making ability:-** The output must produce a relevant and timely information for making decision.

(c) **Flexibility:-** The system must be able to adapt to changing environmental conditions by providing for easy expansion and for added output of production capacity.

(d) **Reliability:-** The system must be reliable in terms of consistency of operations.

(e) **Simplicity:-** A good design must be simplified as much as possible for quick understanding of the system.

In the design of the proposed management system the above features were kept in mind.

4.1 DATABASE

The proposed system was developed using ForxPro (version 2.6 for windows) which is a database oriented language. A database is a collection of useful information organized in a specific manner. Access to the files is not

direct by application, but it is provided by a database management system.

A database management system (DBMS) is a set of programs that makes the database contents easily accessible to its three chief users. The programmer, the operating system, and the information user. A ready-made DBMS eliminates the need for an organization to develop it own detail data-handling capabilities. One of the major purpose of the DBMS is to bring about physical data independence. That is, it allows the physical layout of data fieds to be altered without necessitating changes in application programs.

4.2 BENEFITS OF A DATABASE

(i) Any existing database can be accessed sop that records addition, deletion modification, viewing, etc. can be performed on the data.

(ii) Easy retrieval of appropriate data from various files.

(iii) Database software can protect data from access by unauthorized users.

(iv) Elimination of data redundancy that is duplication of the same piece of information in several files which leads to higher storage and access cost.

(v) Elimination inconsistency that is the various copies of the same data not agreeing

4.2.1 DATA FIELD DESCRIPTION

The proposed computerized system uses eight (8) database tables

namely:

(i) PROFILE:- This table contains fields such as file number, name, sex, date of birth, nationality, etc.

FIELD NAME	FIELD TYPE	DESCRIPTION
FILE – NO	CHAR (10)	FILE NUMBER
TITLE	CHAR (5)	TITLE
SURNAME	CHAR (20)	SURNAME
FIRST NAME	CHAR (20)	FIRST NAME
OTHER NAME	CHAR (20)	OTHER NAME
SEX	CHAR (6)	SEX
MARITAL STATUS	CHAR (10)	MARITAL STATUS
BIRTHDATE	DATE	DATE OF BIRTH
BIRTHPLACE	CHAR (15)	PLACE OF BIRTH
INITIALS	CHAR (4)	INITIALS
RESIDENTIAL ADD.	MEMO	RESIDENTIAL ADD. STR., TOWN, STATE
CONTACT ADD	MEMO	CONTACT ADDRESS
NATIONALITY	CHAR (15)	NATIONALITY
STATE	CHAR (15)	STATE OF ORIGIN
L.G.A.	NUM (20)	LOCAL GOVERNMENT AREA
HEIGHT	NUM (1,2)	HEIGHT (in m)
WEIGHT	NUM (2,2)	WEIGHT (in Kg)

D-APPNT	DATE	DATE OF APPOINTMENT
PHOTOGRAPH	GENERAL	PHOTOGRAPH

QUALIFICATION:- This table contain such fields as certificates obtained, schools attended, and date of graduation, etc

QUALIFICATION TABLE:

FIELD NAME	FIELD TYPE	DESCRIPTION
FILE-NO	CHAR(10)	FILE NUMBER
CER-T	CHAR(15)	CERTIFICATE OBTAINED
DISCIPLINE	CHAR(25)	DISCIPLINE
SCHOOL	MEMO	INSTITUTION
Q-DATE	DATE	DATE OF QUALIFICATION
QUAL-ID	CHAR(15)	QUALIFICATION

JOB DETAIL:- This table contain fields such as personnel's department, career cadre, division, salary grade and level etc.

FIELD NAME	FIELD TYPE	DESCRIPTION
FILE – NO	CHAR (10)	FILE NUMBER
DEPT	CHAR(30)	DEPARTMENT

LOCAT-N	CHAR (30)	LOCATION
DIVISION	CHAR (30)	DIVISION
GRADE	CHAR(2)	GRADE LEVEL
STEP	CHAR(2)	SALARY STEP
CAREER	CHAR(20)	CAREER CADRE
STATUS	CHAR (20)	STATUS
SALARY	NUM(6,2)	ANNUAL SALARY
D-APPNT	DATE	DATE OF PRESENT APPOINTMENT
CONFIRMED	DATE	DATE OF CONFIRMATION

NEXT OF KIN:- This table contain fields such as next of kin's name, address, state of origin, sex etc.

NEXT OF KIN TABLE:

FIELD NAME	FIELD TYPE	DESCRIPTION
FILE – NO	CHAR (10)	FILE NUMBER
K-SNAME	CHAR(4)	KIN TITLE
K-SNAME	CHAR(15)	KIN FIRST NAME

K-ONAME	CHAR (15)	KIN OTHER NAME(S)
K-INITIALS	CHAR (3)	KIN INITIALS
K-SEX	CHAR(6)	SEX
K-RESAdd	MEMO	RESIDENTIAL ADDRESS
K-CONT ADD	MEMO	CONTACT ADDRESS
K-STATE	CHAR(10)	STATE OF ORIGIN
K-RELATION	CHAR (15)	RELATIONSHIP
K-ID	CHAR (2)	KIN KEY FIELD

SPOUSE INFORMATION:- This table contain fields with information on personnel's spouse name, name, address, date of marriage, etc.

SPOUSE INFORMATION TABLE:-

FIELD NAME	FIELD TYPE	DESCRIPTION
F-NO	CHAR (10)	FILE NUMBER
S-SNAME	CHAR (15)	SPOUSE SURNAME
S-FNAME	CHAR (15)	SPOUSE FIRST NAME
S-ONAME	CHAR (15)	SPOUSE OTHERNAME
S-MNAME	CHAR (15)	SPOUSE MIDDLE NAME
S-TITLE	CHAR(3)	SPOUSE TITLE
S-DBIRTH	DATE	SPOUSE DATE OF BIRTH
S-PBIRTH	CHAR (20)	SPOUSE PLACE OF BIRTH

S-HTO WN	CHAR (15)	SPOUSE HOME TOWN
S-PADD	MEMO	PERMANENT ADDRESS
S-CONT ADD	MEMO	CONTACT ADDRESS
S-LANG	CHAR (20)	LANGUAGE
S-NATION	CHAR (20)	NATIONALITY
S-DMARRIAGE	DATE	DATE OF MARRIAGE
S-ID	CHAR(3)	KEY FIELD

CHILDREN INFORMATION:- This table contains fields with information on staff children. It contain fields such as child name, sex, date of birth etc.

CHIILD INFORMATION TABLE

FILE NAME	FIELD TYPE	DESCRIPTION
F-NO	CHAR (10)	FILE NUMBER
CH-SNAME	CHAR (15)	SURNAME
CH-FNAME	CHAR (15)	FIRST NAME
CH-DBIRTH	DATE	DATE OF BIRTH
CH-PLABIRTH	CHAR (20)	PLACE OF BIRTH
CH-SEX	CHAR(6)	SEX
CH-ID	CHAR(2)	CHILD KEY FIELD

REFEREE (S) INFORMATION:- This table contains records on personnel's

referee (s). It comprises of the following fields, referee's name, state of origin local government area etc.

FILE NAME	FIELD TYPE	DESCRIPTION
FILE-NO	CHAR (10)	FILE NUMBER
R-TITLE	CHAR (3)	TITLE
R-SNAME	CHAR (15)	SURNAME
R-FNAME	CHAR (15)	FIRSTNAME
R-ONAME	CHAR (15)	OTHER NAME
R-RESADD	MEMO	RESIDENTIAL ADDRESS
R-CONTADD	MEMO	CONTACT ADDRESS
STATE	CHAR (10)	STATE OF ORIGIN
LOCAL GOVT.	CHAR (20)	LOCAL GOVERNMENT AREA
OCCUPATION	CHAR (20)	OCCUPATION
R-ID	CHAR(2)	REFEREE-ID

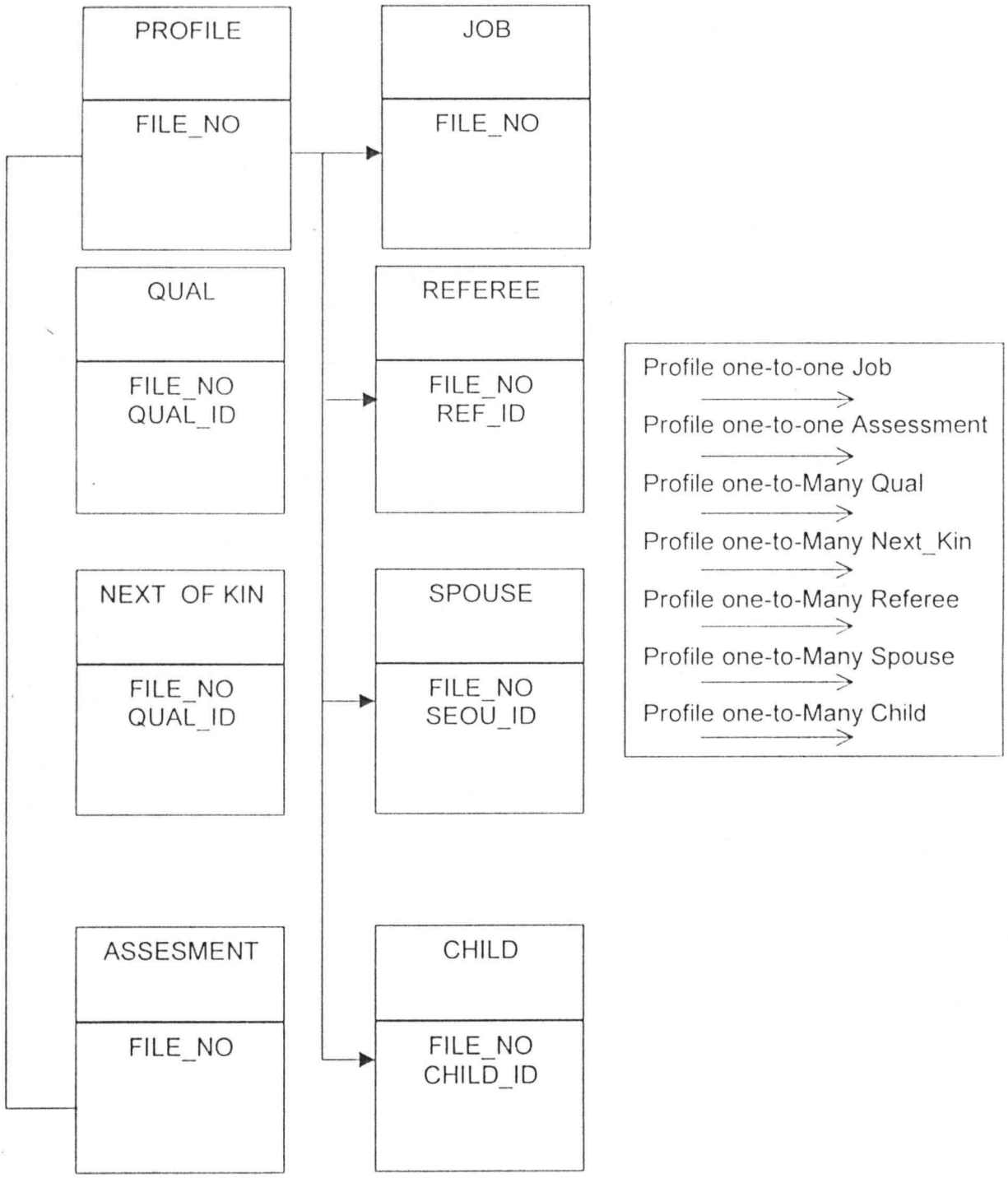
STAFF ASSESSMENT RECORDS:- This table contain fields giving information on staff assessment such as award, query etc.

STAFF ASSESSMENT TABLE

FILE NAME	FIELD TYPE	DESCRIPTION
FILE-NO	CHAR (10)	FILE NUMBER

TYPE	CHAR (15)	TYPE OF RECORD
OFFENCE	MEMO	IF QUERY, DESCRIBE
DATE QUERY	DATE	DATE OF QUERY
AWARD	DATE	IF AWARD, DESCRIBE
DATE AWARD	MEMO	DATE OF AWARD

RELATIONSHIP BETWEEN TABLES



MODULAR PROGRAM OF THE PROPOSED SYSTEM

4.4 OPERATING MANUAL

The programming process is not complete until the program has been written and thoroughly field-tested for substantial period of time. The program is said to be operational when it has been thoroughly tested or completely documented.

As already mentioned, FoxPro (version 2.6) is one of the required software for this system. It is worth nothing that the system can run on visual FoxPro (version 5.0) environment.

This system can be operated either by the use of keyboard (for a computer system that is not windows based) or a mouse (for a windows based system).

FOR WINDOWS BASED COMPUTER:- After the computerized system into the computer with FoxPro 2.6 environment; set the default to the directory or sub directory where the system is installed eg set defa to /foxpro/personnel, then press enter on the keyboard. The system will present a welcoming screen and telling you to press any key to continue. After doing that, the system administrator will come on telling you to key in the password.

If the password is entered you then press O.K. which is situated at the button left of the screen. If the password entered is correct, the main menu screen will come on. If not correct, the system will prompt the user that the password is INCORRECT.

From the main menu screen, the user can pick from a number of alternatives (modules) displayed as push buttons on the screen. For example to enter a new employee record, click RECORD UPDATE then click O.K. this will take you to another menu where you will click ADD RECORD then click OK the screen form of registration form of new employee will come prompting you to key in the relevant data.

FOR DOS BASED COMPUTER:- The method of installation, setting default and keying in the password is the same as with window based computers.
The major difference is that in this case you use keyboard instead of the mouse.

After entering the password, you now move the cursor to the button left of the screen using the key and the arrow keys on the keyboard. When O.K is highlighted then press ENTER. When the main menu screen comes on, you can pick an alternative by simply pressing the button that is underlined (hot keys) on each alternative. For example, to enter a new employee record, press "R" for record update then press enter. The data entry screen will come on. On this screen, you will be presented with a number of choices, press "A" for add record then press enter. The screen form of registration of new employee will come on prompting you to key in the data.

4.5 SYSTEM IMPLEMENTATION

System implementation simply refers to the method of changing from the old system been used to the new computerized system.

There are three types of system implementation; this is:-

Direct change over:- by this method of system implementation, the old system is thrown out and the new system is put on operation. This is probably the cheapest of system implementation, if every thing turns out right. If the system has problem, though, we have no working system to fall back on, the data bank may be filled with erroneous data, which may have done significant harm to the operation the business.

(i) Parallel change over: - with this system, the new system is operated side by side with the old one. We can compare Data, giving us another testing opportunity, if there is a problem, we can continue to operate the old system while we fix the new one. Parallel conversion is safer, but it requires more manpower to handle the data twice.

(ii) Pilot change over:- by this method of conversion, we pick a small section of an organization (or system) and converting it first. Ones it is running smoothly we can move on to other sections of the organization. The recommended method of conversion for this system, computerized personnel management system, is the parallel change over which is safer, though it require more personnel, hence the cost.

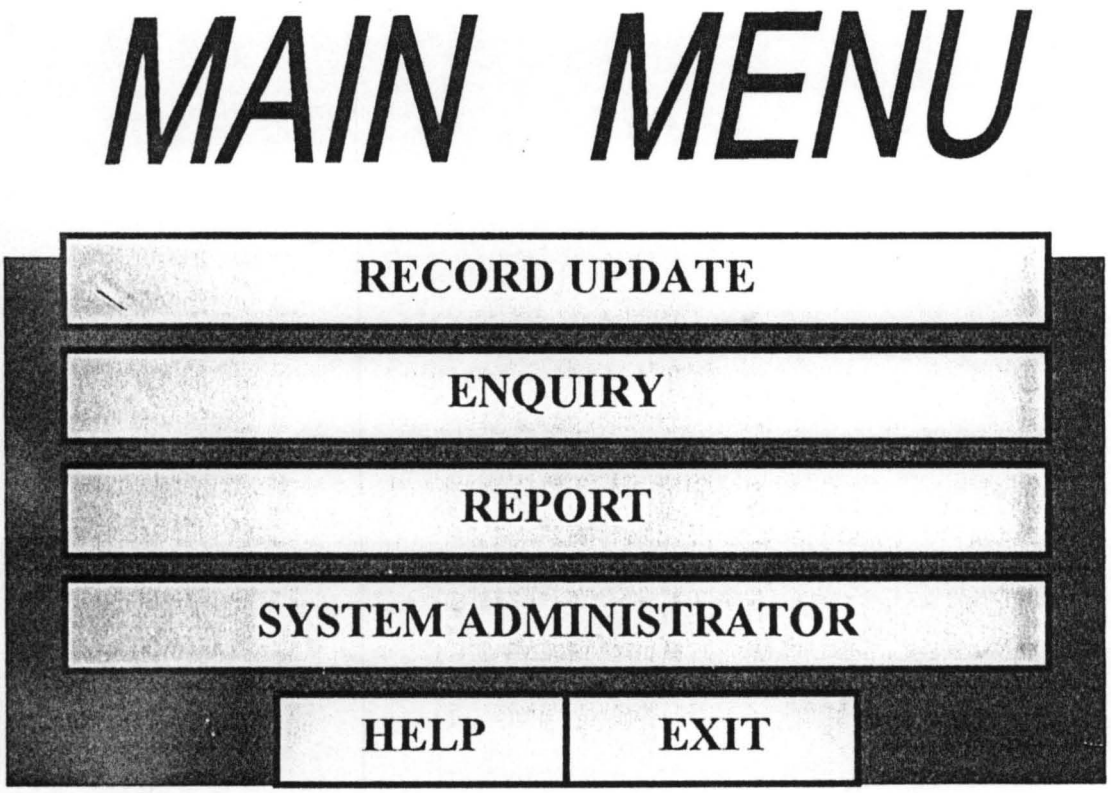
RMRDC PERSONNEL PIS INFORMATION SYSTEM

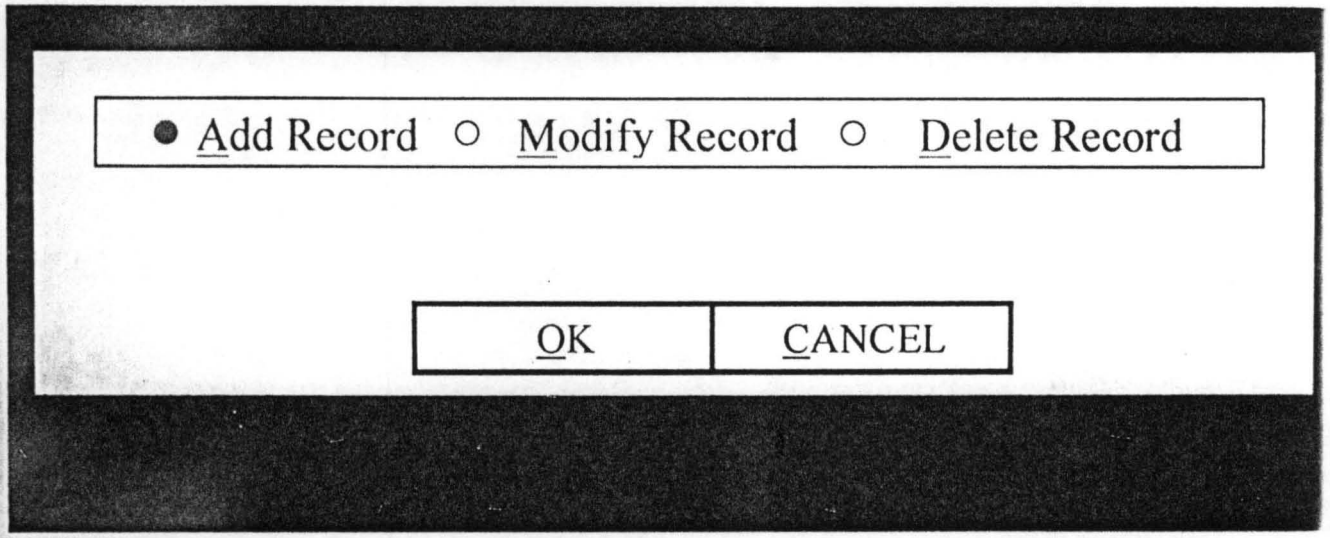
By:

PIS A.O AJIBOWO

FUT MINNA.

Press Any Key To Continue


MAIN MENU
RECORD UPDATE
ENQUIRY
REPORT
SYSTEM ADMINISTRATOR
HELP
EXIT


● Add Record ○ Modify Record ○ Delete Record
OK
CANCEL

CHARPTER FIVE

5.0 SUMMARY, DISCUSSION OF RESULT

This project work is designed with the optimism that it would improve the personnel management system, (M.I.S.), of the Raw Materials Research and Development Council, (R.M.D.C.) and the general management information system.

Each chapter has been carefully and explicitly defined to satisfy its intention.

One of the most important features provided by this program, (P.M.S.), is its ability to get and record each personnel's photograph. Thus the program when implemented would help reduce the problem of ghost workers in the organization.

R.M.R.D.C. deserves the use of computer so as to maximize and enhance human efforts. This program can easily be used to satisfy personnel management system of any organization.

PROPOSAL FOR FUTURE WORK

However, I hereby propose that Raw Materials Research and Development Council, R>M.R.D.C., to improve their personnel procedure by adopting to the management information system (M.I.S.) of this project work and the use of the facilities provided will ease present limitation of the existing system. The use of modular programming and computers like laptops must also be considered important especially to the managers and the specialists so as to obtain information quickly to make or reach important managerial decisions anytime, anywhere.

5.1 CONCLUSION

There are so many myths about computers, people hold rigid and unsubstantial beliefs about its ability and its limitations. Computer should not be seen as a machine that is trying to complete with human ego and attainment, but rather as a machine that has evolve to make human beings job an easy routine.

The program when fully implemented would allow easy access, retrieval, modification and deletion of record in the personnel department of R.M.R.D.C.

One important feature provided by this package is its ability to record each personnel's picture. This will help reduce the problem of ghost workers in the organization. Thus eliminating one problem that is disturbing most government organizations in the country.

It should be noted that this program was designed and developed based on the information gathered from the personnel department of the R.M.R.D.C. alone.

The programming language used, FoxPro (version 2.6), has a well suited Database program structure, user facilities and other enhanced features.

Finally, with computers much can be achieved which otherwise would not have been possible manually. Thus, computerization is the key to effective planning and control of business and other processes.

5.2 RECOMMENDATION

In any modern organization, information processing need to be fast, efficient and error free. To achieve this, computers have to be used and more so a system to do the processing must be developed.

One of the problem militating against the use of computers is the that quit often some people regard computers as a competitor that would take over there job or regard it as the solution to there problems rather than a tool in the acquisition in the high technology that facilitates organisational operations.

I would like to recommend those factors such as human and operational should be improved on so as help the computerization of processes.

An organization like the Raw Materials Research and Development Council need to be computerised by means of the system designed so as to efficiently enhance data execution.

Generally, the project has helped me know and understand what system design and development entails and how to go about nit, not only in the school but also outside the school environment.

I would also like to recommend that system analysis as a course, should continue to be taught in the school and should be introduced in all schools undertaking computer science and it should be made a core course.

REFERENCES

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2. JAMES J.LYNCH: THE ROLE OF COMPUTERS IN MANPOWER PLANNING NCC – BLACKWELL INC., LONDON, (1977).
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4. (1) BASHIR A M: SYSTEM ANALYSIS AND DESIGN LECTURE NOTE FUT, MINNA (UNPUBLISHED).

   (II) NDANUSA A C: DATABASE MANAGEMENT LECTURE NOTE FUT, MINNA (UNPUBLISHED)

4.4 PROGRAMM ALGORITHM FOR THE NEW SYSTEN

```
BEGIN
CLEAR SCREE
ENTER PASSWORD (NOT DISPLAYED)
IF PASSWORD NOT CORRECT
   QUIT
ELSE
    DISPLAY MAIN MENU
    SELECT OPTION
    CASE OPTION = "R"
            EXECUTE RECORD UPDATE MENU
END CASE
CASE OPTION = "E"
            EXECUTE ENQUIRY MENU
END CASE
      CASE OPTION "P"
      EXECUTE REPORT MENU
END CASE
CASE OPTION "H"
      EXECUTE HELP MENU
END CASE
END SELECT
END
DISPLAY RECORD UPDATE MENU
SELECT OPTION
      CASE OPTION = "A"
            EXECUTE RECORD
END CASE
CASE OPTION = "M"
            EXECUTE MODIFY RECORD
END CASE
CASE OPTION  = "D"
            EXECUTE DELETE RECORD
END CASE
END SELECT
```

```
END
DISPLAY ADD RECORD
SELECT OPTION
        CASE OPTION = "P"
                EXECUTE PROFILE SCREEN
        END CASE
        CASE OPTION = "Q"
                EXECUTE QUALIFICATION SCREEN
        END CASE
        CASE OPTION "J"
                EXECUTE JOB DETAIL SCREEN
        END CASE
        CASE OPTION "N"
                EXECUTE NEXT OF KIN
        END CASE
        CASE OPTION = "S"
                EXECUTE SPOUSE SCREEN
        END CASE
        CASE OPTION = "C"
                EXECUTE CHILD SCREEN
        END CASE
        CASE OPTION  = "R"
                EXECUTE REFEREE SCREEN
        END CASE
        CASE OPTION = "T"
                EXECUTE ASSESMENT SCREEN
        END CASE
END SELECT
END
DISPLAY MODIFY MENU
        SELECT OPTION
        CASE OPTION  = "P"
                EXECUTE PROFILE SCREEN
        END CASE
        CASE OPTION "Q"
```

```
            EXECUTE QUALIFICATION SCREEN
        END CASE
        CASE OPTION "J"
            EXECUTE JOB DETAIL SCREEN
        END CASE
        CASE OPTION = "N"
            EXECUTE NEXT OF KIN SCREEN
        END CASE
        CASE OPTION "S"
        EXECUTE SPOUSE SCREEN
        END CASE
        CASE OPTION "C"
            EXECUTE CHILD SCREEN
        END CASE
        CASE OPTION = "R"
            EXECUTE REFEREE SCREEN
        END CASE
        CASE OPTION = "T"
            EXECUTE ASSESSMENT SCREEN
        END CASE
END SELECT
END
DISPLAY DELETE RECORD
SELECT OPTION
        CASE OPTION  = "P"
            EXECUTE PROFILE SCREEN
        END CASE
        CASE OPTION = "Q"
            EXECUTE QUALIFICATION SCREEN
        END CASE
        CASE OPTION = "J"
            EXECUTE JOB DETAIL SCREEN
        END CASE
        CASE OPTION = "N"
            EXECUTE NEXT OF KIN SCREEN
```

```
        END CASE
        CASE OPTION = "S"
              EXECUTE SPOUSE SCREEN
        END CASE
        CASE OPTION = "C"
              EXECUTE CHILD SCREEN
        END CASE
        CASE OPTION = "C"
              EXECUTE CHILD SCREEN
        END CASE
        CASE OPTION "R"
              EXECUTE REFEREE SCREEN
        END CASE
        CASE OPTION "T"
              EXECUTE ASSESSMENT SCREEN
        END CASE
END SELECT
END
DISPLAY ENQUIRYMENU
SELECT OPTION
        CASE OPTION = "L"
              EXECUTE ALL RECORD
        END CASE
        CASE OPTION  = "Q"
              EXECUTE QUALIFICATION
        END CASE
        CASE OPTION = "J"
              EXECUTE JOB DETAIL
        END CASE
        CASE OPTION = "T"
              EXECUTE ASSESSMENT
        END CASE
END SELECT
END
DISPLAY REPORT MENU
SELECT OPTION
        CASE OPTION = "S"
              EXECUTE SCREEN  REPORT
```

```
        END CASE
        CASE OPTION = "P"
                EXECUTE PRINTER REPORT
        END CASE
END SELECT
END
DISPLAY SCREENT REPORT
SELECT OPTION
        CASE OPTION = "L"
                EXECUTE ALL RECORD REPORT
        END CASE
        CASE OPTION = "Q"
                EXECUTE QUALIFICATION SCREEN
        END CASE
        CASE OPTION = "J"
                EXECUTE JOB DETAIL REPORT
        END CASE
        CASE OPTION  = "T"
                EXECUTE ASSESMENT REPORT
        END CASE
END SELECT
END
DISPLAY PRINTER REPORT
SELECT OPTION
        CASE OPTION = "L"
                EXECUTE ALL RECORD REPORT
        END CASE
        CASE OPTION = "Q"
                EXECUTE QUALIFICATION REPORT
        END CASE
        CASE OPTION "J"
                EXECUTE JOB DETAIL REPORT
        END CASE
        CASE OPTION = "T"
                EXECUTE ASSESSMENT REPORT
```

```
        END CASE
END SELECT
END
        DISPLAY HELP MENU
        SELECT OPTION
                CASE OPTION = "W"
                        EXECUTE WHAT THE SYSTEM IS ALL ABOUT
        END CASE
        CASE OPTION = "H"
        EXECUTE HOW TO USE THE SYSTEM
        END CASE
END SELECT
END
```

4.5 PROGRAM CODING

```
* * * PROG. NAME = MAIN PROG * * *
* * * AUTHOR = A O AJIBOWO * * *
* * * FOR COMPUTERRISED PERSONNEL MANAGEMENT SYSTEM * *
            * * * PROCURE MAIN * * *
SET CENTURY ON
SET SYSTEM MENU ON
SET TALK ON
SET DEFA TO/PERSONNEL
PUBLIC     sul,  dan, ac, file-no, xx
Ofile-no ="
Do     screen. Spr

       WATT WIN (press any key to continue)

Do    MENU
PROCEDURE MENU
Tayo = .t.
STORE 0 TO sul
Do while tayo
        Do menu. spr
        DO CASE
```

```
CASE sul = 1
        Do data. Spr
CASE sul = 2
        Do syt-Adm.spr
CASE sul = 3
        Do d-entry. Prg
CASE sul = 4
        Do enquiry. Prg
CASE sul = 5
       Do report. Prg
CASE sul = 6
      Do close
Tayo = .F.
        STORE 0 TO sul
        END CASE
END DO
        RETURN
***** PROCEDURE DATA ENTRY *******
PROCEDURE d-entry
STORE 0 TO ac
Add-rec = 1
Data-on = 1
Clos All
Mod 1 = `NEW RECORD'
DO WHILE data-on
     Do data. Spr
     Do CASE
     CASE ac = 1
     DO CASE
     CASE add-rec = 1
             Do data-ent
     CASE add-rec = 2
             Do modify
      CASE add-rec = 3
             Do delete
```

```
        CASE add-rec = 4
                Do main
        END CASE
Data-on = .f.
END CASE
END DO
RETURN
**** PROC DATA-ENT.PRG ****
PROCEDURE data-ent
        close All
        Publ xx, IDS, BCK, Bhp
        STORE "TO M.FILE-NO
        CLOSE DATA
        STORE "TO NXT-POG
        STIRE TO M.FILE-NO
USE PRO
SCATTER MEM VAR MEMO BLAN
DO GN – REF
**********
DIMENSION FLOW (9)
EXITING = .f.
FLOW (1) = 'Per1. spr
If EXITING = .T.
        DO DATA SPR
ELSE
       DOO WEE
END IF
**********
PROC WEE
FLOW  (2) = 'Per1.spr'
         USE QUAL
FLOW (3) = 'que.spr'
        USE JOB
FLOW (4) = 'dep.spr'
     USE NEXT
```

```
FLOW (5) = 'kin.spr'
        USE SPOUSE
FLOW (6) = 'spouse.spr'
        USE CHILD
FLOW (7) = 'child.spr'
        USE REF
FLOW (8) = 'referee.spr'
        USE DAI
FLOW (9) = 'ASSESS.SPR'
* * * * * * * * * *
ADDING = .F.
SAVING = .F.
RESPONSE = .F.
        DO WHILE
        CASE SAVING = .F.          $$ Reset saving variable
END CASE
CLOS ALL
RETURN
* * * * * * MODIFY.PRG 8* * *
PROC MODIFY
        CLOS DATA
        PUBL XX, IDS
        STORE "TO NXT-PROG
        STORE "TO M.TITLE
        STORE "TO M. O-NAMES
        STORE "TO M. FIL-NO
        IF USED ('pro')
                SELE PRO
        ELSE
                SELE O
                USE PRO
                M.FLE-NO = XX
                SCATTER MEM VAR MEMO BLANK
                XX = M.FILE
                SHOW GETS
```

```
DIMENSION FLOW (10)
FLOW (1) = 'Finder 2. spr'
            Do THE REST
END IF
**********
PROC THE REST
FLOW (2) = 'md-per1.spr'
FLOW (3) = 'mod-per2.spr'
USE QUAL
FLOW (4) = 'mod-qual.spr'
USE JOB
FLOIW (5) = 'mod-job.spr'
USE NEXT
FLOW (6) = 'mod-Kin.spr'
USE SPOUSE
FLOW (7) = 'mod-spou.spr'
USE CHILD
FLOW (8) = 'mod-child.spr'
USE REF
FLOW (9) = 'mod-ref.spr'
USE DAI
FLOW (10) = 'mod-asse.spr'
********
SAVING = .F.
EXTING = .F.
RESPONSE = .F.
PREV-SEC = .F.
LAW = .F.
DO BOOKS
**** PROCEDURES ****
PROC BOOKS
L = 1
DO MORE = .T.
DO WHILE DO MORE
        IF L >10 OR RESPONSE = .T. OR DOMORE .F.
```

```
        ELSE
                NXT-PROG = FLOW (L)
                DO (NXT-PROG)
                DO TEST-PRO $$ Test the value returned for Prev-sec
        END IF
END DO
RETURN
**** PROCEDURES ****
PROC TEST-PRO
IF PREV-SEC = .T.
        L = L – 1
        PREV – SEC = .F.      $$ Reset value
ELSE
        DO WAR
END IF
RETURN
PROC WAR
IF LAW = .T.
        L = 1
        LAW = .F.       Reset value
ELSE
        L = L + 1
END IF
RETURN
*** DELETE  PRG* ***
CLOS DATA
PUBL  bc, xx, ids, ec
STORE "TO M.file-no
STORE "TO nxt-prog
STORE "TO m.title
STORE "TO m.surname
STORE "TO m.o-names
Exiting = .F.
Response = .F.
USE PRO
```

```
SCATTER MEM VAR MEM BLAN
Exiting = .F.
If ! exiting = .T.
        Do wee
ELSE
        Do delete
END IF
* * * PROCEDURES * * * *
PROC wee
* * * *
DIMENSION FLOW (2)
FLOW (1) = 'finder 1.spr'
FLQW (2) = 'del-per.spr'
* * * *
Adding = .F.
Saving = .F.
Exiting = .F.
Response = .F.
        1 = 1
Do more
        DO WHILE do more
        IF L > 2 OR RESPONSE = .T. OR = .T. do more .F.
        ELSE
                nxt-prog = flow (1)
        Do (nxt-prg)
        L = 1 + 1
        END IF
END DO
RETURN
* * * * PROC CLS * * * *
DO CLOS
PRO CLOS
Tolu = .T.
STORE 0 TO Male
DO WHILE Tolu
```

```
        DO CLOS.SPR
        DO CASE
        CASE male  = 1
        Do main
        CASE male = 2
        CLOS DATA
        Cancel program
        Tolu = .F.
STORE 0 TO Male
END CASE
END DO RETURN

SCREEN CLEANUP
CLOS DATA
USE PRO
PUBL xx, ids
Exiting = .F.
Ids = ''
CLOS DATA
SET SAVE OFF
SELE file-no, ALL TRIM (UPPER (file-no) +' '+ALL TRIM (UPPER (s-small) AS
surname;
        FROM PRO;
        INTO TABLE BULL
SET SAVE ON
SELE bull
Rec = ReCOUNT)
DIMENSION fil (rec, 1)
COPY TO ARRAY fil FIELD surname
```

4.6 OPERATING MANUAL

The programming process is not complete until the program has been written and thoroughly field-tested for substantial period of time. The program is said to be operational when it has been thoroughly tested or completely documented.

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If the password is entered you then press O.K. which is situated at the button left of the screen. If the password entered is correct, the main menu screen will come on. If not correct, the system will prompt the user that the password is INCORRECT.

From the main menu screen, the user can pick from a number of alternatives (modules) displayed as push buttons on the screen. For example to enter a new employee record, click RECORD UPDATE then click O.K. this will take you to another menu where you will click ADD RECORD then click OK the screen form of registration form of new employee will come prompting you to key in the relevant data.

FOR DOS BASED COMPUTER:- The method of installation, setting default and keying in the password is the same as with window based computers.
The major difference is that in this case you use keyboard instead of the mouse.

After entering the password, you now move the cursor to the button left of the screen using the key and the arrow keys on the keyboard. When O.K is highlighted then press ENTER. When the main menu screen comes on, you can pick an alternative by simply pressing the button that is underlined (hot keys) on each alternative. For example, to enter a new employee record, press "R" for record update then press enter. The data entry screen will come on. On this screen, you will be presented with a number of choices, press "A" for add record then press enter. The screen form of registration of new employee will come on prompting you to key in the data.

4.7 SYSTEM IMPLEMENTATION

System implementation simply refers to the method of changing from the old system been used to the new computerized system.

There are three types of system implementation; this is:-

Direct change over:- by this method of system implementation, the old system is thrown out and the new system is put on operation. This is probably the cheapest of system implementation, if every thing turns out right. If the system has problem, though, we have no working system to fall back on, the data bank may be filled with erroneous data, which may have done significant harm to the operation the business.

(i) Parallel change over: - with this system, the new system is operated side by side with the old one. We can compare Data, giving us another testing opportunity, if there is a problem, we can continue to operate the old system while we fix the new one. Parallel conversion is safer, but it requires more manpower to handle the data twice.

(ii) Pilot change over:- by this method of conversion, we pick a small section of an organization (or system) and converting it first. Ones it is running smoothly we can move on to other sections of the organization. The recommended method of conversion for this system, computerized personnel management system, is the parallel change over which is safer, though it require more personnel, hence the cost.

5.2 RECOMMENDATION

In any modern organization, information processing need to be fast, efficient and error free. To achieve this, computers have to be used and more so a system to do the processing must be developed.

One of the problem militating against the use of computers is the that quit often some people regard computers as a competitor that would take over there job or regard it as the solution to there problems rather than a tool in the acquisition in the high technology that facilitates orgnisational operations.

I would like to recommend those factors such as human and operational should be improved on so as help the computerization of processes.

An organization like the Raw Materials Research and Development Council need to be computerised by means of the system designed so as to efficiently enhance data execution.

Generally, the project has helped me know and understand what system design and development entails and how to go about nit, not only in the school but also outside the school environment.

I would also like to recommend that system analysis as a course, should continue to be taught in the school and should be introduced in all schools undertaking computer science and it should be made a core course.