COMPUTERISED HOSPITAL PAYROLL SYSTEM

(A CASE STUDY OF CAPITAL HOSPITAL, KATCHA).

BY

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PGD/MCS/118/95/96

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A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS/COMPUTER SCIENCE, FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA.
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE POST-GRADUATE DIPLOMA IN COMPUTER SCIENCE.

MARCH, 1998.

DEDICATION

This project work is solely dedicated to my beloved husband - Dr Jibrin for been there for us always.

Also specially dedicated to my children.

CERTIFICATION

This project work has been read and certified by the undersigned as meeting the requirements of the Department of Mathematics/Computer Science, Federal University of Technology, Minna.

PRINCE R. BADMUS PROJECT SUPERVISOR	DATE
DR K.R. ADEBOYE HEAD OF DEPARTMENT	DATE
EXTERNAL EXAMINER	DATE

ACKNOWLEDGEMENT

To the special glory of the Almighty Allah for making it easy for me despite all odds.

First and foremost, I wish to express my profound gratitude to my project supervisor-Prince R. Badmost for sparing time to read through the work and make necessary corrections. Indeed Sir, your support, guidance, understanding and encouragement from the beginning to the end are highly appreciated.

To the Head of Department, I salute your concern and encouragement to see to the success of the entire work.

To all my lecturers, I salute and thank you for your academic support that make me become a member of the computer society.

I am particularly grateful to my beloved husband-Dr Jibril, for you started it all and gave me the support (morally and financially) to complete the program. There can never been any other person like you to me. I shall ever remain grateful for your love, concern and care. You were always there for me always. May Allah bless you dear.

To my children, what else can a mummy give to her children except to say may the Almighty Allah continues to bless you all for us. To my coursemates, you have all been very wonderful. It has not been too easy, but we all thank God for seeing us through.

To others, you have been very wonderful I say remain blessed in the Almighty Allah.

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CHAPTER ONE

INTRODUCTION

Management has been viewed as activities involving the collection, storing and mobilization of all human and material resources in a particular system.

Organizations depend largely on how the available resources are wisely used. Data management is, therefore, seen as a major task as a significant part of on individual working and personal time is spent searching for, recording, processing and absorbing it as information before any meaningful goal is attained.

Computers are able to assist management to project and analyse the effects of various alternative methods of processing information. When computers are introduced into business information processing, this is referred to OFFICE AUTOMATION. Office automation systems are computer - based to enhance the effectiveness and productivity of people who work in offices. The workers need to learn new office skills and different ways of using new equipment and produred. Some of the skills they need to learn include the preparation of the monthly salaries of workers in all the departments of the organisation and keeping efficient records of the movement of cash and other valuables. Payment of salaries to workers is done throught the payroll system. it involves qerring relevant information from personel and finance department about an employee, processing this information to get the monthly salary payable to each staff and up-dating the records accordingly. Thus, large amount of data are been handled from time to time, new records are been added, some deleted while others are completely updated as the need arises the computerisation of the kapital hospital payroll system has not been fully implemented even though the organisation has computers that can effectively handle this. As a result, preparation of monthly salaries of staff is being done manually.

This is quite a tedious job that requires at lest eight to ten serious minded staff of the Accounting Department to handle. This has to be cross-checked by some two-three senior staff again. Indeed, this is quite monotonous and tire consuming. A lot of calculation are involved and so it is prone to mistakes too.

Problem Defination

The payroll system of the organisation is at present being processed manually. this involves writing our salaries details of each and every staff and carrying out the calculations involved with hands. This is a rather crude and obsolete method of processing of information as relevant as the salaries.

The main concern now is how to devise a method of handling this relevant aspect so that all the draw-backs that are associated with the manual methods are eluminated.

The only way forward is the computerisation of the payroll functions so that at the end of every month when the salaries calculation are been alone, the minimal input of labour and time is expended while the maximum achievable level of accuracy and speed is achieved.

AIMS AND OBJECTIVES OF THE STUDY

The main aims and objective of the study are:-

(1) To determine the problems associated with processing the payroll system manually and how computer can be used to solve this.

(2) To relief staff of tedious routine work.

(3) To prepare timely and accurate returns of payment vouchers.

(4) Provision of efficient and effective payment procedures to the staff members.

(5) To improve quality of centralization of salary.

(6) To eliminate duplicated conflicting and unnecessary names on the payroll.

METHODOLOGY OF STUDY

The approach used here include the followings:-

(a) Interviewing:- This is used mainly to confirm sure information gathered; and also used to obtain suggestions that can be considered relevant to the proposed system.

(b) Record Searching:- Written information such as cards, forms, and reports used in the operation of the system were reviewed and analysed.

(c) Observation:- This method as used to directly study the operations of the existing system.

SCOPE AND LIMITATIONS

The hospital is a big one and an adequate and effective payroll system which is focussed towards the next decade will be adequate for it at this technological age. The following are some of the limitations encountered during the process of working on this project:-

(a) Time:- Inview of the time limit given, it is often difficult to do all the necessary things since it is a very large hospital.

(b) Finance:- funds were scarce, since the author was self-sponsored for the program. One had to pay much to effectively do certain aspects of the project, like typing, binding cost and all in all the cost of developing a working program language for the project.

(c) References:- No Sufficient text or materials on payroll system.

CHAPTER TWO

LITERATURE REVIEW

An Overview

A good deal has ben written on the evaluation of computers and information system. According to A.X. Smith in his work listed four roads to computer profits, these are:-

(a) Incremental benefit

(b) Reduced working capital

(c) Improve use of resource capacity

(d) Improve decision taking

Also Bedford and onsi said that information is traditionally applied and evaluated by the accountant. The accountant is likely to appreciate the uses and benefits of the information generated.

Computers do not operate in a vacuum, but are an integral part of our lives. They are capable of relieving us of boring and routine tasks.

John Deaden has explored the role of computer with great thoroughness and point out that the digital computer is well suited to handing all kinds of problems which requires:-

1. Many interacting variables
2. Reasonably accurate values.
3. Speed
4. Repetition
5. Large number of records to process.

THE FEASIBILITY STUDY

This was carried out to achieve certain relevant objectives which include thus:-

a. To reduce the issue of omission and otherwise of names of entire staff of the organisation.

b. To avoid excessive duplication and manipulation of names of staff.

c. To remove fraudulent practices among the users of the manual system.

d. To all proper reconciliation of accounts books at the end of each end of year closing of books.

e. To have an up to date staff list of the organisation as a means of planning and management decision making.

f. To reduce to the barest minimum level the untimely preparation of payroll at the end of the month.

PROBLEMS WITH THE PRESENT SYSTEM

The current method of data processing and management in the organisation is the traditional manual system of accounting, processing of vouchers, files etc. With this method, many problems are identified in the following areas:-

(a) Large number of Employee.

(b) Staff training (cost of training is high).

(c) prove to many human Errors.

(d) Rather very slow.

(e) Storage in terms of files kept by different departments often create audit problems during checking by the auditors.

MANUAL PREPARATION OF PAYROLL

The requirements for the preparation of payroll manually for an organisation includes:-

- Copy of staff strength
- Payroll form
- Personal Emolument form
- Pay slips form and data for the entries

The staff strength is the total listing of employee whose names are to be included in the payroll of the establishment, the staff are usually listed according to their department. It is usually prepared by the personal department of the organisation and later suit to the accounts department.

The staff strength is updated every month to reflect the current staff that should be included on the payroll

The entries are classified into four groups as follows:-

(a) Earnings:- This includes basic salary, acting allowance, overtime and salary arrears.

(b) Taxation:- This involves the computation of the tax due.

(c) Deductions:- This includes all loans and advances that must have been given to staff. They include motor vehicle advance, Rent/Water, Housing Loan, salary advance, Touring advance and car refurbishing.

(d) Non-taxable payments:- this includes all allowances or payment accured to the employee, such as, leave grant, Housing allowance, transport allowance, Light allowance, Night allowance, meal subsidy, children allowance.

CHAPTER THREE

SYSTEMS ANALYSIS & DESIGN

INTRODUCTION

The detail investigation of the present system or the exploratory survey, commonly referred to as system analysis, involves collecting, organizing and evaluating facts about the present system and the environment in which it operates.

This section considers the logical design of the proposed system which contains the design specification of the system. It focuses on the features of the system in relations to the output specification, input specification, files and procedures.

The importance of doing a thorough exploratory survey cannot be over emphasized. It is extremely assential for the future well - being of the organisation that this time - consuming must be done accurately and methodically.

TESTING THE PROJECT FEASIBILITY

Testing or a review of the methods and procedure of the present project feasibility is necessary. The purpose of such a test is to verify that the outline benefit are, infact, being achieved.

(1) *Operational feasibility*:- This is concern with the workability of the proposed system. When developed and installed, generally what is considered is that, the project has to receive the support of the management and user.

(2) *Technical feasibility*:- This sacks to clarify of the proposed project can be done with the current equipment, existing software and personal.

(3) *Financial/Economical Feasibility*:- This aspect is taken into consideration to access cost of implementing a proposed project along side with the benefit to be derived from implementing it.

REQUIREMENT SPECIFICATION FOR THE PROPOSED NEW SYSTEM

Requirement for the proposed new system is a feature that must be included in a new system. The requirement determination entails studying the existing system and

collecting detailed information about the system so as to found out what their requirements are.

Requirements determination consist of three activities which must be adhered to:-

(1) *Requirement Anticipation*:- these are problems or features that the analysis wished the new system to have as a result of the analysts previous experience.

(2) *Requirement Investigation*:- This activity used variety of tools and skills to study current system and document its features for future analysis.

(3) *Requirement specification*:- This activity leads to a description of features for a new stystem based on the analysis of data produced druing the fact- finding investigation.

In line with this, Requirement specification should be thoroughly done, for the quality of the work performed at this point would reflect later in the characteristic of the new system evolved.

SYSTEM DESIGN

Design is the processe whereby the systems analyst applies his judement, skills and knowledge to interpret the requirements specification that provides detailed documentation of the new system.

For effective design to be accomplished, certain and relevant basic factors must be considered:-

(1) Production of required information at the right time, and amount with an acceptable level of accuracy.

(2) The need to minimize cost and time spent on data preparation.

(3) Effective safeguards for prevention of frauds and malpractice.

(4) Effective design of documents and reports.

(5) Effective security measures to avoid loss of data stored in files.

COST AND BENEFIT ANALYSIS OF THE NEW SYSTEM

(1) **DEVELOPMENT COST**

4 pc (486 Dx, 266/MH2 Processor	650,000.00
102 U.R. Keyboard	50,000.00
Laser Jet Printer (6L)	50,000.00
UPS (1000 KV)	60,000.00
Miscellaneuths Expenses	20,000.00
	₦830,000.00

(2) **SOFTWARE REQUIREMENT**

Word Processing (6 - 1 version)	25,000.00
D Base Program	15,000.00
Spread Sheet	10,000.00
Window '98	5,000.00
	55,000.00

OPERATION COST

Systems Analysis & Design for 3 wks at 8,000/wks	24,000.00
Installation	15,000.00
Training & Development	21,000.00
Utilities	20,000.00
2 A/c ($2^1/_2$ HP)	100,000.00
Stationeries	50,000.00
Miscellaneous expenses	30,000.00
	260,000.00
GRAND TOTAL	**₦1,145,000.00**

SYSTEM BENEFITS

(1) Creater reduction in the use of paper (stationary)

(2) Sorting and arranging of information in various ways can be done easily and quickly.

(3) Automatic updating of records and maintenance.

(4) Elimination of many repetitive work of salary preparation.

(5) Reduction in printing of Bin cards, ledgers and Kalama 220 bunder.

CHAPTER FOUR

SOFTWARE/PROGRAM DEVELOPMENT

INTRODUCTION:-

This is the stage of program development and implementation when the conceptional requirement of the new system and the overall objectives are to be transformed into physical reality. This stage is very important because it is the most crucial stage in achieving a successful new system.

CHOICE OF LANGUAGE

The programming language used for this project is Dbase IV.

Dbase IV is a database management system, a powerful tool for managing data, this means that vast amount of information can be stored, related, manipulated and retrieved with speed and speed and efficiency.

FEATURES OF LANGUAGE CHOSEN

(1) It provides a fuel relational database environment to users.

(2) Data can be verified automatically as they are entered into fied up to 255 fields can be specified per record.

(3) Pop-up menus and windows can be designed.

(4) It has a larger number of memory variables, user-defined functions up to 99 files can be opened at a time.

(1) HARDWARE REQUIREMENTS

The proposed system requires the followings:-

(a) Personal computer 836 main processor.

(b) Ram 16MB

(c) Floppy Disk Drive - 3.5/5-25

(d) Color Monitor

(e) Laser Jet Printer (Al Lease 5L or 6L)

(f) Stabilizer 500 VA

(g) UPS 200 VA

(2) **SOFTWARE REQUIREMENT**

(a) MS -DOS 6. 0/6.1 version

(b) WINDOW 95/97 VERSION

(c) TEXT EDITOR (MS - DOS)

(d) DEBASE IV /FOX PRO/ CLIPPER.

STAFF TRAINING

The amount and period of training for this system will depend upon its complexity and the available skill on the ground presently.

The proposed system will be user - friendly. However, it is necessary to have an in - house training for the various personnel in the organisation.

The training will cover areas like basic computing and operation guidelines for the accounts staff in general. This training should not exceed four weeks of rigorous practicals in the usage of the designed packages.

SYSTEM TESTING

System testing is a vital stage in program implementation. This involves the use of test data on the new system in order to ensure that system works accurately and efficiently before live operation commences.

System testing serves as a confirmation that all is quite okay and correct as well as an opportunity to show the users that the system works as required.

SYSTEM CONVERSION

The following approaches could be used during conversion:-

(1) *Parallel Approach*:- This is a method whereby the old method is operated

simultaneously for sometime with the new system to make sure that the new system meets the requirements that the old system has been meeting oil along and to determine whether the new system will be able to stand the test of time.

(2) *Direct Method*:- This is a method where the old system is discontinued and the new system becomes operational immediately.

(3) *Piecemeal Approach*:- This is a method whereby changing to a new system is done gradually until the desired result is installed in other parts of the organisation gradually.

Based on the above approaches, the parallel method was recommended.

THE MAIN MENU

The main menu in the new system is made up of six options VIZ:- VIEW record, Add record, update record, Delete record, Report generation and Quick.

At this main menu, system will prompt the user to enter the first letter of any of the available option to pick a choice.

STARTING THE SYSTEM

To operate the system written in Debase IV, it could be accessed as follows:-

1. Type Debase at the prompt to display the control center.
2. Press ESC Key to take you to the Dos prompt .
3. At the Dos prompt type:-

CD/Debase IV press ENTER, this is to change the directory to the CD/D base IV directory, when the following message appears:-

C:/Debase IV

Then type

DO PAYROLL ENTER

A screen then appears with messages on how to process the PAYROLL

1. **VIEWING STAFF RECORD**

This allows the user to see an existing record and it is done by first entering the staff number of the employee.

2. **ADDING STAFF RECORD**

This submenu will afford the user an opportunity to add new payroll data into the system.

3. **UPDATE:-** The update menu is used to update all the reference files used in the system. Once this menu is selected, updating is carried out by the user.

4. **REPORT GENERATION:-**This option offers an opportunity to the users to print out any of the reports that is to be generated by this system. Once this option is chosen, the required report required can be generated either on an individual or the entire staff strengthen.

5. **EXIT/QUIT**

Once this option is chosen the user is taken back to the main menu. With that the whole work is done and the user is taken back to Dos prompt.

OUTPUT SPECIFICATION

Output refers to the results and information that are generated by the system. The output from a computer system are required primarily to communicate the results of processing to users or other system

The output will generated the following reports:- pay ship advice, payroll total, deduction list, staff list, annual/mouthily returns of PAYE.

INPUT SPECIFICATION

The followings are the main input specification for the system:

a. The Employees personal Records.

b. Allowances tables.

c. Tax deduction tables.

d. Advance/Loans files.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

Computerization in any organisation is carried out with the hope of eliminating or reducing to certain minimum level the use of manual method in carrying out its activities. It is also done with the sole aim of improving the speed, accuracy and efficiency in collection, manipulation, storage, reporting and dissemination of data.

Indeed, with automation, reports can be generated in good time, thus enabling the organisation to take quick and effective decisions over her financial obligations.

RECOMMENDATIONS

Systems are bound to face changes, as technology, economy, and society change, therefore, the new system should be modified form time to time. The following are been recommended:-

1. The hardware requirements for this new system should be provided immediately.
2. The users/operators of this system needs to be trained for about 4 weeks on the proper usage, maintenance ethics of the system .
3. The organisation should endeavor to see that all activities connected with funds and accounting are fully computerized to ensure proper accountability.
4. One staff should be made to be uncharged of salary.

REFERENCES

1. ANDERSON R.G.(1990): Principles and Practice of data processing (Vol.I)
2. AYO. C.K. (1994): Computer literacy, Operations and Appreciation Alanukitan commercial press LTD, Egte.
3. Badamosi. R. (1997): System Analysis and design. (Unpublished) Federal University of Technology, Minna.
4. ELLIASION, A.L. (1979): BUSINESS COMPUTER AND APPLICATION . SCIENCE RESEARCH ASSOCIATION, CHICAGO.
5. FAPOHUNDA. A (1995): Understanding and using Microcomputers AFLOW press Ltd , Benin city
6. Kola R.A. (1997): Data base management system (Unpolished) F.U.T MINNA
7. LUCCY .T. (1981): Cost and Management Accounting. Hutchinson Publishing London.

COMPUTE.PRG

```
SET STAT OFF
SET BELL OFF
SET HEADING OFF
SET TALK OFF
@ 0,0 TO 24,79 DOUBLE
@ 2,20 TO 5,50 DOUBLE
@ 3,30 SAY "COMPUTATIONS"
*SET COLO TO W+/BG,W+/B+
MEMPNUM = SPACE(10)
MEMPNAM = SPACE(15)
MDAT = CTOD("  /  /  ")
MHRS = 0
MTYPOVAT = SPACE(1)
MRAT = 0
MEMOL1 = 0
MEMOL2 = 0
MEMOL3 = 0
MEMOL4 = 0
MALLOW = 0
MBONU = 0
MFIXEMO = 0
MTAX = 0
MOVAT =0
MVAREMOL = 0
MGROS = 0
MNET = 0
MASSINC = 0
MNPF = 0
MCPF = 0
MTAXINC = 0
MUNIDUE = 0
MTOTDED = 0
USE TRANFILE
DO WHILE .T.
    @ 5,63 SAY "DATE:" GET MDAT
    @ 7,2 SAY "EMPLOYEE NUMBER:" GET MEMPNUM
    @ 7,40 SAY "FIXED EMOLUMENTS"
    @ 8,40 SAY "----------------"
    @ 9,2 SAY "EMPLOYEE NAME:" GET MEMPNAM
    @ 9,40 SAY "BASIC SALARY:" GET MEMOL1 PICT "99,999.99"
    @ 10,2 SAY "VARIABLE EMOLUMENT"
    @ 10,40 SAY "HOUSING ALLOWANCE:" GET MEMOL2 PICT "99,999.99"
    *@ 11,3 SAY "---------------------"
    @ 12,2 SAY "HOURS WORKED:" GET MHRS PICT "999"
    @ 12,40 SAY "TRANSPORT ALLOWANCE:" GET MEMOL3 PICT "99,999.99"
    @ 13,2 SAY "BONUS:" GET MBONU PICT "99,999.99"
    @ 13,40 SAY "LUNCH ALLOWANCEE:" GET MEMOL4 PICT "99,999.99"
    @ 14,2 SAY "OVERTIME       :"
    @ 14,40 SAY "TOTAL EMOLUMENT:"
    @ 15,2 SAY "VARIABLE EMOLUMENT:"
    @ 15,40 SAY "LEAVE ALLOWANCE:" GET MALLOW PICT "99,999.99"
    @ 16,2 SAY "ENTER RATE:" GET MRAT PICT "99,999.99"
```

```
    @ 16,40 SAY "PAYEE TAX:"
    @  18,2  SAY  "TYPE  OF  OVERTIME(Normal/Weekend/Pubic):"  GET
MTYPOVAT PICT "@!"
    @ 19,2 SAY "GROSS:"
    @ 19,40 SAY "NET PAY:"
    READ
    @ 20,4 CLEAR TO 23,74
    @ 20,4 TO 23,74 DOUBLE
    ANS=SPACE(1)
    @ 21,20 SAY "ARE ENTRIES CORRECT?(Y/N)" GET ANS
    READ
    IF ANS $ "nN"
       @ 20,4 CLEAR TO 23,74
       LOOP
    ELSE
    IF ANS $ "yY"
       MFIXEMO = MEMOL1+MEMOL2+MEMOL3+MEMOL4

     IF MTYPOVAT $ "nN"
       MOVAT = MHRS*MRAT
     ELSE
     IF MTYPOVAT $ "wW"
       MOVAT = MHRS*MRAT*1.5
     ELSE
     IF MTYPOVAT $ "pP"
       MOVAT = MHRS*MRAT*2
     ELSE
      LOOP
  ENDIF
  ENDIF
  ENDIF
   MNPF = 0.4*MEMOL1
   MUNIDUE = 0.2*MEMOL1
   MCPF = 0.5*MEMOL1
   MTOTDED = MTAX+MNPF+MUNIDUE+MCPF
   MGROS = MFIXEMO+MOVAT+MBONU
   MASSINC = MGROS-(MNPF+MCPF)
   MTAXINC = MASSINC-MTAX
   MVAREMOL = MOVAT + MALLOW
   *DO PAYTAX
  DO CASE
   CASE MGROS <=0
      MTAX = MGROS * 0.05
   CASE MGROS <2000
      MTAX = MGROS * 0.1
   CASE MGROS >=2000
      MTAX = 2000 * 0.1 + (MGROS - 2000) * 0.1
   CASE MGROS <=4000
      MTAX = 2000 * 0.1 + (MGROS - 2000) * 0.15
   CASE MGROS <=6000
      MTAX = 2000 * 0.1 + 2000 * 0.15 + (MGROS - 4000) * 0.2
   CASE MGROS <=8000
      MTAX = 2000 * 0.1 + 2000 * 0.15 + 2000 * 0.2 +(MGROS - 6000)
* 0.25
```

```
   CASE MGROS <=10000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ (MGROS - 8000) * 0.30
   CASE MGROS <=12000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ 2000 * 0.3 + (MGROS - 10000) * 0.35
   CASE MGROS <=14000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ 2000 * 0.5 + 2000 * 0.35 + (MGROS - 12000) * 0.4
   CASE MGROS <=16000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ 2000 * 0.3 + 2000 * 0.35 + 2000 * 0.4 + (MGROS - 14000) * 0.45
   CASE MGROS <=18000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ 2000 * 0.3 + 2000 * 0.35 + 2000 * 0.4 + 2000 * 0.45 + (MGROS -
16000) * 0.5
   CASE MGROS >=20000
      MTAX = 2000 * 0.10 + 2000 * 0.15 + 2000 * 0.2 + 2000 * 0.25
+ 2000 * 0.3 + 2000 * 0.35 + 2000 * 0.4 + 2000 * 0.45 + 2000 * 0.5
+ (MGROS - 1800) * 0.55
   *OTHERWISE
       *LOOP
   ENDCASE
   MNET = MFIXEMO+MVAREMOL+MGROS-MTOTDED
      @ 14,56 SAY MFIXEMO
      @ 16,55 SAY MTAX
      @ 14,20 SAY MOVAT
      @ 15,20 SAY MVAREMOL
      @ 19,20 SAY MGROS
      @ 19,55 SAY MNET
     ENDIF
     ENDIF
     DO REPLACE
     RETURN
ENDDO

PROCEDURE REPLACE
   SET CONS OFF
   @ 20,4 CLEAR TO 23,74
   STORE SPACE(1) TO ANS1
   @ 21,10 SAY "SAVE RECORD NOW?(Y/N):" GET ANS1
   READ
   SET CONS ON
   IF ANS1 = "Y"
    LOCATE FOR EMPNUM = MEMPNUM
    IF .NOT. FOUND()
      APPEND BLANK
      REPL EMPNUM WITH MEMPNUM
      REPL EMPNAM WITH MEMPNAM
      REPL DAT WITH MDAT
      REPL HRS WITH MHRS
      REPL TYPOVAT WITH MTYPOVAT
      REPL RAT WITH MRAT
      REPL EMOL1 WITH MEMOL1
```

MASTER.PRG

```
SET TALK OFF
SET CONSOLE OFF
SET BELL OFF
SET STATUS OFF
STORE SPACE(10) TO MEMPNUM,MNAME
STORE SPACE(4) TO MINIT
STORE SPACE(1) TO MSEX,MMARITSTA,MEMPCAT,MPAYMODE
STORE SPACE(10) TO MNPFNUM
STORE SPACE(8) TO MBANKACC
MDATEMPL = CTOD("  /  /  ")
STORE SPACE(15) TO MPOST
STORE SPACE(15) TO MQUALIF
USE MASTFILE
   CLEAR
SET COLO TO GR
@ 2,2 to 22,75 doub
@ 4,3 TO 4,74
SET COLOR TO BG
@ 3,3 SAY REPL(CHR(219),72)
I = 5
 DO WHILE I < 22
   SET COLOR TO B
   @I,3 SAY REPL(CHR(219),72)
   I = I + 1
   LOOP
 ENDDO
SET COLOR TO W

DO WHILE .T.
SET COLOR TO G/B
@ 3,30 SAY "MASTER FILE"
SET COLOR TO GB/RB
@ 7,6  SAY "EMPLOYEE NUMBER" get mempnum
@ 9,6 SAY "EMPLOYEE NAME" get mname
@ 11,6 SAY "EMPLOYEE INITIAL" get minit
@ 13,6 SAY "SEX" get msex
@ 15,6 SAY "POST HELD" get mpost
@ 17,6 SAY "DATE EMPLOYED" get mdatempl
@ 7,40 SAY "QUALIFICATION" get mqualif
@ 9,40 SAY "MARITAL STATUS" get mmaritsta
@ 11,40 SAY "NPF NUMBER" get mnpfnum
@ 13,40 SAY "EMPLOYEE CATEGORY" get mempcat
@ 15,40 SAY "BANK ACCOUNT" get mbankacc
@ 17,40 SAY "PAY MODE" get mpaymode
read
ANS1 = " "
    @ 19,25 SAY "ARE THE ENTRIES CORRECT(Y/N):" GET ANS1
    READ
    IF UPPER(ANS1) = "Y"
       REPL EMPNUM WITH mempnum
       REPL NAME WITH mname
       REPL INIT WITH minit
```

```
 DO WHILE I < 22
   SET COLOR TO B
   @I,3 SAY REPL(CHR(219),72)
   I = I + 1
   LOOP
 ENDDO
SET COLOR TO W

DO WHILE .T.
SET COLOR TO G/B
@ 3,30 SAY "MASTER FILE"
SET COLOR TO GB/RB
@ 7,6  SAY "EMPLOYEE NUMBER" get mempnum
@ 9,6 SAY "EMPLOYEE NAME" get mname
@ 11,6 SAY "EMPLOYEE INITIAL" get minit
@ 13,6 SAY "SEX" get msex
@ 15,6 SAY "POST HELD" get mpost
@ 17,6 SAY "DATE EMPLOYED" get mdatempl
@ 7,40 SAY "QUALIFICATION" get mqualif
@ 9,40 SAY "MARITAL STATUS" get mmaritsta
@ 11,40 SAY "NPF NUMBER" get mnpfnum
@ 13,40 SAY "EMPLOYEE CATEGORY" get mempcat
@ 15,40 SAY "BANK ACCOUNT" get mbankacc
@ 17,40 SAY "PAY MODE" get mpaymode
read
ANS1 = " "
    @ 19,25 SAY "ARE THE ENTRIES CORRECT(Y/N):" GET ANS1
    READ
    IF UPPER(ANS1) = "Y"
       USE MASTFILE
       APPEND BLANK
       REPL EMPNUM WITH mempnum
       REPL NAME WITH mname
       REPL INIT WITH minit
       REPL SEX WITH msex
       REPL POST WITH mpost
       REPL DATEMPL WITH mdatempl
       REPL QUALIF WITH mqualif
       REPL MARITSTA WITH mmaritsta
       REPL NPFNUM WITH mnpfnum
       REPL EMPCAT WITH mempcat
       REPL BANKACC WITH mbankacc
       REPL PAYMODE WITH mpaymode
    ENDIF
      ans = " "
      @ 19,25 CLEAR TO 19,60
      @ 19,25 SAY "MORE RECORDS (Y/N)" GET ANS
      SET COLOR TO W
      READ
      IF ANS = "Y"
         LOOP
      APPEND BLANK
      ELSE
         EXIT
```

```
      ENDIF
ENDDO
USE MASTFILE
SET STAT ON
SET TALK ON
SET BELL ON
@7,1 clear to 22,79
deactivate menu
return

**************** EDIT PROCEDURE ********************
PROCEDURE MAST_EDIT
@7,1 clear to 22,79
store space(10) to mempnum
@7,6 say "Enter employee number:" get mempnum
read
USE mastfile
locate for empnum=mempnum
if .not. found()
  store ' ' to que
  @22,20 say "Record not found!..Press a key to go on..." get que
  read
  return
endif

MEMPNUM=empnum
MNAME=name
MINIT=init
MSEX=sex
MMARITSTA=maritsta
MEMPCAT=empcat
MPAYMODE=paymode
MNPFNUM=npfnum
MBANKACC=bankacc
MDATEMPL=datempl
MPOST=post
MQUALIF=qualif
@ 7,6  SAY "EMPLOYEE NUMBER" get mempnum
@ 9,6 SAY "EMPLOYEE NAME" get mname
@ 11,6 SAY "EMPLOYEE INITIAL" get minit
@ 13,6 SAY "SEX" get msex
@ 15,6 SAY "POST HELD" get mpost
@ 17,6 SAY "DATE EMPLOYED" get mdatempl
@ 7,40 SAY "QUALIFICATION" get mqualif
@ 9,40 SAY "MARITAL STATUS" get mmaritsta
@ 11,40 SAY "NPF NUMBER" get mnpfnum
@ 13,40 SAY "EMPLOYEE CATEGORY" get mempcat
@ 15,40 SAY "BANK ACCOUNT" get mbankacc
@ 17,40 SAY "PAY MODE" get mpaymode
ead
NS1 = " "
   @ 19,25 SAY "SAVE CHANGES TO FILE?(Y/N):" GET ANS1
   READ
   IF UPPER(ANS1) = "Y"
```

```
      USE MASTFILE
      REPL EMPNUM WITH mempnum
      REPL NAME WITH mname
      REPL INIT WITH minit
      REPL SEX WITH msex
      REPL POST WITH mpost
      REPL DATEMPL WITH mdatempl
      REPL QUALIF WITH mqualif
      REPL MARITSTA WITH mmaritsta
      REPL NPFNUM WITH mnpfnum
      REPL EMPCAT WITH mempcat
      REPL BANKACC WITH mbankacc
      REPL PAYMODE WITH mpaymode
    ENDIF
  @ 7,1 clear to 22,77
  deactivate menu
  return


**************** DELETE PROCEDURE ********************
PROCEDURE MAST_DEL

@7,1 clear to 22,79
store space(10) to mempnum
@7,6 say "Enter employee number:" get mempnum
read
USE mastfile
locate for empnum=mempnum
if .not. found()
  store ' ' to que
  @22,20 say "Record not found!..Press a key to go on..." get que
  read
  return
endif

MEMPNUM=empnum
MNAME=name
MINIT=init
MSEX=sex
MMARITSTA=maritsta
MEMPCAT=empcat
MPAYMODE=paymode
MNPFNUM=npfnum
MBANKACC=bankacc
MDATEMPL=datempl
MPOST=post
MQUALIF=qualif
@ 7,6  SAY "EMPLOYEE NUMBER"
@ 7,25 SAY mempnum
@ 9,6 SAY "EMPLOYEE NAME"
@ 9,25 SAY mname
@ 11,6 SAY "EMPLOYEE INITIAL"
@ 11,25 SAY minit
@ 13,6 SAY "SEX"
```