COMPUTERIZED ADMISSION SYSTEM FOR NIGERIAN POLYTECHNICS: (Case Study of The Federal Polytechnic, Bida)

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CERTIFICATION

I certified that this research work carried out by **IKUGHUR ATSUA JONATHAN** of the department of Mathematics and computer science, school of Post-Graduate Studies, Federal University of Technology, Minna under my Supervisor.

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DEDICATION

his piece of work is dedicated to my family and all the **dende's** Descendants.

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The Lord will reward all your labour of love.

ABSTRACTS

his project is a careful study of the present Admission
ystem in the Federal Polytechnic, Bida.
addition to improving the existing system, it attempts to
sign a new Admission Processing System whereby substantial
d sensitive parts of the exercise will be done with the use
Computer.
e Admission program is developed as a complete package made
of six main routines namely, **Data entry, Modification,**
letion, Viewing, Report Generation and Processing Routines.
e program Algorithm is the Flowchart and the program codes
e written in dBaseIV Language.
nally, the output (results) of the program is presented and
scussed in here.

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CHAPTER ONE

INTRODUCTION TO ADMISSION PROCESSING

1 BACKGROUND OF THE STUDY

Admission into higher institutions in Nigeria in the recent times has become competitive. Competitive in the sense that it is surrounded with several cases. Ikughur (1995) identified these cases to include:

a. There are many applicants seeking to secure Admission for higher studies in several disciplines. Record shows that the number of applicants and hence, enrolment has been increasing with time. (See Appendix A)
b. The number of colleges are few, with limited capacity. Besides, even if the present capacity were to be exceeded by a significant proportion, the demand would yet be unfilled.

What is important is perhaps, not the number of applicants but those who, in the pursuit, would be able to withstand challenges posed by academics and would thereafter, pursue the ideal protection of their Nation in all ramifications.

To be eligible for admission depends on National policy toward education in particular and the policy of the school in particular. For instance, in order to keep a society of men and women that are literate, the Federal Government have in the past evolve policies that were geared toward Mass Education. We had the Universal Primary Education (UPE). Many post-primary and tertiary institutions were established.

Harold (1978) stated that "for some Schools or institutions, all applicants are considered for admission. Some other schools consider applicants who have sat and passed an entrance examination while some others would require some great deal of paper work where a formal application form stating details of personal history, interests educational achievements, plans etc"

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Almost all the Polytechnic in Nigeria are owned by the various Governments (State or Federal) and their operations are regulated by the National Board For Technical Education (NBTE). These polytechnic run program leading to the award of National Diploma (ND), and Higher National Diploma (HND) and Certificate Courses (Intermediate and Advanced).

Admission into National Diploma Program is exercised by the Joint Admissions and Matriculation Board. Here, applicants sit for qualifying examination (Polytechnic and Colleges Of Education Matriculation Examination) and applicants who have passed the examination with the required points (Cut-off points) are selected for offer of admission.

For the Higher National Diploma Program, no such entrance examination is conducted. rather, the applicant completes a formal form. To be eligible here requires that the applicant satisfies the pre-requisites and once such applicant is not qualified, is eliminated from the exercise.

In the recent past, it was easy to process admission. However, with the increasing complexities owing to the cases enumerated above and several other problems associated with the conventional method of data processing, there is the need to develop a system that shall meet up with the challenges of the time, that is a better way of processing admission.

One way of coping up with the situation is by Automating the system whereby computers are used to partially or fully process Admission.

The Federal Polytechnic, Bida is one of the higher institution in Nigeria today that has grown significantly; in size and in population and need to automate her information system to take care of not only the Admission but also her payroll, student records, personnel records, Library, and Matriculation

umbering etc.

t is therefore, on this background that this research eeks to study the existing system with the view to dentify the weaknesses and bring out a design which, if mplemented would ease the processing of Admission in articular and the entire admission exercise in general.

2 **STATEMENT OF THE PROBLEM.**

The careful observation of the existing system revealed several problem areas beginning from the numbers of the application forms being sold, decentralization of admission processing, method of admission processing and so on. These problems render the present system so complex, inefficient and expensive. Hence this project titled, **computerized Admission System for Nigerian Polytechnic** uses the Federal Polytechnic Bida as a case study and will seek to formulate a system that will address and improve the current system.

3 **AIMS AND OBJECTIVES OF THE STUDY.**

The aims and objectives of this research work is amongst others, to:

a. provide a better alternative way of admission processing in particular and the entire admission exercise in general that will serve to improve and perhaps replace the existing system.
b. design a system that will minimize the cost of the entire admission exercise.
c. develop the necessary software that will be useful for the exercise.
d. make appropriate recommendations to those concerned with the research work.

HYPOTHESIS

The claim made here is that the old and the new system perform the same task but in different ways of which the new system performs better.

5 **JUSTIFICATION**

Having been opportuned to process admission for the

Department of Mathematics, Statistics and Computer Studies of The Federal Polytechnic, Bida the researcher was previledged to the conventional or manual approach. Apart from its several defects, it is very cumbersome and if replaced, will

a. ease the work of the Admission Officers
b. save the polytechnic of the time and cost associated with the Admission exercise and of course, convenience
c. perform the task objectively without unnecessary human interference.

1.6 SCOPE OF THE STUDY

Presently, the Polytechnic run programmes leading to the award of the following:

a. Higher National Diploma
b. National Diploma
c. Certificate courses
d. Remedial (Preliminary Studies)

These programmes are ran in different disciplines. For the purpose of this study, only admission into HND Program will be considered.

1.7 BRIEF HISTORY OF THE FEDERAL POLYTECHNIC BIDA

According to the Polytechnic Information handbook (1992), the Polytechnic began as Federal College of Technology, Kano on the 1st March 1977. Following the Federal Government decision to transfer the college to Bida, the college was finally moved to Bida on the 27th July 1977. The college then known as Bida College of Technology was temporarily accommodated at the Government Technical College, Eyagi and later on its temporary facilities along Wuya Road, Bida. The permanent site of the Polytechnic comprises of a land 2km x 2km and lies between kilometre 7 and kilometre 9 along Bida-Doko road. Physical planning of the site commenced early in 1979 and by the end of October, 1979 the Administrative unit and some Academic departments moved to the permanent site. By the end of 1982/83 session, all arms of the Polytechnic

had been fully settled on the permanent site.
The Polytechnic admitted its first set of students in April 1978 for the 1977/78 session with an enrolment of 211 students of which 154 students finally graduated with the then Nigerian National Diploma (NND) in August 1981. Thereafter, the students enrolment continues to grow yearly. (see appendix A).
The development of the permanent site of the polytechnic was planned to proceed in phases. Phase 1 was designed for a target students of 1500. This could rise up to 2500 while Phase 2 had a target of 6000 students. Due to inadequate funding, the polytechnic still operate on facilities meant for 1500 students despite the tremendous increase in the students' population.
Presently, the Polytechnic has five schools namely:-

a. School of Applied Arts and Science
b. School of Business Management and Administration
c. School of Construction Engineering Technology
d. School of Engineering Technology
e. School of Preliminary Studies

Each of the School comprises of several departments. At present, HND programmes are run in the following areas:-

a. Accountancy
b. Business Administration
c. Secretariat Studies
d. Marketing
e. Science Laboratory Technology with the following options:-
    i. Chemistry
    ii. Biology
    iii Biochemistry
    iv Chemistry/Biochemistry
    v Physics/Electronics
    vi Microbiology
    vii Biology/Microbiology
    viii Biochemistry/Microbiology

f. Statistics
g. Agricultural Engineering with the following options
    i. Farm Power and Machines
    ii. Soil and Water Engineering
    iii. Post Harvest Technology
h. Chemical Engineering
i. Civil Engineering with the following options:-
    i. Structures
    ii. Transportation
j. Electrical Engineering with the following options:-
    i. Power and machines
    ii. Electronics and Telecommunications
k. Building
l. Quantity Surveying

CHAPTER TWO

CASE STUDY OF ADMISSION PROCESSING

.1 INTRODUCTION

This chapter seeks to make a survey of the existing system of admission processing in the institution. it will also investigate in order to ascertain the strength and weaknesses of the system with the view to determine whether there is the need for computerization or not.

.2 ADMISSION EXERCISE UNDER THE CURRENT SYSTEM

The present system of admission exercise is completely manual. It has the following features:-

a. A pair of form is sold to the applicants and upon completion of the form, it is sent to the Academic unit where it is received.
b. The Academic Unit acknowledges the receipt of the form
c. The form is registered by giving it a code number. For example BN/HND/STAT/001 meaning that the applicant is the first on the Benue State list and is applying for HND program in Statistics
d. When adequate forms are received, they are then despatched to their respective departments, keeping one copy of each in the Academic Affairs Unit.
e. The department sorts out the forms according to state of origin of the applicant as well as registration number.
f. The department prepares the list of applicant on the Admission Processing Format. See appendix B
g. It also determines whether the candidate is suitable or not for the offer of Admission based on the criteria laid by the National Board for Technical Education (NBTE).
h. It prints out at least 40 copies of the shortlisted names to be circulated to members of the Academic Board.

The Academic Board in turn does the selection from amongst the eligible candidates. When the exercise is

completed, the Registrar prints out list of selected candidates and thereby send them with notice of the offer of Admission.

.3 **ADMISSION CRITERIA**

This refers to those standards laid down by the institution in accordance with the NBTE requirements for Admission into HND programme. These criteria are:-

a. Candidates must possess a National Diploma Certificate from an accredited institution with a minimum of Lower credit grade.
b. Candidate in (a) above must spend at least one year of Post-National Diploma working experience in the relevant field.
c. In addition, the candidate must have at least four credit passes in the relevant subjects at the ordinary level.
d. A holder of National Diploma certificate with a grade of pass may be considered for admission provided that such candidate satisfies the ordinary level requirements and have had at least two years of Post-National Diploma working experience in the relevant field.
e. Candidates with O-level deficiencies and have undertaken a one year remedial program (PRE-ND) is assumed to have satisfied the O-level requirements provided that such person has passed all the subjects offered during the remedial period.

The applicant is assumed to have satisfied other requirements such as age. Be it as it may, the offer is not automatic. Candidates are selected from each state of the federation. Sometimes, some states are given a higher priority because they fall into what is called catchment area and also educationally disadvantaged area.

Below are the basic O-level requirements for admission exercise according to each department:-

TABLE A.

Subjects	Acct	Bam	Sec	Mkt	Stat	SIT	BLD	QS	ELEC	CIV	AGRIC
English	"	"	"	"	"	"	"	"	"	"	"
MATHS	"	"	"	"	"	"	"	"	"	"	"
Fur-Math	"	"	"	"	"	"	"	"	"	"	"
Econs	"	"	"	"	"	"	"	"	'	"	"
Comm	"	"	"	"	"	"	"	"	"	"	"
Govt	"	"	"	'	'	"	'	'	"	"	"
B/Methods	"	"	"	"	'	"	'	"	"	"	"
Physics	"	"	'	"	"	'	"	"	"	'	"
Chemistry	"	"	'	'	"	'	"	"	'	'	'
Bio/Agric	"	"	"	"	"	"	"	"	"	"	"
Accts	"	'	'	'	"	"	"	"	"	"	"
Statistics	"	'	"	"	"	"	'	"	"	"	"
T/Drawing	"	"	"	"	"	"	"	"	"	"	"

Source: Academic Affairs Units, Federal Polytechnic, Bida.

2.4 PROCESSING ADMISSION WITH THE CURRENT SYSTEM

To be able to understand and appreciate the working of the current system, we need to review some aspects of data processing in order to identify the numerous problem areas.

According to Oliver (1990), "data processing is the name given to the process of providing meaningful information by collecting all items of data together and performing some operation on them to extract the required information". The process is done in stages: Data origination, preparation, Input, Process, Output using one or a combination of methods: manual, mechanical and or electronic data processing with the use of computegw. Infact, the choice of method of data processing depends on the size and type of business, the timing aspects, that is, of information sensitive to time and the link between application where information can be centrally controlled as a single pool and can be assessed by several users.

Thus, the present system makes use of the conventional method. Although some mechanical devices such as typewriters are often used in performing this task.

2.5 PROBLEM WITH THE PRESENT SYSTEM

a. <u>The storage of Application Forms:</u>

The completed forms are stored in both the Academic Affairs and the Department thereby occupying much office space hence, duplicating the role and increasing redundancy as one pair of the application form remains unused for a longer time. This is irrelevant and it amounts t o wastage of resources.

b. <u>Data Recording and Sorting:</u>

There is usually a large number of Application Forms that are received and because the call for submission of Shortlisted candidate list is done at a given time after the dateline for submission, the sorting and recording is deferred until then.This implies a delay

in work due to this approach.

c. Data Processing:

This starts with making entries on the Admission Format Sheet by extracting the essential information about a candidate and completing the form in a specified way. A minor error may be corrected using the liquid correction fluid while a major error may render the format invalid. Whichever the case may be, causes poor quality output and of course, wastage of resources (time, papers, ink and so on).

d. Data Deletion and Updating:

Sometimes, it becomes necessary to update records. This is not an easy task under this system as it may mean performing the task entirely and any reoccurrence of such error may mean repeating the task unendingly. Thus cases of omission and transposition of data fields or records are not easily resolved except new entries are made.

e. Data Storage and Retrieval:

Information are stored on papers and kept in cabinets. Access top the information means searching the entire file until the information is found. If the information is large, it then requires a large storage space and the retrieval of such information may be time consuming.

f. Data Manipulation:

This entails assessing the admission criteria to determine the candidates' eligibility. However, conducting a routinely repetitious operation like this with manual method wastes time. Besides, it is boring and there is the likelihood of some deliberate human errors which could lead to offering admission to a non-eligible candidate.

g. gwme taken by the present System:

The present system is slow and takes a longer time, perhaps, days or weeks to get records processed

(especially where there are errors recurring thereby needing to be continuously corrected).

2.6 **BENEFIT OF COMPUTERIZATION**

To be able to discuss the benefit of computers and of course automating the admission system, it will worth a while to note what computer can do.

Hall (1983), in comparing between the man and the computer, noted that "the human, though very intelligent, creative, intuitive and self motivated easily become bored, tired and forgetful. Computer however perform a single task based on a set of instructions created by a person, works very rapidly, obeys instructions or commands exactly and repeat task untiringly.

This indicates that Computerization of the admission process would be a better alternative and it will help in achieving the following:-

a. Making work easier and more accurate.
b. Carrying out work, logical comparison between things as well as checking and correcting errors without being bored.
c. Time and Cost Benefit: The amount of stationeries consumed under the existing system will be minimized. Time benefit mostly attributable to the amazingly high processing speed of the computer.
d. Efficient storage and retrieval of information using magnetic disk, tapes and so on. it also causes the reduction of physical storage space required.
e. It provides accurate information such that once the computer disqualifies a candidate based on the laid down criteria, the pressure on the concerned officers will be minimized.

Thus, if the present system is replaced (partially or fully), the benefit enumerated above shall be realised.

CHAPTER THREE

ANALYSIS AND DESIGN OF ADMISSION PROGRAM MODEL

.1 INTRODUCTION

System Analysis according to Hall(1983) is part of data processing which is "concerned with the investigation of the business need for information and for the design of a system to supply that information".

Oliver and Chapman(1990) sees computerization of a system to "entail more than just the automation of parts of the existing system by means of computer. Analysis of an organisation information requirements may show that the requirement will be better served by a newly designed and implemented system with the virtues of both the manual and computerized elements".

This research uses these two premises in the analysis and design of the admission system of the Federal Polytechnic, Bida.

.2 PROBLEM IDENTIFICATION

This is as contained in item 2.5 of this project. It includes the following:-

a. The number of forms sold to applicant amount to wastage as a result of pairing of forms
b. the present admission processing system creates a kind of decentralization.
c. The time taken to process admission is longer.
d. The quality of the output is not uniform and sometimes poor.
e. There is wastage of resources.

These problems render the present system quite expensive and inefficient.

.3 FACTS FINDING TECHNIQUES

To be able to achieve the goal of designing a better system, a careful observation and analysis have to be made based on facts rather than guesses. Thus, the researcher gathered the facts used here through the combination of the following methods

a. **QUESTIONNAIRE**:- Questionnaires were used to fully understand the admission process and whether the management of the Federal Polytechnic, Bida would desire a change. Here all the thirteen respondents made up of Academic Heads of Departments and the Registrar (Admissions) voted for the proposed system.

b. **RECORD SEARCHING:**-This entails going through the records of an organisation to obtaining relevant information. Such information are secondary but are useful in case study of this kind. Thus, past record on enrolment (see appendix A) were observed to study the pattern of admission.

c. **PARTICIPATION/OBSERVATION:-** Here, the researcher took part in processing the admission for the 1996/97 session so as to understand and appreciate the problems associated with the manual method.

.4 **OBSERVATIONS**

a. The sales of pair of admission forms is partially the cause of decentralization of admission processing.

b. There is usually delay in the processing of admission as the concerned officers will have to wait until all forms are collected.

c. The delay is the cause of late submission of list of candidates (shortlist) for the admission exercise.

d. It gives room for lobbying.

.5 **DESCRIPTION OF THE NEW SYSTEM**

3.5.1 **Admission forms:** The new system demands that only one copy of the application form be issued instead of two.

3.5.2 i. **Centralisation of information processing:-** Application forms need not be despatched to the departments. Rather, the department supplies her criteria to the Admission Officer who would do the processing with his subordinates. Each department will or may send a representative at such instance to verify and validate the accuracy of the work done

by the Admission Officers.

3.5.2.ii.Relevant information pertaining an applicant shall be extracted by an assigned officer trained for the task.

3.5.2.iii. All extracted data are to be into the computer immediately, irrespective of the order.

3.5.2.iv The computer sorts the data according to course applied for and the candidates' state of origin.

3.5.2.v Computer perform the manipulation of data, assigning points to each applicant and determining whether a candidate is eligible or not.

3.5.3 **Kind of Output**

There shall be two kinds of output namely, the intermediate output and the final output.

a. Intermediate output will print out the list of all candidates according to specified order for consideration by the Academic Board.

b. The final output will comprise of all the candidates offered admission, that is the successful candidates.

.6.1 **COMPUTING STANDARD FOR DETERMINING ELIGIBILITY**

Almost all the criteria for determining applicants' suitability are quantified except for the selection exercise which remains the discretion of the Academic Board.

a. **Grading the Qualifications**

i. National Diploma Certificate is graded as follows

Grade	Points
Distinction	4
Upper Credit	3
Lower Credit	2
Pass	1

ii. Pre National Diploma certificate is graded 1 point

iii. GCE "O" Level /SSCE Grading

Grade	Points
A1--A3	3
C4--C6	2
P7--P8	1
F9	0

iv. Post National diploma Working Experience.

a. Candidates with a minimum of lower credit pass and with at least one year post qualification work experience is graded 1 point otherwise, 0 point and is automatically disqualified with the remark NQ**.

b. Candidate with a pass grade with at least two years work experience is graded 1 point otherwise, is graded 0 point and is automatically disqualified with the remark NQ**

.6.2 **CUT OFF POINTS**

For candidates with distinction at diploma level and the minimum O-level requirement, the total points (maximum) is 18

For a lower credit holder, the minimum points is 8

Therefore any candidate eligible for admission is expected to have a minimum of 8 points in four O-level subject relevant to the course applied for. A candidate that does not have at least 8 point is automatically disqualified with a remark NQ.

.6.3 **NON-ELIGIBILITY CASES**

a. Candidate who does not satisfy the minimum requirement is not eligible. The remark is NQ meaning not qualified.

b. Candidate who does not satisfy post-ND working experience has the remark NQ**

c. Candidate who does not satisfy the basic O-level requirement (especially English language and, or

Mathematics) has the remarks NQ*.

.7 **TESTING PROJECT FEASIBILITY**

3.7.1 **Technical Feasibility:-** At present, the Federal Polytechnic Bida has up to 25 micro-computers and the personnel needed to man the computer. The technical supports are already in place.

3.7.2 **Operational Feasibility:-** With trained manpower and workable systems, it is expected that the project will be operationally feasible.

3.7.3 **Economic Feasibility:-** The cost of conducting a detailed system investigation would be eliminated by this study. Most equipments needed are already in place. Such include: Micro-computers, printers, airconditioners, good office space, uninterruptible power supply (UPS), chairs, tables, stabilizers, diskettes, database management system (DBMS) and so on.

.8 **REQUIREMENT SPECIFICATION FOR THE PROPOSED SYSTEM**

a. Comprehensive list of applicants and their data
b. Routine for data entry, modification, deletion and viewing.
c. Report generation on the screen and sent to the printer for hard copy
d. Data to be stored on the magnetic storage medium
e. Database management system (DBMS)
f. Formation of admission processing committee to coordinate the task.

.9 **COST AND BENEFIT ANALYSIS**

a. Development Cost (Dc)	N	K
- System analysis and design		
3 weeks, 10 hrs/day @ N4000/week	12000.	00
- Software Development and implementation		
4 weeks, 10 hrs/day @ N4000/week	16000.	00
- ** Equipment Procurement	20,0000.	00
- ** Installation	6000.	00

- Personnel Training (5 days) 6 hrs/day @ N1,200/day	6000.	00
TOTAL	**240,000.**	**00**
b. System Operating Cost (Soc)		
-**Equipment maintenance	50,000.	00
- program maintenance	10,000.	00
-**Labour Cost	48,000.	00
-**Utilities	12,000.	00
- Stationeries	10,000.	00
- Miscellaneous	20,000.	00
TOTAL	**158,000.**	**00**
TOTAL COST = Dc + Soc =	**398,000.**	**00**
c. System benefit per annum		
- savings from printing of 5,000 admission forms @ N30.00 each	150,000.00	
- reduced spending on stationeries	15,000.00	
TOTAL BENEFIT: =	**165,000.00**	

.10 **OUTPUT SPECIFICATION**

a. The intermediate output has the following fields:-

- form number
- registration number
- name
- institution attended
- year of graduation
- diploma grade
- course applied for
- pre-ND
- "O" level {up to 4 subjects}
- number of credits
- points
- remarks

b. The final output consists of the following:-

- serial number
- name of candidate
- course
- points

.11 **INPUT SPECIFICATION**

This consists of the following:-

- form number
- registration number
- surname
- other name
- institution attended
- year of graduation
- diploma grade
- year of admission
- pre-ND
- course applied for
- option
- O-level requirements {sub1, sub2.....sub6}

.12 **FILE AND PROCEDURE**

A database file is to be created called **admission.dbf** which is the master file. Processed data is stored in **eligible.dbf** from which candidates offered admission are moved into **award.dbf**.

The procedure here are the steps which unify the whole processes together to produced the desired result. It involves both the manual and computer.

The manual aspects requires that the clerks collects and enter data into the data entry format, as well as considering the eligible candidates by the Academic Board.

The computer then performs the manipulation required to give the output in the manner so desired.

CHAPTER FOUR

SOFTWARE DEVELOPMENT AND EXPERIMENTATION

.1 INTRODUCTION

The system to be implemented is carefully designed to process admission into Nigerian Polytechnic with emphasis on the Federal Polytechnic, Bida. The program has been coded, tested and is operational.

.2 CHOICE OF LANGUAGE

The software in use here is the **database management system** and **dBaseIV** for the program development. It provides a relational database structure where data are entered and stored into the database file in rows and columns called records and fields respectively. It is very useful especially for record processing of this kind.

.3 DATABASE MANAGEMENT SYSTEM

This is a complex software system which constructs, expands and maintain data in the base. It also allocates storage to data, maintain indices so that any required data can be retrieved and so that separate data item in the base can changed as needed.

DBMS maintain data in the base by **adding, deletion, modification, viewing** and so on.

Files can be processed sequentially or serially. It also has the function of providing security for the data in the base against unauthorized user and against corruption.

DBMS as a software is therefore aimed at the following:-

a. **Data Integration**: where information from many files can be assessed, coordinated and operated upon as though they were from a single file. It is also possible for two or more applications to share data in the base.

b. **Eliminating redundancy:** Redundancy occur when the data in the base cannot be arranged to suit all application programs accessing them. If this happens, some data

may appear in more than one file leading to wastage of storage space and duplication of efforts during data entry.

c. **Achieving Data Independency:** Which is rather an insulation of application programs from the physical or logical storage of data in such a way that it allows modifications in the contents and organisation of the data without reprogramming and vice versa.

d. **Centrally Controlled:** Hers, data and operations on data are centrally controlled and this leads to a better management of data by enforcing standard for all users.

e. **Achieving Data Integrity:** Duplication is eliminated giving room for consistent information.

.4 **SOFTWARE DEVELOPMENT**

The program developed here is called **PGD96129 PROGRAM.** In order to access this program, the user is expected to type in the command **do pgd96129** at the Dot Prompt. upon pressing the <enter> key, a message is displayed (see appendix E) and access validation gate is open for the user to enter password. If the correct password is entered, the program displays another message and the mainmenu whereby the user is expected to select from the options listed below:-

i. **A**.....Add record(s)
ii. **M**.....Modify record(s)
iii. **D**.....Delete record(s)
iv. **P**.....Process Record(s)
v. **R**.....Generate report(s)
vi. **V**.....View record(s)
vii. **E**.....Quit/Exit Database

i. **Option A: Add Record(s)**

Once this option is selected, the system provides the user with a blank data entry routine (see appendix F) to make data entries through the keyboard. The user is provided with the opportunity

to check the accuracy of the data entered. If the data are correct, they are saved automatically in the database file otherwise, it prompt the user to re-enter the data again. The user can add as much records as possible irrespective of the order. When the data entry exercise is completed, the program returns to the mainmenu.

ii. **Option M: Modify Record(s)**

This option allows the user to modify record(s) in the **admission.dbf** file. The user can remove the duplicated records in order to create more space. Correction can be made here. See appendix G

iii. **Option D: Delete Record(s)**

This module provides the user the opportunity to remove record(s) from the base. See appendix H

iv. **Option P: Process record(s)**

As soon as data entry is completed and all modifications done, the next task is to have the record processed in order to assign points and remarks. This module carries out this task and the result of the processed data are stored into **eligible.dbf** file.

v. **Option V: View Record(s)**

This allows the user to view the contents of his database using the browse.

vi. **Option G: Generate Report(s)**

This is a technical part of the program. It comprises of the following options in the submenu.

F.....Final report
I.....Intermediate report
P.....Print final report
E.....Exit

This section of the program serves to link eligible.dbf with award.dbf.

vii. **Option E: Exit/Quit Database**

This option terminates the running of the program

and returns the user to the dot prompt or the control panel as the case may be.

.5 **PROGRAM ALGORITHM**

The algorithm used for the design of this program is the Flowchart. Holmes(1992) have it that it provides a means of designing a computer program independent of any make or computer language by the use of "symbols that represent specific activities with the symbols connected by arrowed lines indicating the direction of flow, usually from top to the bottom of the page". Holmes(1992) added that "it also indicates the ingredient of structured programming, the sequence, selection, repetition and procedures or sub-routines as the case may be".

.6 **PROGRAM TESTING**

Here, four basic elements are necessary and are provided in the package developed for the new system. These are:-

a. The routines for data entry, modification, deletion, processing, viewing and report generation.
b. The data used for testing the package (See appendix J)
c. The intermediate output generated by the program can be see in appendix K
d. The Final output can be seen in appendix L

.7 **STAFF TRAINING**

The operational staff concerned with the use of the software are expected to undergo at least one week of intensive training.

.8 **CHANGEOVER**

The change from the old system to the new one is expected to be a **direct** changeover where all the element of the old system are replaced with the new one. The date of Changeover shall be determined by the management of the Federal Polytechnic, Bida.

CHAPTER FIVE

SUMMARY FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

The Federal Polytechnic, Bida which is the case study presently uses the conventional method in processing her admissions. This gives rise to several problem areas as discussed in the previous chapters.

In trying to accomplish the aim of this research, some facts finding techniques were used to gather relevant data. Questionnaire was administered on the heads of Academic Departments and the Registrar (Academics) and they all favoured the new system.

The feasibility study indicates that the project will technically, economically and operationally feasible. It is based on this background that the admission criteria were quantified and a program designed, coded, tested and is found workable. The package developed uses database management system which is very efficient in record processing.

The program is made up of six principal modules which include the routine for data entry, modification, deletion, viewing, processing and report generation. The output of the program can be seen in appendices**

5.2 FINDINGS

The findings of this research work are partly listed in item 3.4 of this work. These include:-

a. The old system is not suitable owing to its numerous disadvantages. Consequently, the new system is preferable.
b. The management of the Federal polytechnic, Bida have given their support for the system.
c. It will cost N398,000.00 to put the system in place
d. The institution stand to gain N165,000.00 annually as the new system will create a sort of cost saving due to reduced spending on material and so on.
e. The new system will be centralised, in which case, it

will reduce several costs in terms of money, men, material and time.

f. It will take lesser time to process records

g. It will occupy a lesser space.

.3 CONCLUSION AND RECOMMENDATION

Computerising the admission process for higher institution has not been an easy task in our society where there are several interests: quota, Federal character, Educationally disadvantaged states, personal interests and so on. Whatever be the case, the package considered at least, almost every interest associated with admission exercise. It ensures that only candidates with at least the minimum entry requirements are eligible for the offer of admission. This is so because, while interests are being considered, the essential factor should be the main object for which educational institutions are established as such, the national interest must take precedence over all others.

Alade (1994) stated that "since the world today is now in the computer age and virtually everything is going computerised, information is made available at the finger tips of man through information technology which is 100% computer oriented. This pre-supposes that if we must take action or make good decisions, then the information needed must be timely. In this regards, it will be reasonable to conclude that the admission system of the Federal Polytechnic, Bida and other higher institutions in Nigeria be automated. Such system could replace the existing one in a kind of direct changeover.

For a new institutions or those without computers, they need to procure micro computers arises. This work does recommend a micro computer preferably, **Pentium** with the following features.

a. Hardisk Drive of 1.6 Gigabytes

b. RAM size of 8 MB upgradable to 72 MB

c. Speed/Clock of 100 MHz

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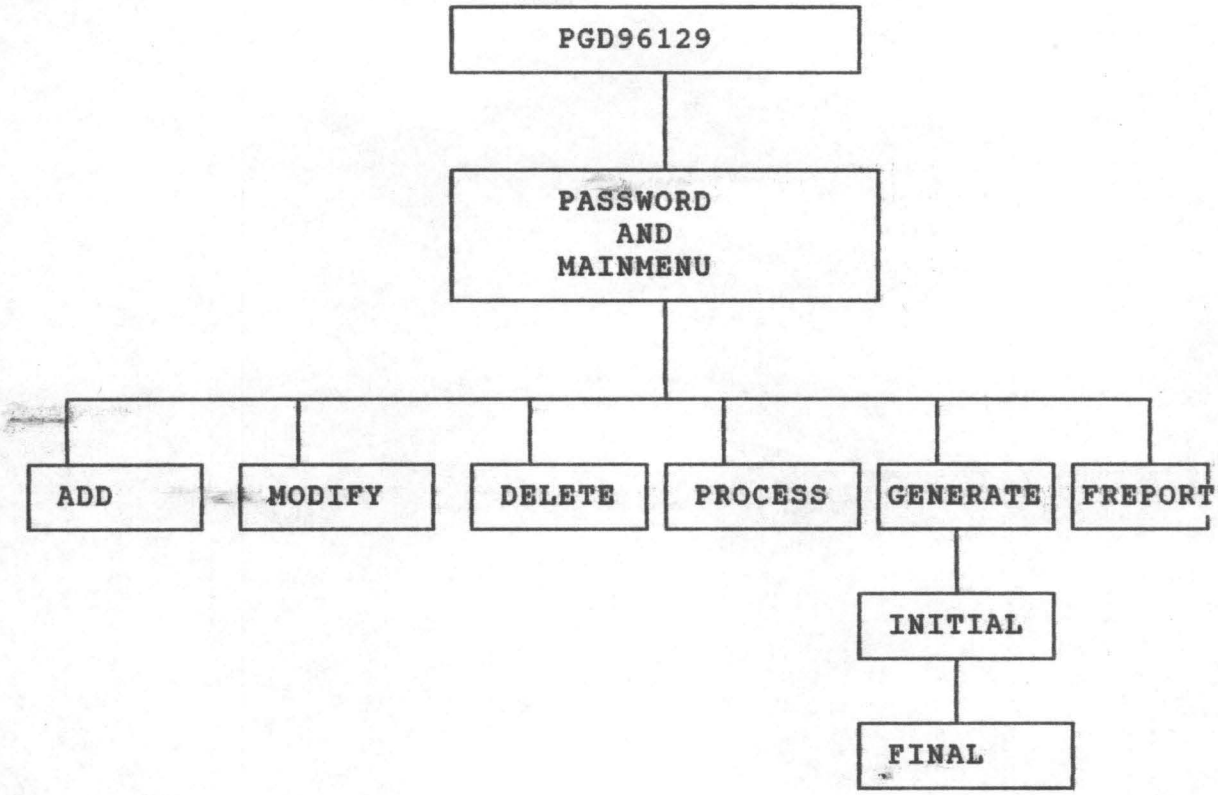
APPENDIX A

NUMBER OF REGISTERED STUDENTS FOR THE PERIOD 1980-1997

SESSION	POPULATION
1977/78	211
1978/79	83
1979/80	147
1980/81	162
1981/82	1209
1982/83	1442
1983/84	1464
1984/85	1704
1985/86	1908
1986/87	2173
1987/88	2377
1988/89	2067
1989/90	2509
1990/91	2409
1991/92	3747
1992/93	4700
1993/94	5880
1994/95	7023
1995/96	9303
1996/97	12131

ADMISSION PROGRAM STRUCTURE.



SPECIMEN OF ADMISSION PROCESSING FORMAT

SR. NO.	FORM NO.	REG. NO	NAME	INSTITUTE ATTENDED	YR OF GRAD	DIP. GRADE	CGPA

MATHS	ENG	SUB3	SUB4	SUB5	SUB6	SUB7	REMARKS

APPENDIX C2

ADMISSION PROGRAM WELLCOME SCREEN

COMPUTERIZED ADMISSION SYSTEM FOR NIGERIAN POLYTECHNIC:
A CASE STUDY OF FEDERAL POLYTECHNIC, BIDA

DEVELOPED BY IKUGHUR ATSUA JONATHAN
SCHOOL OF POST GRADUATE STUDIES,
(DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE)
FEDERAL UNIVERSITY OF TECHNOLOGY MINNA

SUPERVISED BY ISAH AUDU ESQ

press any key to continue

APPENDIX D

PROGRAM MAINMENU

28/02/98 12:03:51

THE FEDERAL POLYTECHNIC, BIDA

COMPUTERIZED ADMISSION SYSTEM

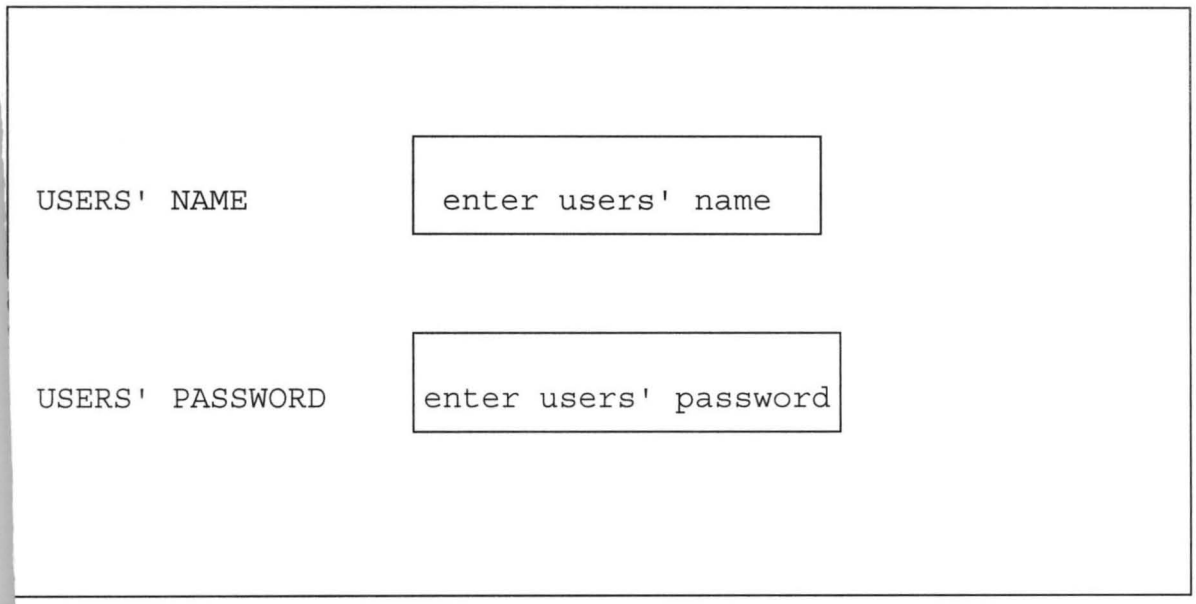
PROGRAM MAINMENU

TASK	TASK DESCRIPTION
A	ADD RECORD(S)
M	MODIFY RECORD(S)
D	DELETE RECORD(S)
V	VIEW RECORD(S)
P	PROCESS RECORDS
G	GENERATE REPORT
E	EXIT

enter your choice ■

APPENDIX E

ACCESS VALIDATION GATE



APPENDIX F

DATA ENTRY ROUTINE

THE FEDERAL POLYTECHNIC, BIDA

DATA ENTRY ROUTINE

ADD
RECORD

FORM NO: 1008 REG NO: LA001 COURSE APPLIED:STAT

SURNAME: MATTI B OTHER NAME: F.O

INSTITUT ATTENDED: BIDA YEAR OF GRADUATION: 1996

COURSE OPTION: STAT YEAR OF ADMISSION: 1998

DIP GRADE: UC PRE_ND: -

SUB1: 6 SUB2: 6 SUB3: 3

SUB4: 4 SUB5 0 SUB6 0

COURSE: STAT

SUB1: ENGLISH SUB2: MATHEMATICS

SUB3: STATISTICS/ECONOMICS SUB4: GEO/PHYSICS

SUB5: BIO/AGRIC SUB6: GOVT/FUR MATHS

enter any four (4) subjects for from the above ■

APPENDIX G

DATA MODIFICATION ROUTINE

THE FEDERAL POLYTECHNIC, BIDA

DATA MODIFICATION ROUTINE

MODIFY

RECORD

FORM NO: 1008 REG NO: LA001 COURSE APPLIED:STAT
SURNAME: MATTI B OTHER NAME: F.O

INSTITUT ATTENDED: BIDA YEAR OF GRADUATION: 1996

COURSE OPTION: STAT YEAR OF ADMISSION: 1998

DIP GRADE: UC PRE_ND: -

SUB1: 6 SUB2: 6 SUB3: 3

SUB4: 4 SUB5 0 SUB6 0

COURSE:STAT

SUB1: ENGLISH SUB2: MATHEMATICS

SUB3: STATISTICS/ECONOMICS SUB4: GEO/PHYSICS

SUB5: BIO/AGRIC SUB6: GOVT/FUR MATHS

PRESS F1 FOR HELP

enter any four (4) subjects for from the above ■

APPENDIX H

DATA DELETION ROUTINE

THE FEDERAL POLYTECHNIC, BIDA

DATA DELETION ROUTINE

DELETE

RECORD

FORM NO: 1008 REG NO: LA001 COURSE APPLIED:STAT
SURNAME: MATTI B OTHER NAME: F.O

INSTITUT ATTENDED: BIDA YEAR OF GRADUATION: 1996

COURSE OPTION: STAT YEAR OF ADMISSION: 1998

DIP GRADE: UC PRE_ND: -

SUB1: 6 SUB2: 6 SUB3: 3

SUB4: 4 SUB5 0 SUB6 0

To DELETE this RECORD?(Y/N)

APPENDIX I

REPORT GENERATION ROUTINE

```
I.....................................INTERMEDIATE REPORT
F.....................................FINAL REPORT
P.....................................PRINT FINAL REPORT
E.....................................EXIT

enter option ■
```

APPENDIX J

TEST DATA

SNO	REGNO	CAND NAME	CRSE	INST	YEAR	DIP	S1	S2	S3	S4	PRE
1	LA001	BALOGUN M.O	STAT	BIDA	1996	DI	6	6	4	6	
2	ZA001	ABDULLAHI N.	STAT	B/KEB	1997	UC	4	7	4	4	-
3	BN002	OTAJELE M.E	STAT	IDAH	1995	UC	5	9	6	1	PRE
4	BN001	OGBAJI O.I	STAT	UGBOK	1996	LC	8	6	6	6	-
5	KG001	IDACHABA D.O	STAT	BIDA	1990	PA	1	1	1	6	-

APPENDIX K

INTERMEDIATE REPORT

THE FEDERAL POLYTECHNIC, BIDA
LIST OF SHORTLISTED CANDIDATES FOR ADMISSION INTO HND PROGRAM FOR THE 1997/98 SESSION.

SNO	REGNO	CAND NAME	CRSE	INST	YEAR	DIP	O-L	EN	MA	PTS	REM
1	BN001	OGBAJI O.I	STAT	UGBOK	1996	LC	3C,1P	8	6	10	Q
2	BN002	OTAJELE M.E	STAT	IDAH	1995	UC	3C,0P	5	9	12	NQ*
3	KG001	IDACHABA D.O	STAT	BIDA	1990	PA	4C,0P	1	1	12	Q
4	LA001	BALOGUN M.0	STAT	BIDA	1996	DI	4C,0P	6	6	13	Q
5	ZA001	ABDULLAHI N.	STAT	B/KEB	1997	UC	3C,1P	4	7	10	NQ**

press any key to continue

APPENDIX

FINAL REPORT L

THE FEDERAL POLYTECHNIC, BIDA
LIST OF CANDIDATES OFFERED ADMISSION FOR HND PROGRAMME INTO THE FEDERAL POLYTECHNIC, BIDA FOR THE 1997/98 SESSION

S/NO	REG/NO	CANDIDATE NAME	COURSE	POINTS
1	BN001	OGBAJI O.I	STAT	10
2	KG001	IDACHABA D.O	STAT	12
3	LA001	BALOGUN M F	STAT	13

PROGRAM LISTING

```
SET SCORE OFF
SET STAT OFF
SET CONSOL OFF
SET ESCAPE OFF
CLEAR
SET COLO TO RG+,G,R+
@ 5,2 TO 21,75 DOUBLE
*SET COLO TO G+
@ 7,10 SAY "COMPUTERIZATION OF ADMISSION INTO NIGERIAN
POLYTECHNICS"
@ 9,10 SAY "A CASE STUDY OF FEDERAL POLYTECHNIC, BIDA"
@ 13,10 SAY "DEVELOPED BY IKUGHUR, A. JONATHAN"
@ 14,10 SAY "SCHOOL OF POST GRADUATE STUDIES"
@ 15,10 SAY "(DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE)"
@ 16,10 SAY "FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA"
@ 17,3 TO 17,74
@ 19,20 SAY "SUPERVISED BY ISAH, AUDU"
@ 23,3 SAY "press any key to continue"
WAIT " "
CLEAR
SET COLO TO W/RG
DO AVPASWD
*DO ADMISION
CLOSE ALL
SET TALK ON
SET ESCAPE ON
SET SCORE ON
SET CONSOL ON
SET STAT ON
CLEA
RETURN


        *****AVPASWD/PRG*****
SET CONSOL OFF
SET STATUS OFF
SET SCORE OFF
UNAME = SPACE(15)
PASWD = SPACE(5)
k = 1
DO WHILE .T.
   SET COLO TO RG+,g,r+
   @ 7,25 SAY "ACCESS VALIDATION GATE"
   @ 8,5 TO 18,75 DOUBLE
   @ 11,8 SAY "USERS' NAME:"
   @ 10,20 TO 12,60
   @ 15,15 SAY "USERS' PASSWORD:"
   @ 14,30 TO 16,60
   @ 11,24 SAY "Enter Your Name" GET UNAME
   READ
   @ 15,33 SAY "ENTER PASSWORD"
   SET COLO TO N/N
```

```
   ACCEPT TO PASWD
   SET COLO TO W+
   IF UPPER(PASWD) = "ATSUA"
     CLEA
     @ 2,2 TO 23,78
     @ 5,10 TO 13,70
     @ 19,10 TO 21,70
     SET COLO TO B+
     @ 7,11 SAY "                                  ********
********   ********"
     @ 8,11 SAY "                                  **          **
**    **     **"
     @ 9,11 SAY "                                  ********
********   ********"
     @ 10,11 SAY "                                 **          **
   **     **"
     @ 11,11 SAY "                                 **          **
   ********"
     SET COLO TO
     @ 7,11 SAY "WELCOME TO"
     @ 8,11 SAY "THE FEDERAL POLYTECHNIC"
     @ 9,11 SAY "BIDA"
     @ 10,11 SAY "NIGER STATE"
     @ 11,11 SAY "NIGERIA"
     @ 15,8 SAY "              IF YOU HAVE COME TO PROCESS
ADMISSION"
     @ 16,8 SAY "              THEN YOU ARE IN THE RIGHT PLACE
...OK"
     SET COLO TO R+
     @ 20,26 SAY "       Have a nice time"
     SET COLO TO
     @ 24,33 SAY "               Press any key to continue"
     WAIT
     do admision
   ELSE
     CLEA
     RES = " "
     @ 12,12 SAY "to try again (Y,N)" get RES
     read
     IF UPPER(RES) = "Y"
        CLEA
        LOOP
     ELSE
        CLEA
        EXIT
     ENDIF
   ENDIF
   ENDDO
CLEA
SET CONSOL ON
SET STATUS ON
SET SCORE ON
RETURN
```

```
                ******* ADMISION PROG *******

SET TALK OFF
SET STAT OFF
SET ECHO OFF
SET SCORE OFF
SET ESCAPE OFF
DO WHILE .T.
SET COLO TO R+,G,Rb+
@ 2,10 SAY DATE()
@ 2,60 SAY TIME()
@ 3,9 TO 19,70 DOUBL
@ 5,25 SAY "THE FEDERAL POLYTECHNIC BIDA"
@ 6,25 SAY "COMPUTERIZED ADMISSION SYSTEM"
@ 7,25 SAY "PROGRAM MAINMENU"
@ 8,25 TO 8,39
@ 10,15 SAY "TASK CODE                          TASK
DESCRIPTION"
@ 11,15 TO 11,65
@ 12,15 SAY "A.................................ADD
RECORD(S)"
@ 13,15 SAY "M.................................MODIFY
RECORD(S)"
@ 14,15 SAY "D.................................DELETE
RECORD(S)"
*@ 15,15 SAY "V.................................VIEW
RECORD(S)"
@ 15,15 SAY "P.................................PROCESS
REPORTS"
@ 16,15 SAY "G.................................GENERATE
REPORTS"
@ 17,15 SAY "E.................................EXIT"
TCODE = " "
@ 20,10 SAY "enter your choice" GET TCODE
READ
IF UPPER(TCODE) = " "
  LOOP
ELSE
  DO CASE
   CASE UPPER(TCODE) = "A"
      CLEA
      DO VAADD
   CASE UPPER(TCODE) = "M"
      CLEA
      DO VAMODI1
   CASE UPPER(TCODE) = "D"
      CLEA
      DO VADEL
   CASE UPPER(TCODE) = "G"
      CLEA
      DO GENERATE
   CASE UPPER(TCODE) = "P"
      CLEA
      DO VAMODI
```

```
   OTHERWISE
      CLEA
      ANS = " "
      @ 12,12 SAY "TO EXIT (Y/N) ?" GET ANS
      READ
      IF UPPER(ANS) = "N"
        CLEA
        LOOP
      ELSE
        CLEA
        EXIT
      ENDIF
ENDCASE
ENDIF
ENDDO
SET TALK ON
SET ECHO ON
SET SCORE ON
SET STAT ON


      ****** VAADD PRG ******

SET TALK OFF
SET SCORE OFF
SET ECHO OFF
SET STATUS OFF
SET COLO TO RW/B+*
@ 12,12 SAY "you are about to make DATA ENTRY....OK"
SET COLO TO
@ 19,12 SAY "please wait......"
INK = INKEY(2)
CLEA
 A:USE ADMISION
MRNO = SPACE(8)
MFNO = SPACE(5)
MSNAME = SPACE(12)
MONAME = SPACE(5)
MINST = SPACE(10)
MPRE = SPACE(3)
MDGRAD = SPACE(4)
MCOURSE = SPACE(4)
MOPT = SPACE(4)
STORE 0 TO MYGRAD, MYADMIS, MSUB1, MSUB2, MSUB3, MSUB4, MSUB5,
MSUB6
CLEA
SET COLO TO RW+,RG+,G
DO WHILE .T.
   MFNO = FORM_NO
   MRNO = REG_NO
   MSNAME = SURNAME
   MONAME = OTH_NAME
   MINST = INSTITUT
   MOPT = OPTION
```

```
   MPRE = PRE_ND
   MYGRAD = YR_GRAD
   MYADMIS = YR_ADMIS
   MDGRAD = DIP_GRAD
   MSUB1 = SUB1
   MSUB2 = SUB2
   MSUB3 = SUB3
   MSUB4 = SUB4
   MSUB5 = SUB5
   MSUB6 = SUB6
   @ 0,2 SAY "DATE: "
   @ 0,62 SAY "TIME: "
   @ 0,8 SAY DATE()
   @ 0,67 SAY TIME()
   @ 1,2 TO 14,75 DOUBLE
   @ 16,2 TO 20,75 PANEL        &&DOUBLE
   SET COLO TO BR+
   @ 4,25 SAY "THE FEDERAL POLYTECHNIC BIDA"
   @ 5,25 SAY "DATA ENTRY ROUTINE"
   @ 6,25 TO 6,42
   @ 3,6 TO 7,14
   @ 4,7 SAY "ADD"
   @ 5,7 SAY "RECORDS"
   @ 15,30 SAY "COURSE"
   @ 12,6 SAY "SUBJECTS:"
   @ 13,6 SAY "GRADE:"
   @ 8,6 SAY "FORM NO" GET MFNO PICT "9999"
   @ 8,23 SAY "REG.NO" GET MRNO
   @ 8,50 SAY "COURSE APPLIED " GET MCOURSE
   READ
   @ 15,40 SAY MCOURSE
   DO CASE
      CASE UPPER(MCOURSE) = "ACCT"
     SET COLO TO
     @ 17,10 SAY "SUB1 = ENGLISH                SUB2 =
MATHS/FURTHER MATHS"
     @ 18,10 SAY "SUB3 = ACCOUNTS               SUB4 =
ECONOMICS/PHYSICS"
     @ 19,10 SAY "SUB5 = BUS.METHODS/BIO/GEO    SUB6 =
GOVT/HIST/AGRIC"
      CASE UPPER(MCOURSE) = "STAT"
     SET COLO TO
     @ 17,10 SAY "SUB1 = ENGLISH                 SUB2 =
MATHEMATICS"
     @ 18,10 SAY "SUB3 = STATISTICS/ECONS        SUB4 =
GEO/PHYSICS"
     @ 19,10 SAY "SUB5 = BIO/AGRIC               SUB6 =
GOVT/FUR.MATHS"
     CASE UPPER(MCOURSE) = "ELEC"
     SET COLO TO
     @ 17,10 SAY "SUB1 = ENGLISH                 SUB2 =
MATHEMATICS"
     @ 18,10 SAY "SUB3 = PHYSICS                 SUB4 =
CHEMISTRY"
```

```
     @ 19,10 SAY "SUB5 = GEO/FUR. MATHS          SUB6 =
BIOLOGY/ECONS"
     CASE UPPER(MCOURSE) = "QS"
     SET COLO TO
     @ 17,10 SAY "SUB1 = ENGLISH                 SUB2 =
MATHEMATICS"
     @ 18,10 SAY "SUB3 = PHYSICS                 SUB4 =
CHEMISTRY"
     @ 19,10 SAY "SUB5 = GEO/TECH.DRW/GOVT       SUB6 =
ECONS/FUR MATHS"
   ENDCASE
   @ 12,17 SAY "SUB1     SUB2     SUB3     SUB4     SUB5
SUB6"
   @ 21,2 SAY "enter any four (4) subjects from the above"
   @ 9,6 SAY "SURNAME:" GET MSNAME
   @ 9,33 SAY "OTHER-NAME:" GET MONAME
   @ 9,50 SAY "YEAR OF ADMISSION" GET MYADMIS PICTURE "9999"

   @ 10,6 SAY "INST.ATTENDED:" GET MINST
   @ 10,33 SAY "YR.OF GRAD:" GET MYGRAD PICTURE "9999"
   @ 10,50 SAY "COURSE OPTION:" GET MOPT
   *@ 11,6 SAY "YEAR OF ADMISSION:" GET MYADMIS PICTURE "9999"
   @ 11,33 SAY "DIPLOMA GRADE:" GET MDGRAD
   @ 11,60 SAY "PRE-ND:" GET MPRE
   @ 13,17 GET MSUB1 PICTURE "9"
   @ 13,26 GET MSUB2 PICTURE "9"
   @ 13,35 GET MSUB3 PICTURE "9"
   @ 13,43 GET MSUB4 PICTURE "9"
   @ 13,51 GET MSUB5 PICTURE "9"
   @ 13,59 GET MSUB6 PICTURE "9"
   READ
   @ 12,6 SAY "SUBJECTS"
   @ 13,6 SAY "GRADE: "
   SET COLO TO RB+*
   RESP = " "
   @ 23,10 SAY "are your entries correct (y/n)?" GET RESP
   READ
   IF UPPER(RESP) = "N"
    CLEA
    AN = " "
    @ 10,10 SAY "To Continue (Y/N)?" get AN
    READ
    IF UPPER(AN) = "Y"
       CLEA
       LOOP
    ELSE
       CLEA
       EXIT
    ENDIF
 ENDIF
 IF UPPER(RESP) = "Y"
   APPEND BLANK
   REPL FORM_NO WITH MFNO, REG_NO WITH MRNO, SURNAME WITH
MSNAME
```

```
   REPL OTH_NAME WITH MONAME, INSTITUT WITH MINST, DIP_GRAD
WITH MDGRAD
   REPL COURSE WITH MCOURSE, OPTION WITH MOPT, PRE_ND WITH
MPRE
   REPL YR_GRAD WITH MYGRAD, YR_ADMIS WITH MYADMIS, SUB1 WITH
MSUB1
   REPL SUB2 WITH MSUB2, SUB3 WITH MSUB3, SUB4 WITH MSUB4,
SUB5 WITH MSUB5
   REPL SUB6 WITH MSUB6
  ENDIF
  @ 21,1 CLEA TO 24,78
  CHO = " "
  @ 23,10 SAY "more records (y/n)?" GET CHO
  READ
  SET COLO TO
  IF UPPER(CHO) = "Y"
   CLEA
   LOOP
  ENDIF
   IF UPPER(CHO) = "N"
    CLEA
    EXIT
   ENDIF
ENDDO
CLEA
RETURN
```

******VAMODI PRG******

```
SET STATUS OFF
SET SCORE OFF
SET TALK OFF
SET ECHO OFF
I = 0
ON KEY LABEL F1 DO W2
DEFINE WINDOW W2 FROM 12,10 TO 16,70 DOUBLE
@ 10,10 TO 14,70
SET COLO TO G+*
@ 12,12 SAY "you are about to modify record(s) in the
base..ok"
@ 15,12 SAY "Please wait......."
I = INKEY(2)
SET COLO TO
CLEA
USE ADMISION
DO WHILE .T.
 SET COLO TO RW, G, Rg+
 RNO = "        "
 @ 12,10 TO 16,70 PANEL COLO RW/B+
 @ 11,20 SAY "<enter CANDIDATE'S REGISTRATION NUMBER"
 @ 14,33 GET RNO
 READ
 CLEA
 USE ADMISION
```

```
 LOCA FOR REG_NO = RNO
 IF FOUND()
  SET COLO TO RG+
  @ 0,2 SAY "DATE:"
  @ 0,67 SAY "TIME:"
  @ 0,8 SAY DATE()
  @ 0,73 SAY TIME()
  SET COLO TO
  @ 1,2 TO 15,78 DOUBLE
  @ 16,2 TO 20,78 PANEL COLO RW/B+
  @ 20,30 SAY "press <F1> for help"
  @ 4,25 SAY "THE FEDERAL POLYTECHNIC BIDA"
  @ 5,25 SAY "DATA MODIFICATION ROUTINE"
  @ 6,25 TO 6,50
  @ 3,6 to 7,14
  @ 4,7 SAY "MODIFY"
  @ 5,7 SAY "RECORDS"
  @ 15,30 SAY "COURSE:"
  @ 8,6 SAY "FORM NO" GET FORM_NO
  @ 8,23 SAY "REG.NO" GET REG_NO
  @ 8,50 SAY "COURSE APPLIED" GET COURSE
  READ
  @ 15,40 SAY COURSE
  DO CASE
     CASE COURSE = "ACCT"
       @ 17,10 SAY "SUB1 = ENGLISH                SUB2 =
MATHS/FURTHER MATHS"
       @ 18,10 SAY "SUB3 = ACCOUNTS               SUB4 =
ECONOMICS/PHYSICS"
       @ 19,10 SAY "SUB5 = BUS.METHODS/BIO/GEO    SUB6 =
GOVT/HIST/AGRIC"
     CASE COURSE = "STAT"
       @ 17,10 SAY "SUB1 = ENGLISH                SUB2 =
MATHEMATICS"
       @ 18,10 SAY "SUB3 = STATISTICS/ECONOMICS   SUB4 =
GEO/PHYSICS"
       @ 19,10 SAY "SUB5 = BIO/AGRIC              SUB6 =
GOVT/FUR.MATHS"
    CASE COURSE = "ELEC"
       @ 17,10 SAY "SUB1 = ENGLISH                SUB2 =
MATHEMATICS"
       @ 18,10 SAY "SUB3 = PHYSICS                SUB4 =
CHEMISTRY"
       @ 19,10 SAY "SUB5 = GEO/FUR.MATHS          SUB6 =
BIOLOGY/ECONS"
    CASE COURSE = "QS"
       @ 17,10 SAY "SUB1 = ENGLISH                SUB2 =
MATHEMATICS"
       @ 18,10 SAY "SUB3 = PHYSICS                SUB4 =
CHEMISTRY"
       @ 19,10 SAY "SUB5 = GEO/TECH.DRW/GOVT      SUB6 =
ECONS/FUR.MATHS"
 ENDCASE
 @ 21,2 SAY "enter any four (4) subjects from the above"
```

```
 @ 9,6 SAY "SURNAME:" GET SURNAME
 @ 9,40 SAY "OTHER-NAME:" GET OTH_NAME
 @ 10,6 SAY "INST.ATTENDED:" GET INSTITUT
 @ 10,40 SAY "YR.OF GRAD:" GET YR_GRAD
 @ 11,6 SAY "COURSE OPTION:" GET OPTION
 @ 11,40 SAY "YR OF ADMISSION:" GET YR_ADMIS
 @ 12,6 SAY "DIP. GRADE:" GET DIP_GRAD
 @ 12,40 SAY "PRE_ND:" GET PRE_ND
 @ 13,6 SAY "SUB1:" GET SUB1
 @ 13,30 SAY "SUB2:" GET SUB2
 @ 13,54 SAY "SUB3:" GET SUB3
 @ 14,6 SAY "SUB4:" GET SUB4
 @ 14,30 SAY "SUB5:" GET SUB5
 @ 14,54 SAY "SUB6:" GET SUB6
 READ
 @ 12,6 SAY "SUBJECTS:"
 @ 13,6 SAY "GRADE:"
 @ 21,1 CLEA TO 24,78
 RESP = " "
 @ 23,10 SAY "to effect CHANGE (y/n)?" GET RESP PICT "Y"
 READ
 @ 21,1 CLEA TO 24,78
  REPL FORM_NO WITH FORM_NO, REG_NO WITH REG_NO
  REPL SURNAME WITH SURNAME, OTH_NAME WITH OTH_NAME
  REPL INSTITUT WITH INSTITUT, DIP_GRAD WITH DIP_GRAD
  REPL COURSE WITH COURSE, OPTION WITH OPTION, PRE_ND WITH
PRE_ND
  REPL YR_GRAD WITH YR_GRAD, SUB1 WITH SUB1, SUB2 WITH SUB2,
SUB3 WITH SUB3
  REPL SUB4 WITH SUB4, SUB5 WITH SUB5, YR_ADMIS WITH YR_ADMIS,
SUB6 WITH SUB6
 ANS = " "
 @ 23,10 SAY "to modify another record (y/n)?" GET ANS PICT
"Y"
 READ
 IF UPPER(ANS) = "Y"
   CLEA
   LOOP
 ELSE
   CLEA
   EXIT
 ENDIF
ENDIF
 IF .NOT. FOUND()
    CLEA
    @ 10,10 TO 14,70 PANEL COLO G+
    @ 15,10 SAY "you have entered " + RNO
    SET COLO TO R+*
    @ 12,20 SAY "this record does not EXIST"
    I = INKEY(1)
    CLEA
    DEC = " "
    @ 8,10 TO 12,70
    @ 10,20 SAY "to try another record (y/n)? " GET DEC
```

```
    READ
    IF UPPER(DEC) = "Y"
       CLEA
       LOOP
    ENDIF
    IF UPPER(DEC) = "N"
       CLEA
       EXIT
    ENDIF
 ENDIF
ENDDO
SET TALK ON
SET STAT ON
CLOSE DATABASES
CLOSE ALL
RETURN
*******************PROCEDURE W2*********************
PROCEDURE W2
ACTIVATE WINDOW W2
? " i.  press <CTRL+END> to save"
? " ii. use <ENTER> or the <ARROW> to move around the record"
wait
DEACTIVATE WINDOW W2
RETURN

           ********VADEL PRG********

SET TALK OFF
SET STATUS OFF
SET SCORE OFF
SET BELL OFF
CLEA
I = 0
@ 10,10 TO 14,70
SET COLO TO GR+*
@ 12,15 SAY "you are about to DELETE Record(s) in the
database...ok"
SET COLO TO
I = INKEY(3)
USE ADMISION
CLEA
DO WHILE .T.
 CLEA
 SET COLO TO RW+,r+,RG+
 REGNO = "         "
 @ 13,10 TO 16,70 PANEL
 @ 11,20 SAY " <enter CANDIDATE'S REGISTRATION NUMBER>"
 @ 14,33 GET REGNO
 READ
 CLEA
 LOCA FOR REG_NO = REGNO
 IF FOUND()
  @ 4,3 SAY DATE()
  @ 4,69 SAY TIME()
```

```
 @ 5,2 TO 20,78 PANEL
  @ 8,17 SAY "THE FEDERAL POLYTECHNIC BIDA"
  @ 9,17 SAY "DATA DELETION ROUTINE"
  @ 10,17 TO 10,37
  @ 7,6 TO 10,14
  @ 8,8 SAY "DELETE"
  @ 9,8 SAY "RECORD"
  @ 12,8 SAY "FORM-NO:" GET FORM_NO
  @ 12,35 SAY "REG.NO:" GET REG_NO
  @ 12,53 SAY "COURSE:" GET COURSE
  @ 13,8 SAY "SURNAME:" GET SURNAME
  @ 13,27 SAY "OTHER-NAME:" GET OTH_NAME
  @ 13,50 SAY "INST.ATTENDED:" GET INSTITUT
  @ 14,8 SAY "YR.OF GRAD:" GET YR_GRAD
  @ 14,27 SAY "COURSE OPTION:" GET OPTION
  @ 14,49 SAY "YEAR OF ADMISSION:" GET YR_ADMIS
  @ 15,8 SAY "DIPLOMA GRADE:" GET DIP_GRAD
  @ 15,40 SAY "PRE-ND:" GET PRE_ND
  @ 16,8 SAY "SUB1:" GET SUB1
  @ 16,29 SAY "SUB2:" GET SUB2
  @ 16,45 SAY "SUB3:" GET SUB3
  @ 16,60 SAY "SUB4:" GET SUB4
  @ 17,8 SAY "SUB5:" GET SUB5
  @ 17,29 SAY "SUB6:" GET SUB6
  READ
  ANS = "Y"
  @ 20,15 SAY "are you sure you want to delete this record?
(y/n)" GET ANS
  READ
  SET COLO TO
  IF UPPER(ANS) = "Y"
     DELETE
     PACK
     CLEA
     @ 12,12 SAY "the record has been deleted....ok"
     SET COLO TO
     I = INKEY(1)
     CLEA
  ENDIF
  DES = " "
  @ 22,15 SAY "Delete another record (Y/N)?" GET DES
  READ
  IF UPPER(DES) = "Y"
     CLEA
     LOOP
  ENDIF
  IF UPPER(DES) = "N"
     CLEA
     EXIT
  ENDIF
ELSE
    CLEA
    @ 8,10 TO 12,70 DOUB
    @ 10,20 SAY "you have entered " + REGNO
```

```
    @ 14,10 SAY "This Record does not
exist.................ok"
    I = INKEY(2)
    CLEA
    @ 10,10 TO 14,70 DOUB
    RESPO = " "
    @ 12,20 SAY "to continue (y/n) ? "  GET RESPO
    READ
    IF UPPER(RESPO) = "Y"
       CLEA
       LOOP
    ENDIF
    IF UPPER(RESPO) = "N"
       CLEA
       EXIT
     ENDIF
  ENDIF
ENDDO
RETURN
**************VAVIEW PRG
set talk off
set stat off
set score off
set echo off
set colo to r,rg+,b+
@ 10,12 say "NOTE"
@ 11,12 to 11,16
@ 12,12 say " 1...you are viewing data (records) in the
database....ok"
@ 14,12 say " 2...you can add data into the base"
@ 16,12 say " 3...you can make modications as well"
@ 17,12 say "     by changing the contents in your database"
@ 19,10 to 19,70 doub
wait    "          press any key to continue
.....................ok"
set colo to
clea
use admision
set colo to rw+,rg,r+
do while .not. eof()
     browse
     ans = "Y"
     @ 12,12 say "to continue (Y/N)" get ans
     read
     if upper(ans) = "Y"
          clea
          loop
     else
          clea
          exit
     endif
enddo
set talk on
set stat on
```

```
set echo on
set score on
return
            ******VAPROCESS. PRG******

SET STATUS OFF
SET SCORE OFF
SET TALK OFF
SET ECHO OFF
*ON KEY LABEL F1 DO W2
*DEFINE WINDOW W2 FROM 12,10 TO 16,70 DOUBLE
STORE SPACE(5) TO NC, MREMARKS
STORE 0 TO MYADMIS, MWEXP, MPOINTS, MYGRAD, MSUB1, MSUB2,
MSUB3, MSUB4, MSUB6
STORE 0 TO MPOINTS, MSUB1, MSUB2, MSUB3, MSUB4, MSUB5, MSUB6,
CR, PA
MREMARKS = SPACE(4)
SELECT 1
  USE ADMISION
SELECT 2
  USE ELIGIBLE
CLEA
SET COLO TO R+,G, RG+
@ 10,17 SAY "Processing Begins at "
@ 10,38 SAY TIME()
SELE 1
DO WHILE .NOT. EOF()
 SET COLO TO R+,G,RB
 SELE 1
  SET COLO TO RG+*
 @ 11,20 SAY "processing....................."
 @ 12,20 SAY "   processing....................."
 @ 13,20 SAY "      processing....................."
 MFNO = FORM_NO
 MRNO = REG_NO
 MSNAME = SURNAME
 MONAME = OTH_NAME
 MINST = INSTITUT
 MCOURSE = COURSE
 MOPT = OPTION
 MPRE = PRE_ND
 MDGRAD = DIP_GRAD
 MYADMIS = YR_ADMIS
 MYGRAD = YR_GRAD
 MSUB1 = SUB1
 MSUB2 = SUB2
 MSUB3 = SUB3
 MSUB4 = SUB4
 MSUB5 = SUB5
 MSUB6 = SUB6
 POINTS = MPOINTS
 REMARKS = MREMARKS
 NO_CR = NC
 MWEXP = MYADMIS - MYGRAD
```

```
 IF MDGRAD = "DIST"

   P1 = 4
 ENDIF
IF MDGRAD = "UC"
   P1 = 3
ENDIF
IF MDGRAD = "LC"
   P1 = 2
ENDIF
IF MDGRAD = "PASS"
   P1  = 1
ENDIF
IF MPRE = "PRE"
   P2 = 1
ELSE
   P2 = 0
ENDIF
DO CASE
   CASE (MSUB1 > 0) .AND. (MSUB1 <= 3)
        P3 = 3
     C1 = 1
        STORE 0 TO C2, C3
   CASE (MSUB1 > 3) .AND. (MSUB1 <= 6)
        P3 = 2
     C2 = 1
     STORE 0 TO C1,C3
   CASE (MSUB1 > 6) .AND. (MSUB1 <= 8)
        P3 = 1
     C3 = 1
        STORE 0 TO C1,C2
   OTHERWISE
        P3 = 0
        STORE 0 TO C1,C2,C3
ENDCASE
DO CASE
   CASE (MSUB2 > 0) .AND. (MSUB2 <= 3)
        P4 = 3
   CASE (MSUB2 > 3) .AND. (MSUB2 <= 6)
         P4 = 2
   CASE (MSUB2 > 6) .AND. (MSUB2 <= 8)
        P4 = 1
   OTHERWISE
        P4 = 0
ENDCASE
DO CASE
   CASE (MSUB3 > 0) .AND. (MSUB3 <= 3)
        P5 = 3
   CASE (MSUB3 > 3) .AND. (MSUB3 <= 6)
        P5 = 2
   CASE (MSUB3 > 6) .AND. (MSUB3 <= 8)
        P5 = 1
  OTHERWISE
      P5 = 0
```

```
ENDCASE
 DO CASE

    CASE (MSUB4 > 0) .AND. (MSUB4 <= 3)
         P6 = 3
    CASE (MSUB4 > 3) .AND. (MSUB4 <= 6)
         P6 = 2
    CASE (MSUB4 > 6) .AND. (MSUB4 <= 8)
         P6 = 1
    OTHERWISE
        P6 = 0
 ENDCASE
 DO CASE
    CASE (MSUB5 > 0) .AND. (MSUB5 <= 3)
         P7 = 3
    CASE (MSUB5 > 3) .AND. (MSUB5 <= 6)
         P7 = 2
    CASE (MSUB5 > 6) .AND. (MSUB5 <= 8)
         P7 = 1
   OTHERWISE
       P7 = 0
 ENDCASE
 DO CASE
    CASE (MSUB6 > 0) .AND. (MSUB6 <= 3)
         P8 = 3
    CASE (MSUB6 > 3) .AND. (MSUB6 <= 6)
         P8 = 2
    CASE (MSUB6 > 6) .AND. (MSUB6 <= 8)
         P8 = 1
    OTHERWISE
        P8 = 0
 ENDCASE
 DO CASE
    CASE (MSUB1 > 0) .AND. (MSUB1 <= 6)
         C1 = 1
         STORE 0 TO C2,C3
    CASE (MSUB1 > 6) .AND. (MSUB1 <= 8)
         C2 = 1
         STORE 0 TO C1,C3
    OTHERWISE
         STORE 0 TO C3,C1, C2
 ENDCASE
 DO CASE
    CASE (MSUB2 > 0) .AND. (MSUB2 <= 6)
         D1 = 1
         STORE 0 TO D2,D3
    CASE (MSUB2 > 6) .AND. (MSUB2 <= 8)
      D2 = 1
      STORE 0 TO D1
   OTHERWISE
      STORE 0 TO D3, D2,D1
 ENDCASE
 DO CASE
    CASE (MSUB3 > 0) .AND. (MSUB3 <= 6)
```

```
      E1 = 1
      E2 = 0
   CASE (MSUB3 > 6) .AND. (MSUB3 <= 8)

      E2 = 1
      E1 = 0
   OTHERWISE
      STORE 0 TO  E3, E2,E1
ENDCASE
DO CASE
   CASE (MSUB4 > 0) .AND. (MSUB4 <= 6)
      F1 = 1
      F2 = 0
   CASE (MSUB4 > 6) .AND. (MSUB4 <= 8)
      F2 = 1
      F1 = 0
   OTHERWISE
      STORE 0 TO F3, F1,F2
ENDCASE
DO CASE
   CASE (MSUB5 > 0) .AND. (MSUB5 <= 6)
      G1 = 1
      G2 = 0
   CASE (MSUB5 > 6) .AND. (MSUB5 <= 8)
      G2 = 1
      G1 = 0
   OTHERWISE
         STORE 0 TO G3, G2,G1
ENDCASE
DO CASE
   CASE (MSUB6 > 0) .AND. (MSUB6 <= 6)
      H1 = 1
      H2 = 0
   CASE (MSUB6 > 6) .AND. (MSUB6 <= 8)
      H2 = 1
      H1 = 0
   OTHERWISE
         STORE 0 TO H3, H2, H1
ENDCASE
CR = C1 + D1 + E1 + F1 + G1 + H1
PA =  C2 + E2 + F2 + G2 + H2 + D2
DO CASE
   CASE CR = 4
      NC = "4C,0P"
ENDCASE
DO CASE
   CASE CR = 3
      IF (PA = 1)
         NC = "3C,1P"
      ELSE
         NC = "3C,0P"
      ENDIF
ENDCASE
DO CASE
```

```
   CASE CR = 2
     IF (PA = 2)
        NC = "2C,2P"
     ENDIF

     IF (PA = 1)
        NC = "2C,1P"
     ENDIF
     IF (PA = 0)
        NC = "2C,0P"
     ENDIF
ENDCASE
DO CASE
   CASE CR = 1
     IF (PA = 3)
        NC = "1C,3P"
     ENDIF
     IF (PA = 2)
       NC = "1C,2P"
     ENDIF
     IF (PA = 1)
       NC = "1C,1P"
     ENDIF
     IF (PA = 0)
       NC = "1C,0P"
     ENDIF
ENDCASE
DO CASE
   CASE CR = 0
     IF (PA = 4)
        NC = "0C,4P"
     ENDIF
     IF (PA = 3)
        NC = "0C,3P"
     ENDIF
     IF (PA = 2)
        NC = "0C,2P"
     ENDIF
     IF (PA = 1)
        NC = "0C,1P"
     ENDIF
     IF (PA = 0)
        NC = "0C,0P"
     ENDIF
ENDCASE
DO CASE
   CASE MDGRAD = "PASS"
        IF MWEXP >= 2
           P9 = 1
        ELSE
           P9 = 0
        ENDIF
   CASE MDGRAD = "DIST"
        IF MWEXP >= 1
```

```
            P9 = 1
         ELSE
            P9 = 0
         ENDIF
   CASE MDGRAD = "UC"

         IF MWEXP >= 1
            P9 = 1
         ELSE
            P9 = 0
         ENDIF
   CASE MDGRAD = "LC"
         IF MWEXP >= 1
            P9 = 1
         ELSE
            P9 = 0
         ENDIF
   OTHERWISE
            P9 = 0
ENDCASE
MPOINTS = P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8 + P9
DO CASE
   CASE MDGRAD <> "PASS"
         IF MWEXP >= 1
            DO CASE
               CASE MPOINTS >= 8
                     IF    (MSUB1 = 0) .OR. (MSUB2 = 0)
                           IF MPRE = "PRE"
                              MREMARKS = "Q*"
                           ELSE
                              MREMARKS = "NQ**"
                           ENDIF
                     ELSE
                        MREMARKS = "Q"
                     ENDIF
               CASE MPOINTS < 8
                  MREMARKS = "NQ"
            ENDCASE
         ELSE
            MREMARKS = "NQ*"
         ENDIF
CASE MDGRAD = "PASS"
         IF MWEXP >= 2
            DO CASE
               CASE MPOINTS >= 8
                     IF (MSUB1 = 0) .OR. (MSUB2 = 0)
                           IF MPRE = "PRE"
                               MREMARKS = "Q*"
                           ELSE
                              MREMARKS = "NQ**"
                           ENDIF
                     ELSE
                         MREMARKS = "Q"
                     ENDIF
```

```
                CASE MPOINTS < 8
                     MREMARKS = "NQ"
           ENDCASE
      ELSE
           MREMARKS = "NQ*"
      ENDIF

 ENDCASE
  SELE 2
    APPEND BLANK
  REPL FORM_NO WITH MFNO, REG_NO WITH MRNO
  REPL SURNAME WITH MSNAME, OTH_NAME WITH MONAME, NO_CR WITH
NC
  REPL INSTITUT WITH MINST, DIP_GRAD WITH MDGRAD
  REPL COURSE WITH MCOURSE, OPTION WITH MOPT, PRE_ND WITH MPRE
  REPL YR_GRAD WITH MYGRAD, SUB1 WITH MSUB1, SUB2 WITH MSUB2
  REPL SUB3 WITH MSUB3, SUB4 WITH MSUB4, SUB5 WITH MSUB5
  REPL SUB6 WITH MSUB6, POINTS WITH MPOINTS, REMARKS WITH
MREMARKS
SET COLO TO
SELE 1
SKIP
IF EOF()
   SET COLO TO RG+
   @ 11,17 CLEA TO 13,70
   @ 13,17 SAY "processing ends at"
   @ 13,37 SAY TIME()
   @ 15,17 SAY "press any key to continue....................."
   WAIT " "
ENDIF
ENDDO
SET STAT ON
CLOSE DATABASES
CLOSE ALL
RETURN
****************GENERATE. PRG*********
SET TALK OFF
SET SCORE OFF
SET STAT OFF
SET ECHO OFF
DO WHILE .T.
    SET COLO TO Rw+,G,gR+
    @ 10,26 SAY "GENERATING REPORT SUBMENU"
    @ 11,10 TO 16,70 DOUB
    @ 12,11 SAY "I.......................... .GENERATE
INTERMEDIATE REPORT"
    @ 13,11 SAY
"F.....................................GENERATE FINAL REPORT"
    @ 14,11 SAY
"P.....................................PRINT FINAL REPORT"
    @ 15,11 SAY
"E.....................................................EXIT"
    OPTI = " "
       @ 17, 15 SAY "enter option" get opti
```

```
      READ
      IF UPPER(OPTI) = "I"
         CLEA
         DO REPOTR1
      ENDIF
      IF UPPER(OPTI) = "F"
         CLEA

         DO FREPORT
      ENDIF
      IF UPPER(OPTI) = "P"
         CLEA
         DO REPOTR2
      ENDIF
      IF UPPER(OPTI) = "E"
         CLEA
         EXIT
      ENDIF
ENDDO
SET TALK OFF
SET STAT OFF
RETU

                  *****FREPORT******
SET TALK OFF
SET STAT OFF
SET SCORE OFF
SET ECHO OFF
CLEA
MRNO = SPACE(8)
MSNAME = SPACE(15)
STORE SPACE(4) TO MONAME, MCOURSE, MREMARKS
MPOINT = 0
SELE 1
 USE ADMISION
SELE 2
 USE ELIGIBLE
SELE 3
 USE AWARD
K = 1
I = 0
SET COLO TO RW/B+*
@ 14,15 SAY "you are about to generate REPORT on successful
APPLICANTS"
@ 16,15 SAY "Please wait...."
 = INKEY(2)
CLEA
DO WHILE .T.
 CLEA
 SET COLO TO RW/B+
 MRNO = "       "
 @ 12,10 TO 14,70 PANEL
 @ 11,25 SAY "<enter REGISTRATION NUMBER>"
 @ 13,32 GET MRNO
```

```
 READ
 SELE 2
 *USE ELIGIBLE
 LOCATE FOR REG_NO = MRNO
  IF  FOUND()
   CLEA
   @ 5,10 TO 15,70 DOUBLE

   SET COLO TO R+
   @ 16,12 TO 18,68 PANEL
   @ 4,10 SAY DATE()
   @ 4,63 SAY TIME()
   SET COLO TO
   SET COLO TO G+
   @ 6,12 SAY "THE FEDERAL POLYTECHNIC BIDA"
   @ 7,12 SAY "ROUTINE FOR GENERATING FINAL ADMISSION INTO HND
PROGRAMS"
   @ 8,12 SAY REPLICATE ("_", 57)
   SET COLO TO R+
   @ 17,18 SAY "Press <CTRL+END> to SAVE, <ESC> to ABORT"
   *@ 9,20 SAY "SERIAL NUMBER: " GET S_NO
   @ 10,20 SAY "REGISTRATION NUMBER: " GET REG_NO
   @ 11,20 SAY "SURNAME: " GET SURNAME
   @ 12,20 SAY "OTHER NAMES: " GET OTH_NAME
   @ 13,20 SAY "COURSE APPLIED FOR: " GET COURSE
   @ 14,20 SAY "POINTS SCORED: " GET POINTS
   READ
   RESP = " "
   SET COLO TO RG+
   @ 19,10 SAY "Is the candidate selected (y/n)?" GET RESP
   READ
   IF UPPER(RESP) = "N"
    CLEA
    LOOP
   ENDIF
   IF UPPER(RESP) = "Y"
   MRNO = REG_NO
   MSNAME = SURNAME
   MONAME = OTH_NAME
   MCOURSE = COURSE
   MPOINTS = POINTS
   SELE 3
     USE AWARD
    APPEND BLANK
    REPL REG_NO WITH MRNO, SURNAME WITH MSNAME
    REPL OTH_NAME WITH MONAME, COURSE WITH MCOURSE, POINTS
WITH MPOINTS
   ENDIF
   DECI = " "
   @ 20,15 SAY "More records (Y/N)?" GET DECI
   READ
   IF UPPER(DECI) = "Y"
     SELE 2
     CLEA
```

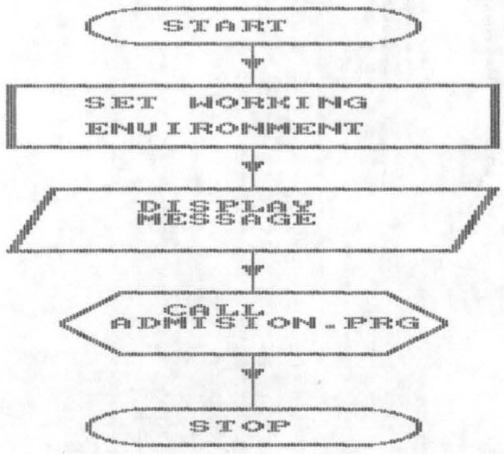
```
      LOOP
    ENDIF
    IF UPPER(DECI) = "N"
      CLEA
      EXIT
    ENDIF
 ELSE
  CLEA

  RES = " "
  @ 10,10 TO 12,70 PANEL
  SET COLO TO G+
  @ 11,20 SAY "no such record please"
  I = INKEY(2)
  CLEA
  @ 10,10 TO 12,70 PANEL
  @ 11,20 SAY "to continue (y/n) ?" GET RES
  READ
  IF UPPER(RES) = "Y"
     CLEA
     LOOP
  ENDIF
  IF UPPER(RES) = "N"
     CLEA
     EXIT
  ENDIF
 ENDIF
 ENDDO
 CLOSE DATABASES
 CLOSE ALL
 RETURN
                *****REPORT1*********

 SET TALK OFF
 SET SCORE OFF
 SET STATUS OFF
 *SET DEVI TO SCREEN
 CLEA
 SS = SPACE(7)
 STORE SPACE(4) TO MSNO
 STORE SPACE(10) TO MINST, MRNO
 MSNAME = SPACE(15)
 MONAME = SPACE(5)
 STORE SPACE(4) TO MDGRAD, MCOURSE, MREMARKS, T
 STORE 0 TO MYGRAD, MYADMIS
 STORE SPACE(3) TO MPRE
 STORE SPACE(2) TO MPASS, MCREDIT, MNCR
 MPOINTS = 0
 MYGRAD = 0
 STORE 0 TO MSUB1, MSUB2, MSUB3, MSUB4, MSUB5, MSUB6, RE
 @ 12,12 SAY "<ENTER SESSION>" GET SS
 READ
 USE ELIGIBLE
 INDEX ON UPPER(COURSE)+" "+UPPER(REG_NO) TO ADMIS
```

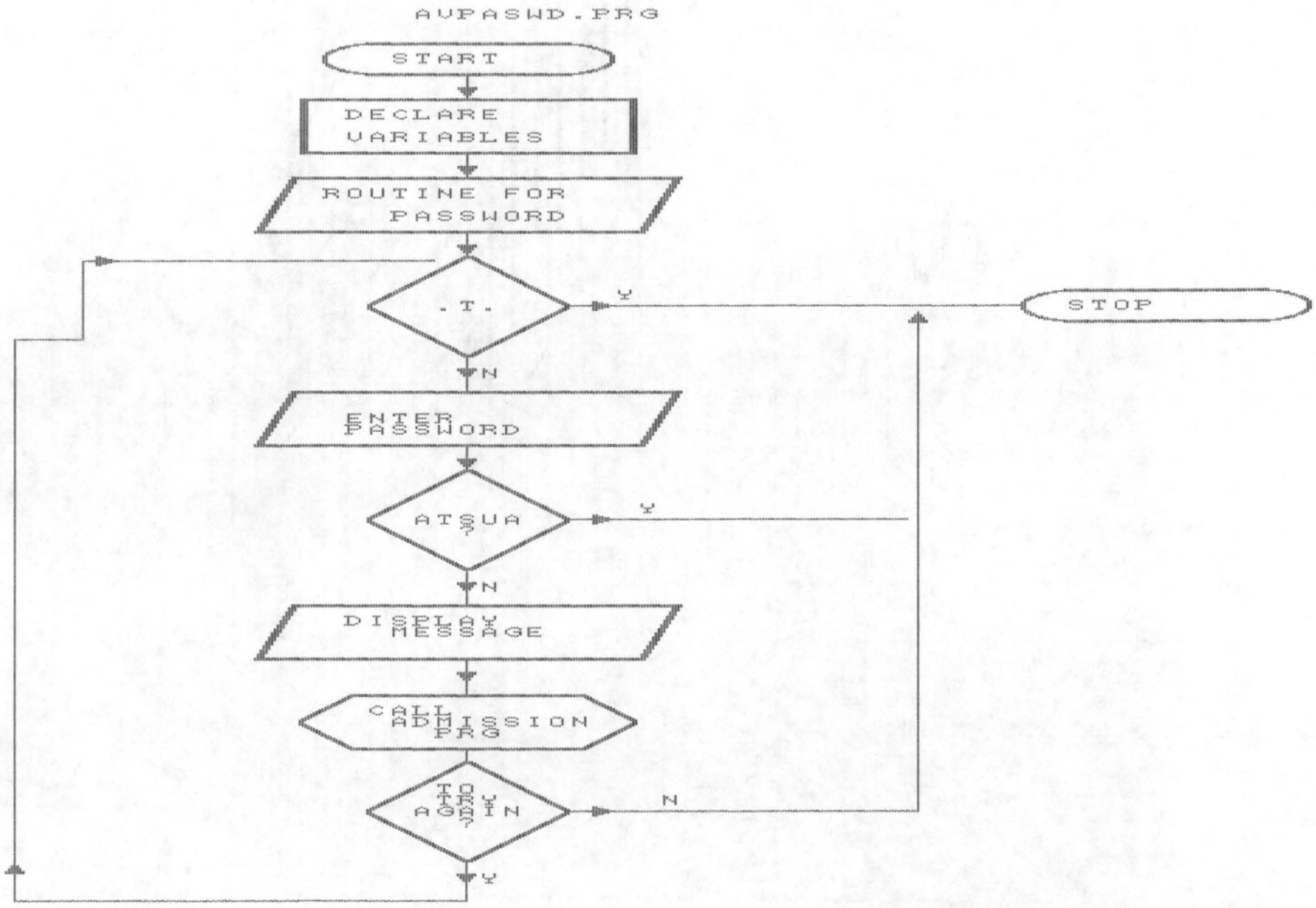
```
SNO = 0
K = 1
R = 7
CLEA
*SET DEVICE TO PRINT
@ 1,15 SAY "THE FEDERAL POLYTECHNIC BIDA."
@ 2,15 SAY "List of Shortlisted Candidates For admission into
HND"
@ 3,15 SAY "program For the " +ss + " Session."

@ 4,1 to 4,78 double
DO WHILE .NOT. EOF()
*SET DEVICE TO PRINT
*PRINTJOB
SNO = SNO + 1
@ 5,1 SAY "S/NO"
@ 5,6 SAY "REG/NO"
@ 5,17 SAY "CANDIDATE  NAME"
@ 5,34 SAY "CSE"
@ 5,39 SAY "INSTITUT"
@ 5,50 SAY "YEAR"
@ 5,55 SAY "DIP"
@ 5,59 SAY "O-L"
@ 5,65 SAY "EN"
@ 5,68 SAY "MA"
*@ 5,71 SAY "PRE"
@ 5,71 SAY "PTS"
@ 5,74 SAY " REMKS"
@ 6,1 TO 6,78 DOUBLE
MSNAME = SURNAME
MONAME = OTH_NAME
MDGRAD = DIP_GRAD
MYGRAD = YR_GRAD
MCOURSE = COURSE
MINST = INSTITUT
MPOINTS = POINTS
MREMARKS = REMARKS
MPRE = PRE_ND
MSUB1 = SUB1
MSUB2 = SUB2
MRNO = REG_NO
MNCR = NO_CR
@ R,1 SAY STR(SNO,2)
@ R,5 SAY MRNO
@ R,16 SAY MSNAME
@ R,28 SAY MONAME
@ R,34 SAY MCOURSE
@ R,39 SAY MINST
@ R,49 SAY STR(MYGRAD,4)
@ R,54 SAY MDGRAD
@ R,59 SAY MNCR
*@ R,62 SAY MPRE
@ R,65 SAY STR(MSUB1,1)
@ R,68 SAY STR(MSUB2,1)
```

```
@ R,71 SAY STR(MPOINTS,2)
@ R,75 SAY MREMARKS
R = R + 1
K = K + 1
 IF K >= 11
   WAIT
  @ 7,1 CLEA TO 7,78
  R = 7
ENDIF
*SET DEVI TO PRINT

SKIP
*SET DEVI TO PRIN
*ENDPRINT
ENDDO
SET TALK ON
SET SCORE ON
SET STAT ON
CLOSE DATABASES
CLOSE ALL
RETURN
                *****REPORT2*******
SET TALK OFF
SET SCORE OFF
SET STAT OFF
SS = SPACE(7)
SNO = 0
KOUNT = 0
STORE SPACE(4) TO MONAME, MCOURSE, MREMARKS, MPOINTS, MSNO
MSNAME = SPACE(15)
MRNO = SPACE(10)
@ 12,12 SAY "ENTER SESSION" GET SS
READ
R = 7
SET DEVI TO SCREEN
USE AWARD
INDEX ON UPPER(COURSE)+" "+UPPER(REG_NO) TO ELIGIBLE
CLEA
 DO WHILE .NOT. EOF()
 SET COLO TO Rw,G+,R+
 SNO = SNO + 1
 @ 1,13 SAY "THE FEDERAL POLYTECHNIC BIDA"
 @ 2,13 SAY "LIST OF CANDIDATES OFFERED ADMISSION INTO HND
PROGRAM"
 @ 3,13 SAY "FOR THE "+SS+" SESSION"
 @ 4,1 TO 4,78 DOUBLE
 @ 5,1 SAY "S/NO"
 @ 5,16 SAY "REG/NO"
 @ 5,32 SAY "CANDIDATE    NAME"
 @ 5,55 SAY "COURSE"
 @ 5,65 SAY "POINTS"
 @ 6,1 TO 6,78 DOUBLE
 SET COLO TO RG+
 MSNO = S_NO
```

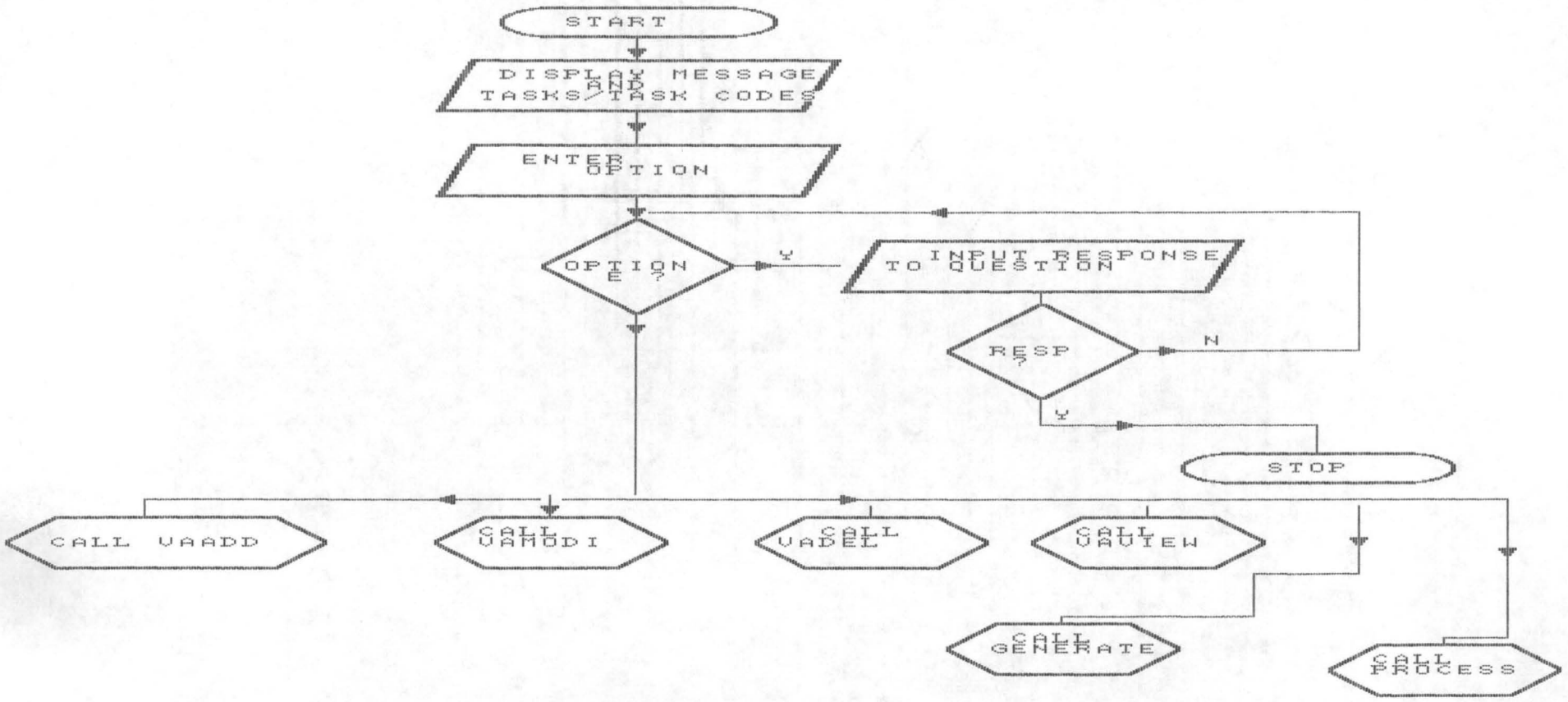
```
 MRNO = REG_NO
 MSNAME = SURNAME
 MONAME = OTH_NAME
 MCOURSE = COURSE
 MPOINTS = POINTS
 @ R,1 SAY  STR(SNO,4)
 @ R,16 SAY MRNO
 @ R,32 SAY MSNAME
 @ R,45 SAY MONAME
 @ R,55 SAY MCOURSE
 @ R,65 SAY STR(MPOINTS,2)

 IF KOUNT >= 15
  WAIT
  @ 7,1 CLEA TO 24,78
  KOUNT = 0
  R = 7
 ENDIF
R = R + 1
KOUNT = KOUNT + 1
SKIP
ENDDO
CLOSE DATABASES
CLOSE ALL
RETURN
```

PROGRAM FLOWCHART

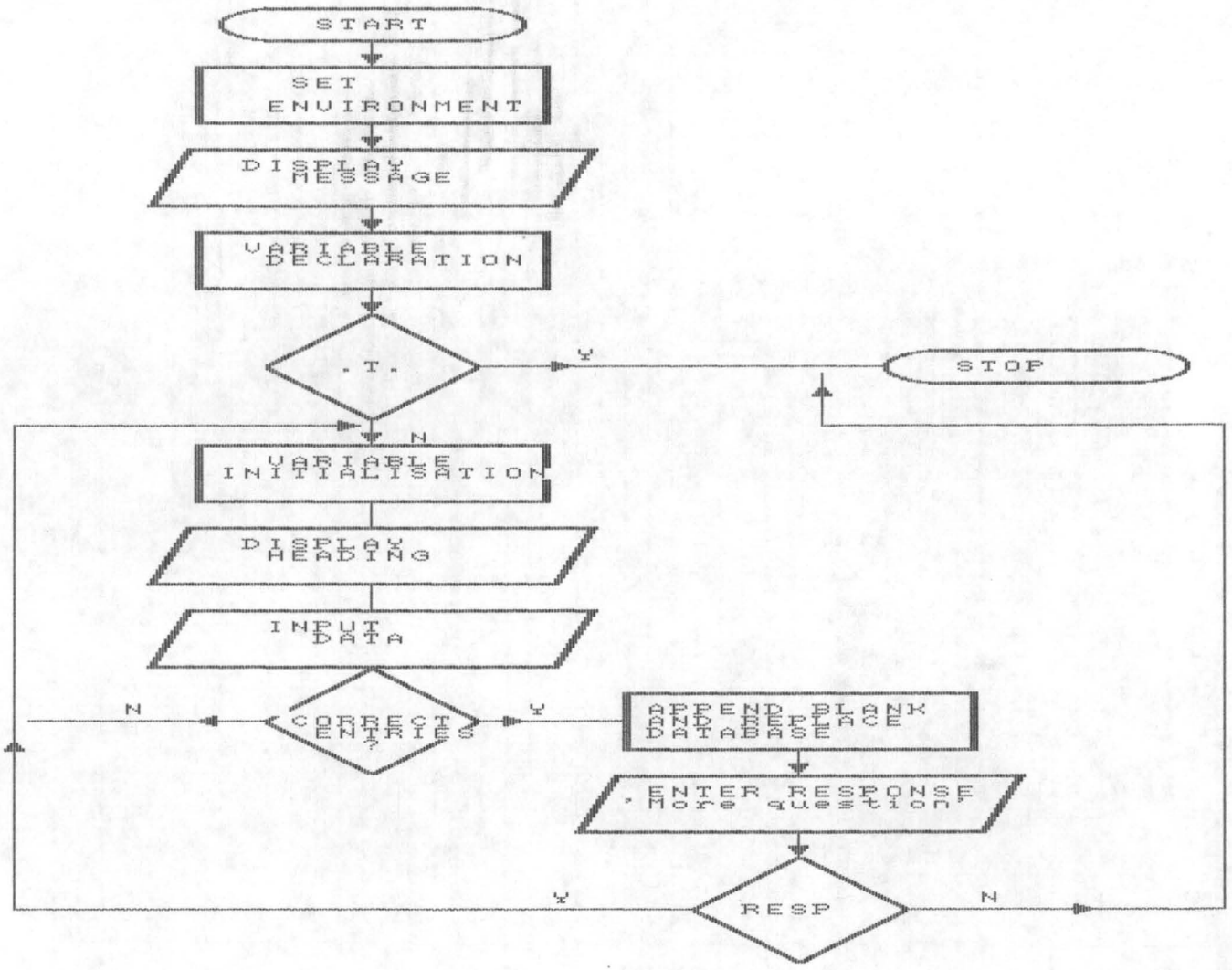



AVPASWD.PRG
START
DECLARE VARIABLES
ROUTINE FOR PASSWORD
.T.
Y
STOP
N
ENTER PASSWORD
ATSUA ?
Y
N
DISPLAY MESSAGE
CALL ADMISSION PRG
TO TRY AGAIN ?
N
Y

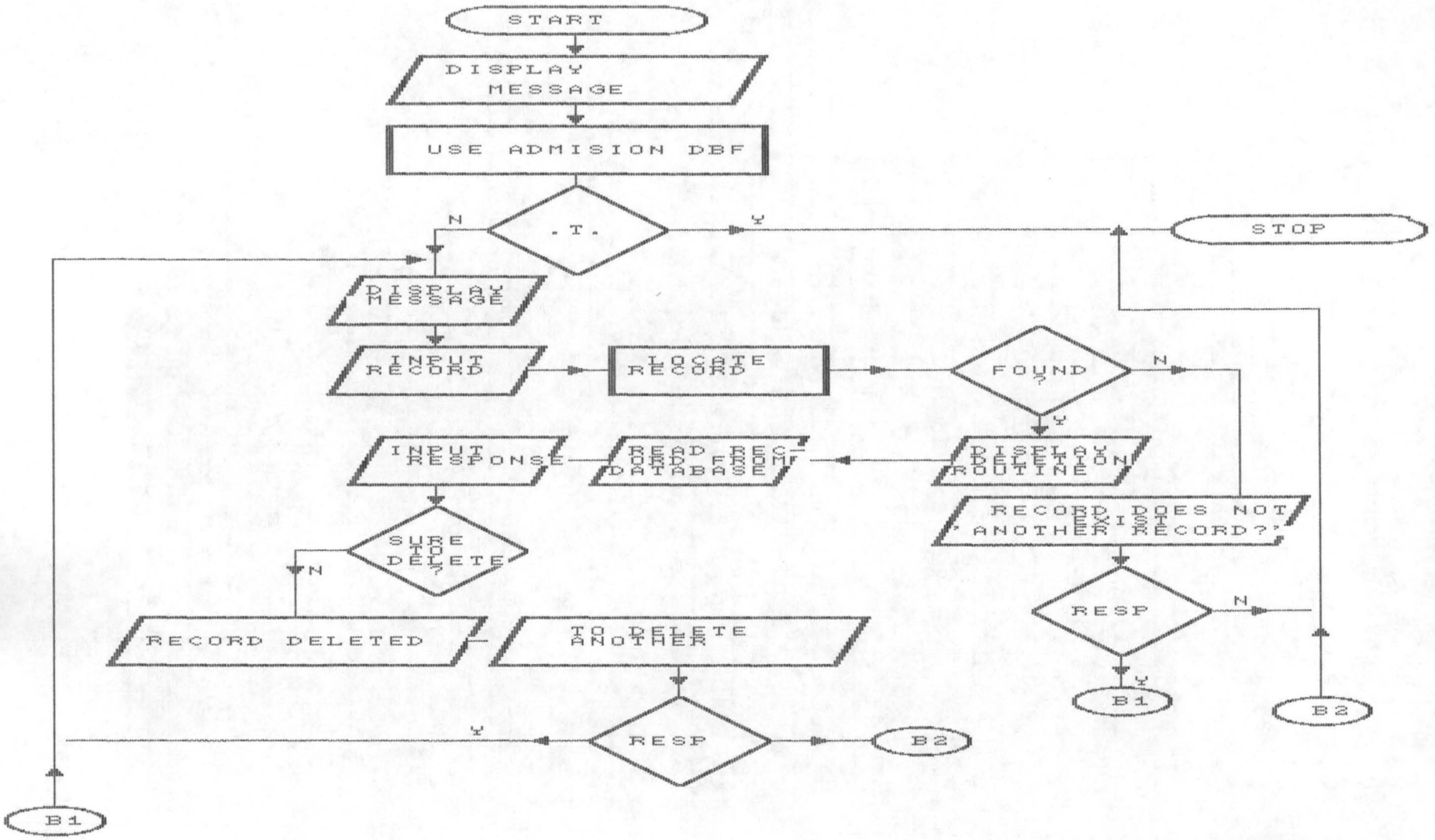
ADMISION PROGRAM



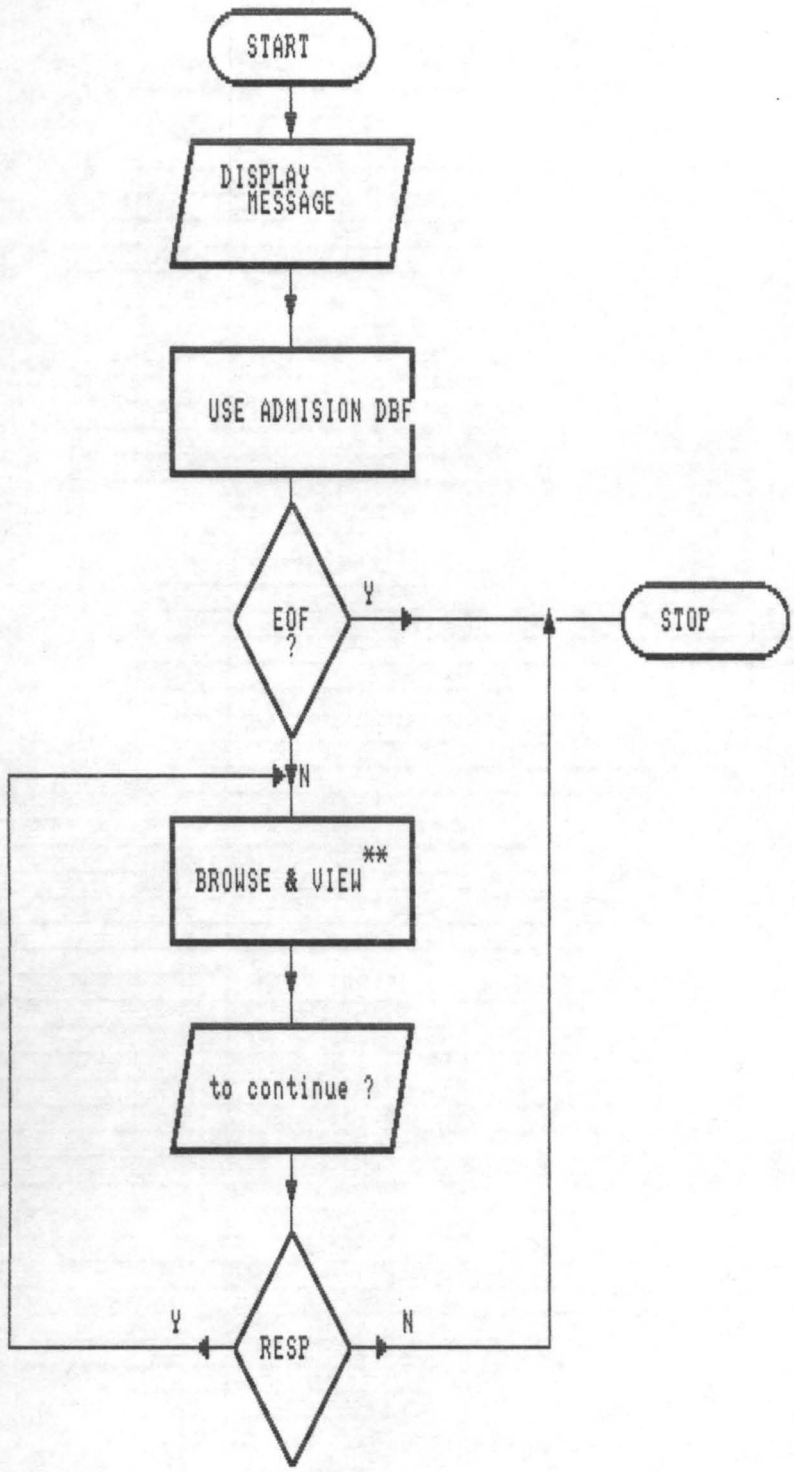
VAADD PROGRAM



VADEL PROGRAM

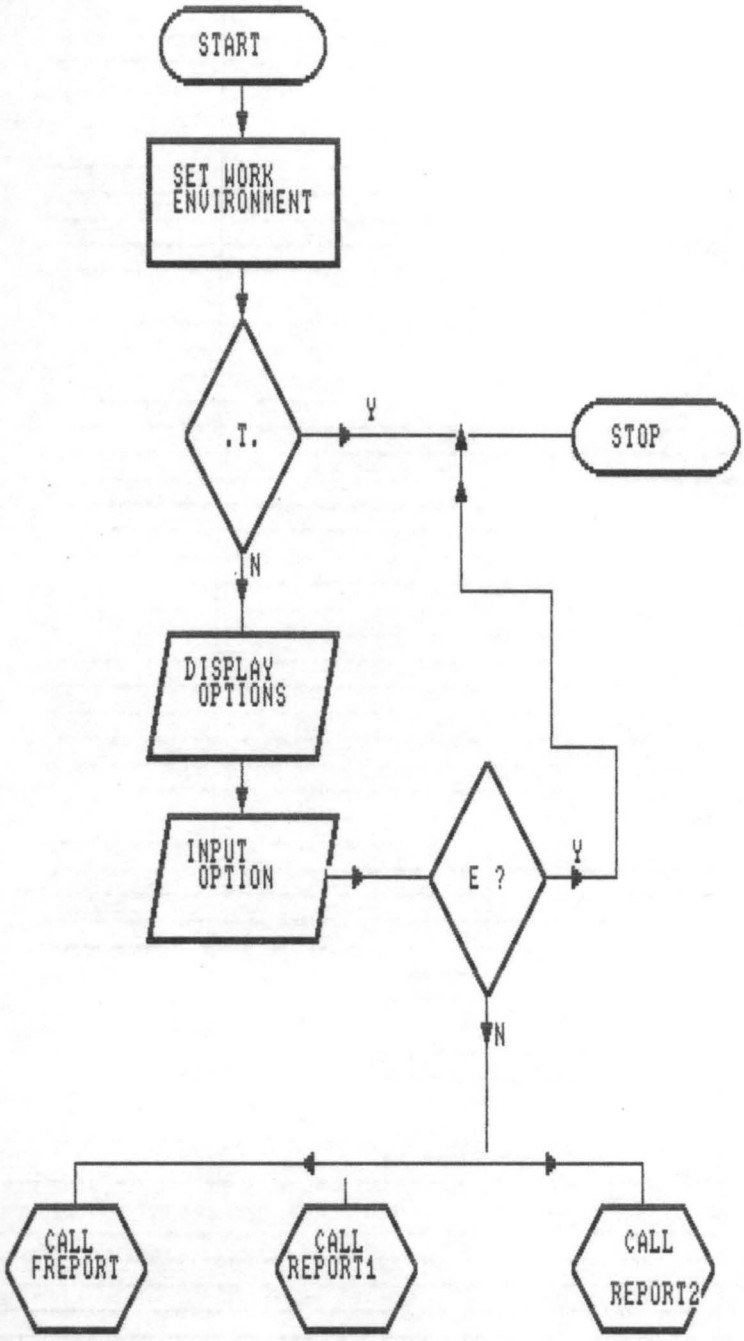


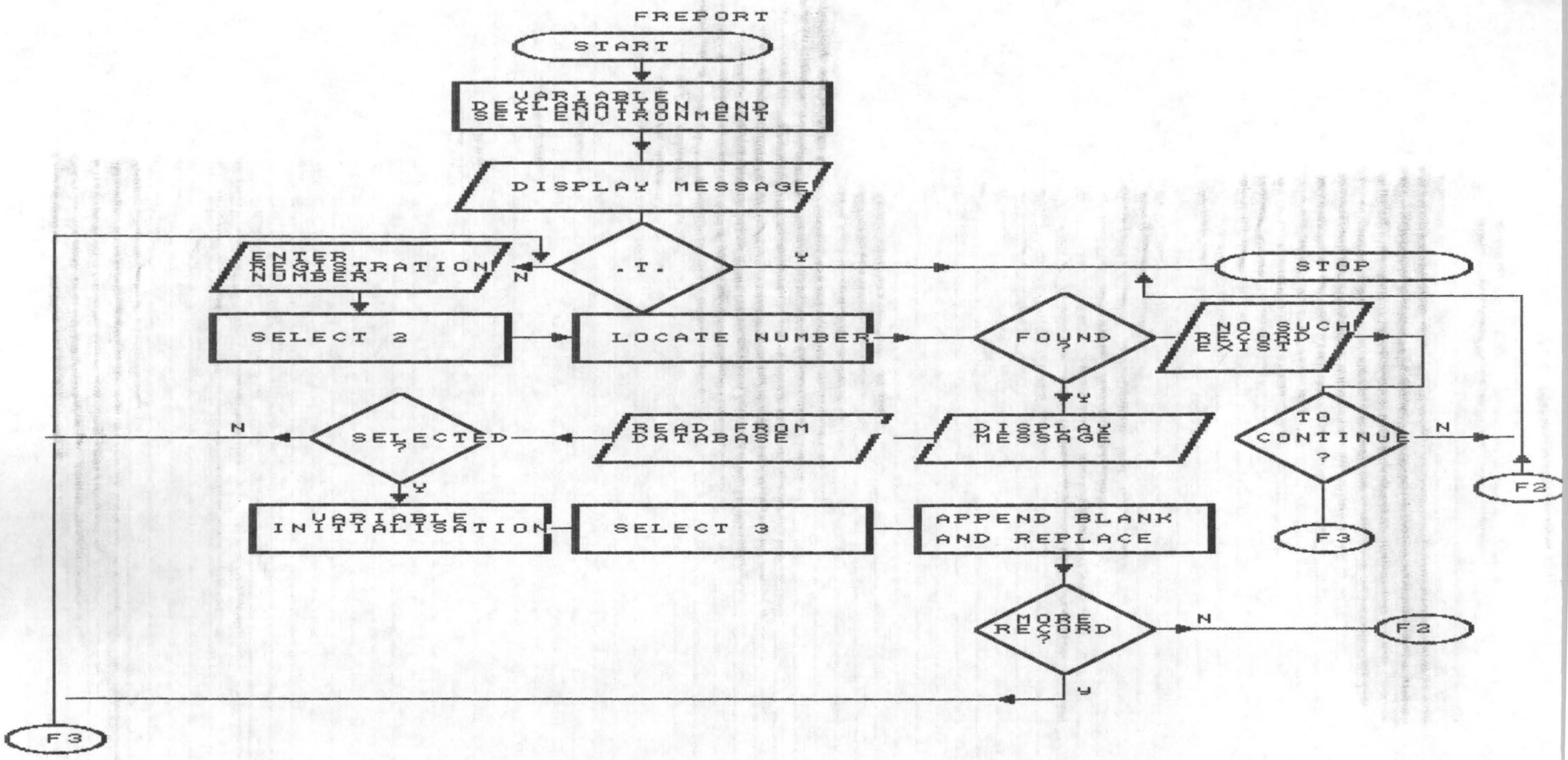
VAVIEW PROGRAM



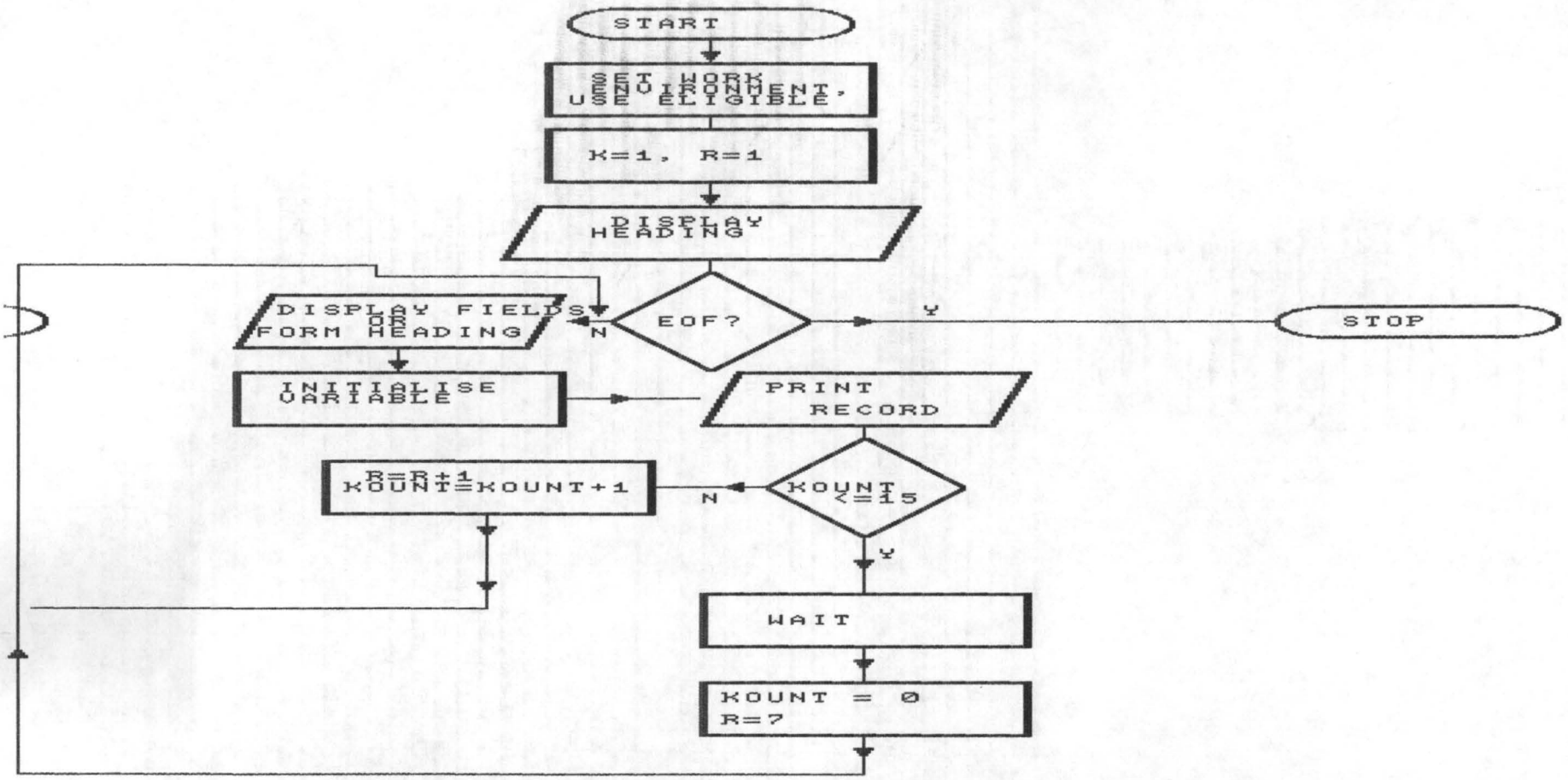
NOTE: ** Indicates that other activities can be performed here For example, we can make data entry, deletion, modification etc.

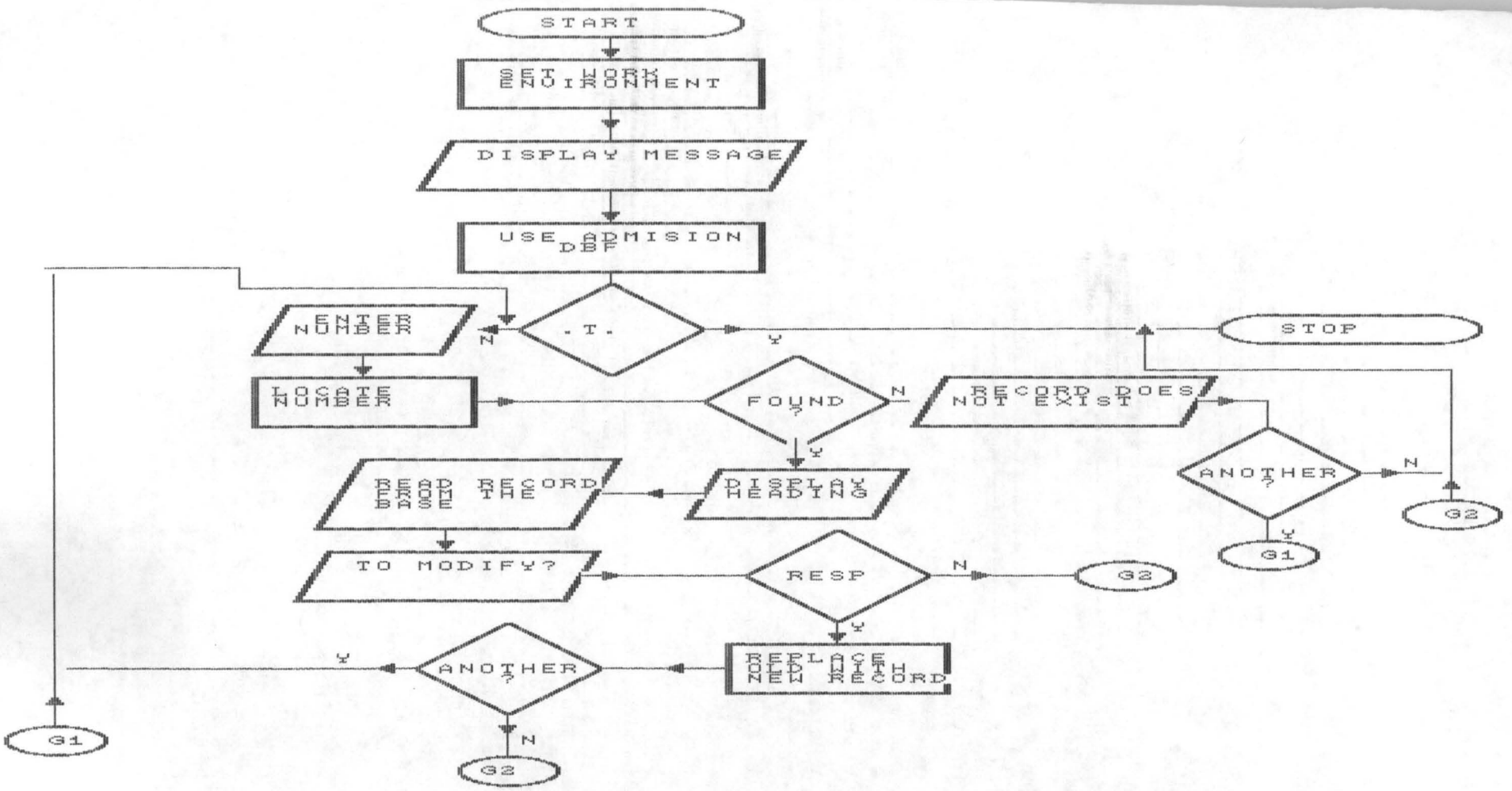
GENERATE PROGRAM



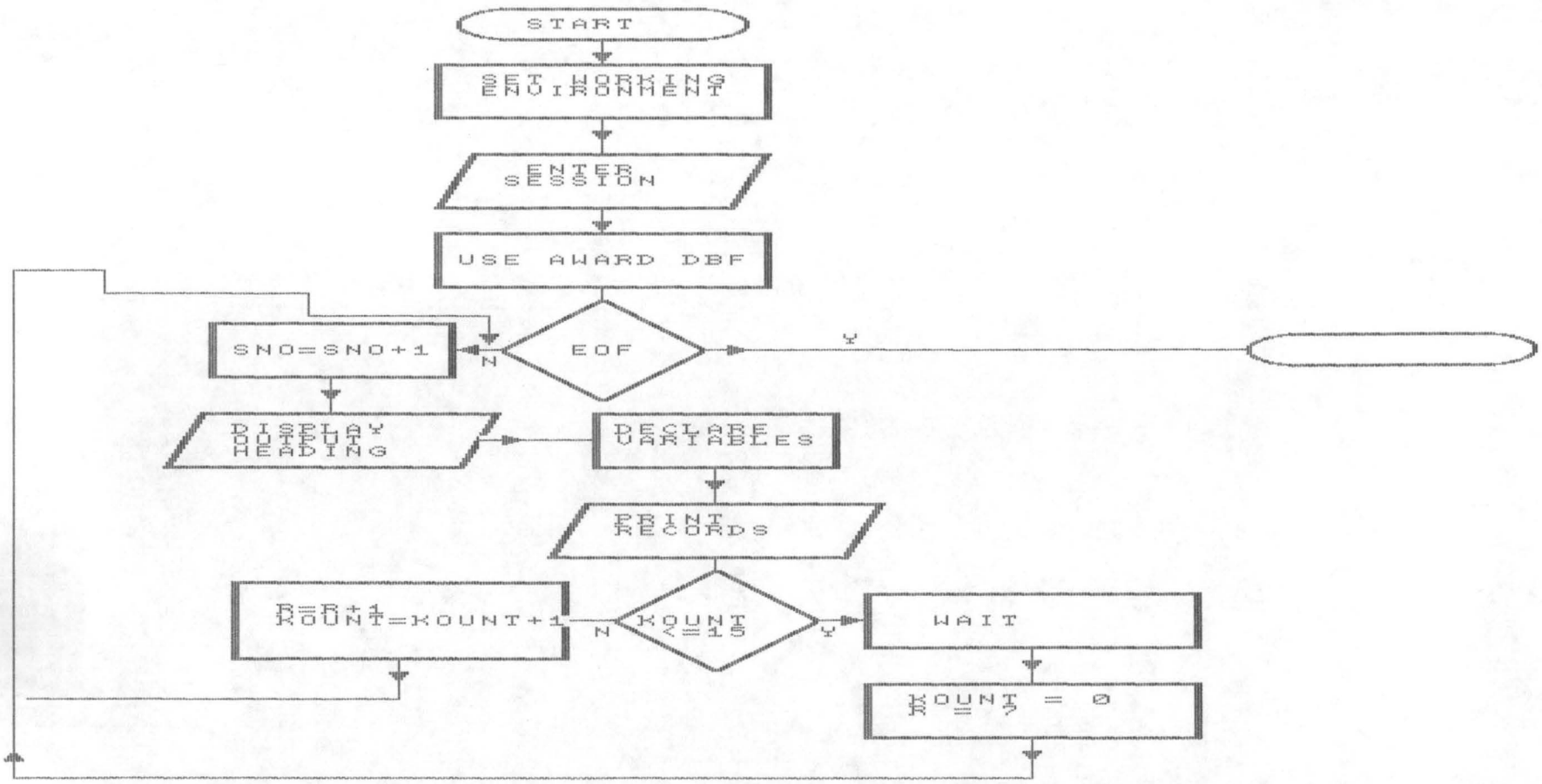

FREPORT
START
VARIABLE DECLARATION AND SET ENVIRONMENT
DISPLAY MESSAGE
.T.
Y
STOP
N
ENTER REGISTRATION NUMBER
SELECT 2
LOCATE NUMBER
FOUND ?
NO SUCH RECORD EXIST
Y
TO CONTINUE ?
N
F2
F3
SELECTED ?
N
READ FROM DATABASE
DISPLAY MESSAGE
Y
VARIABLE INITIALISATION
SELECT 3
APPEND BLANK AND REPLACE
MORE RECORD ?
N
F2
Y
F3

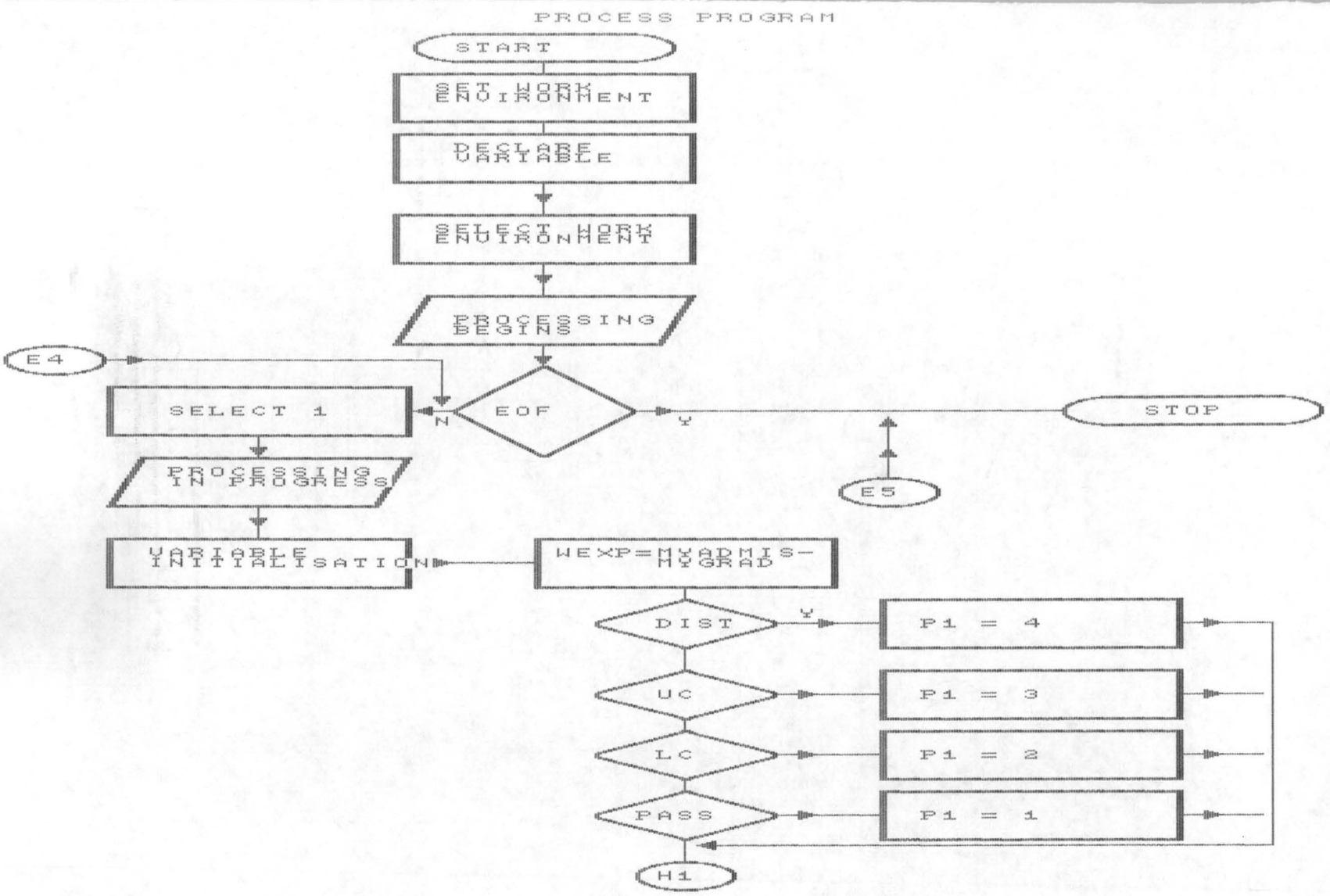
REPORT1 PROGRAM

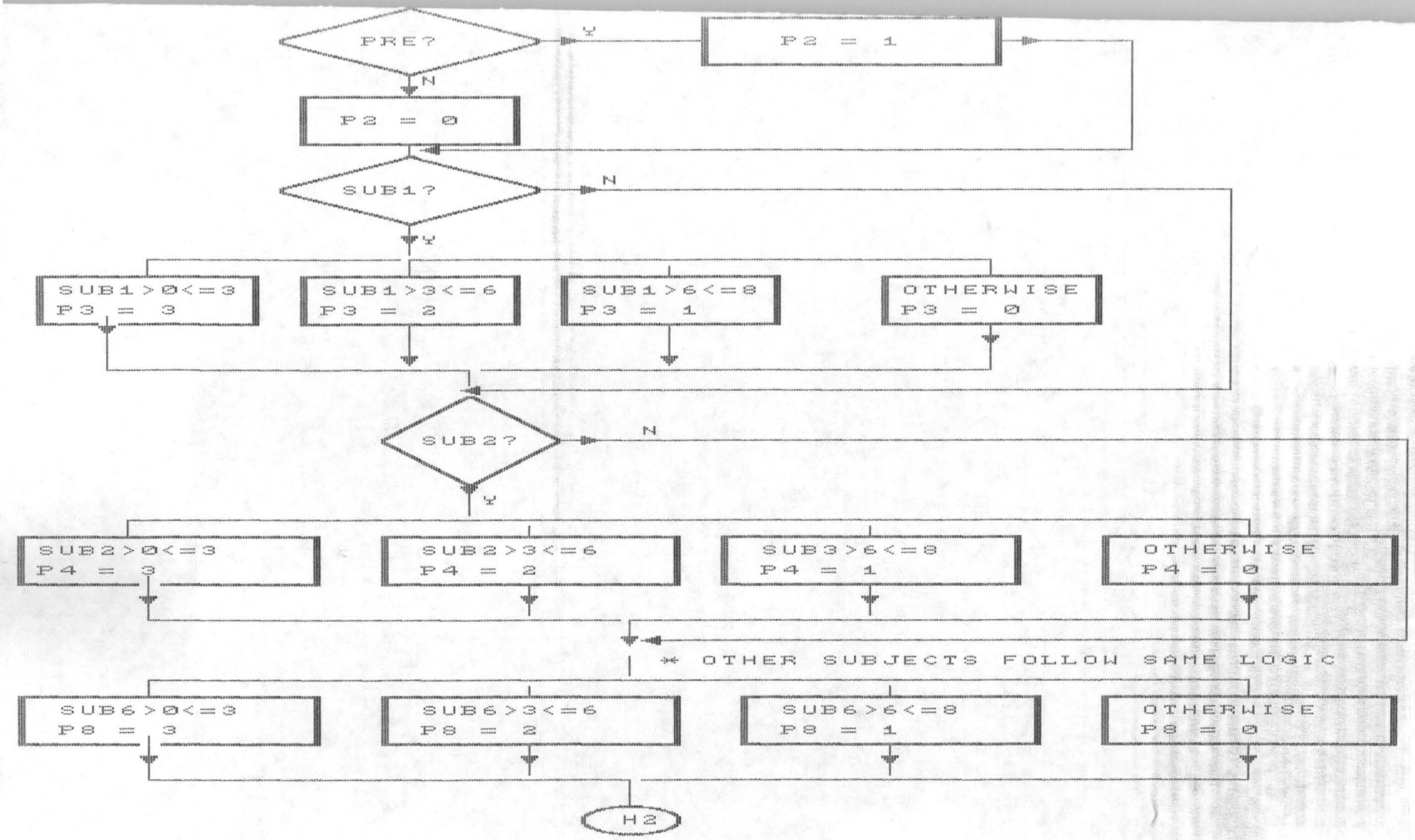


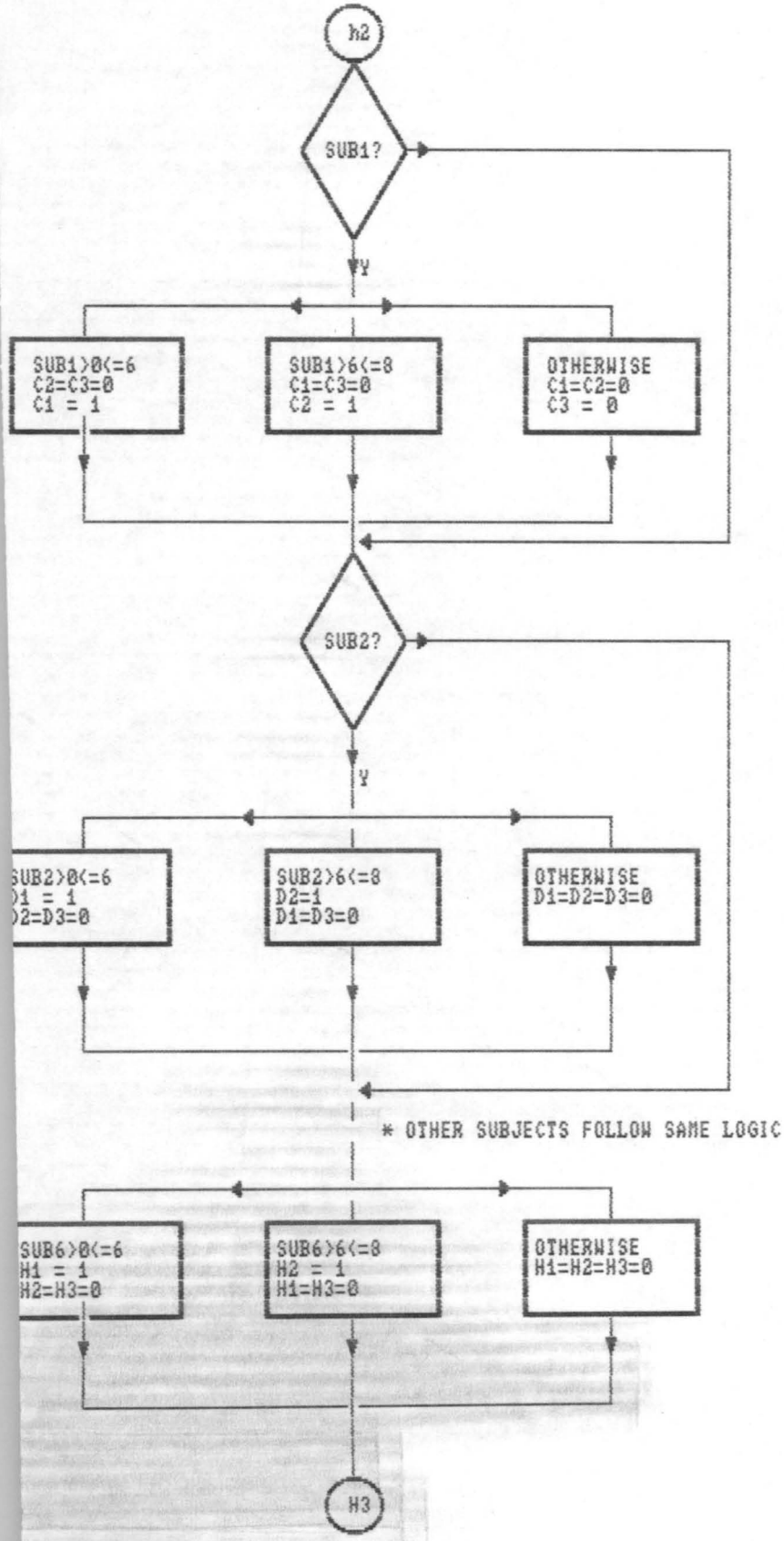

START
SET WORK ENVIRONMENT
DISPLAY MESSAGE
USE ADMISION DBF
ENTER NUMBER
.T.
N
Y
STOP
LOCATE NUMBER
FOUND?
N
RECORD DOES NOT EXIST
ANOTHER?
N
G2
Y
G1
Y
DISPLAY HEADING
READ RECORD FROM THE BASE
TO MODIFY?
RESP
N
G2
Y
REPLACE OLD WITH NEW RECORD
ANOTHER?
Y
N
G2
G1

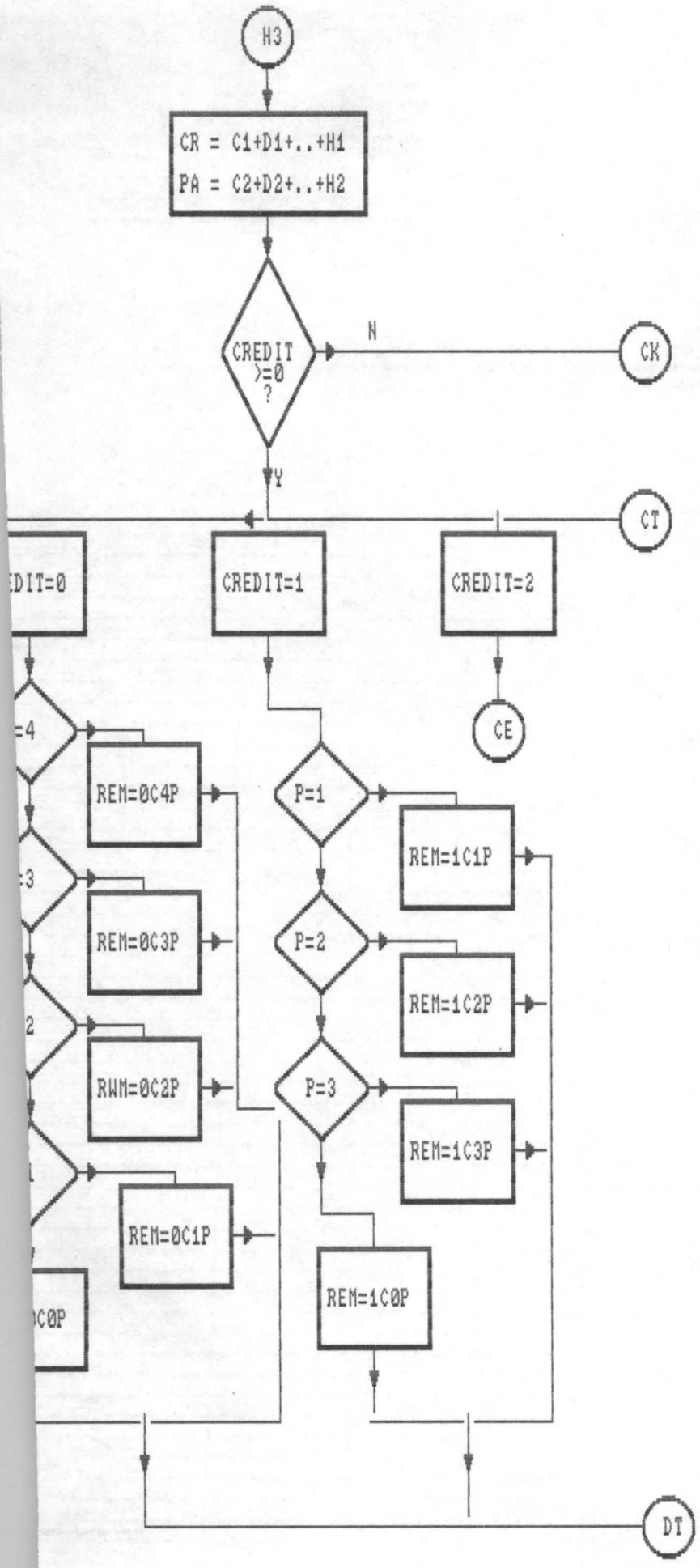
REPORT2 PROGRAM

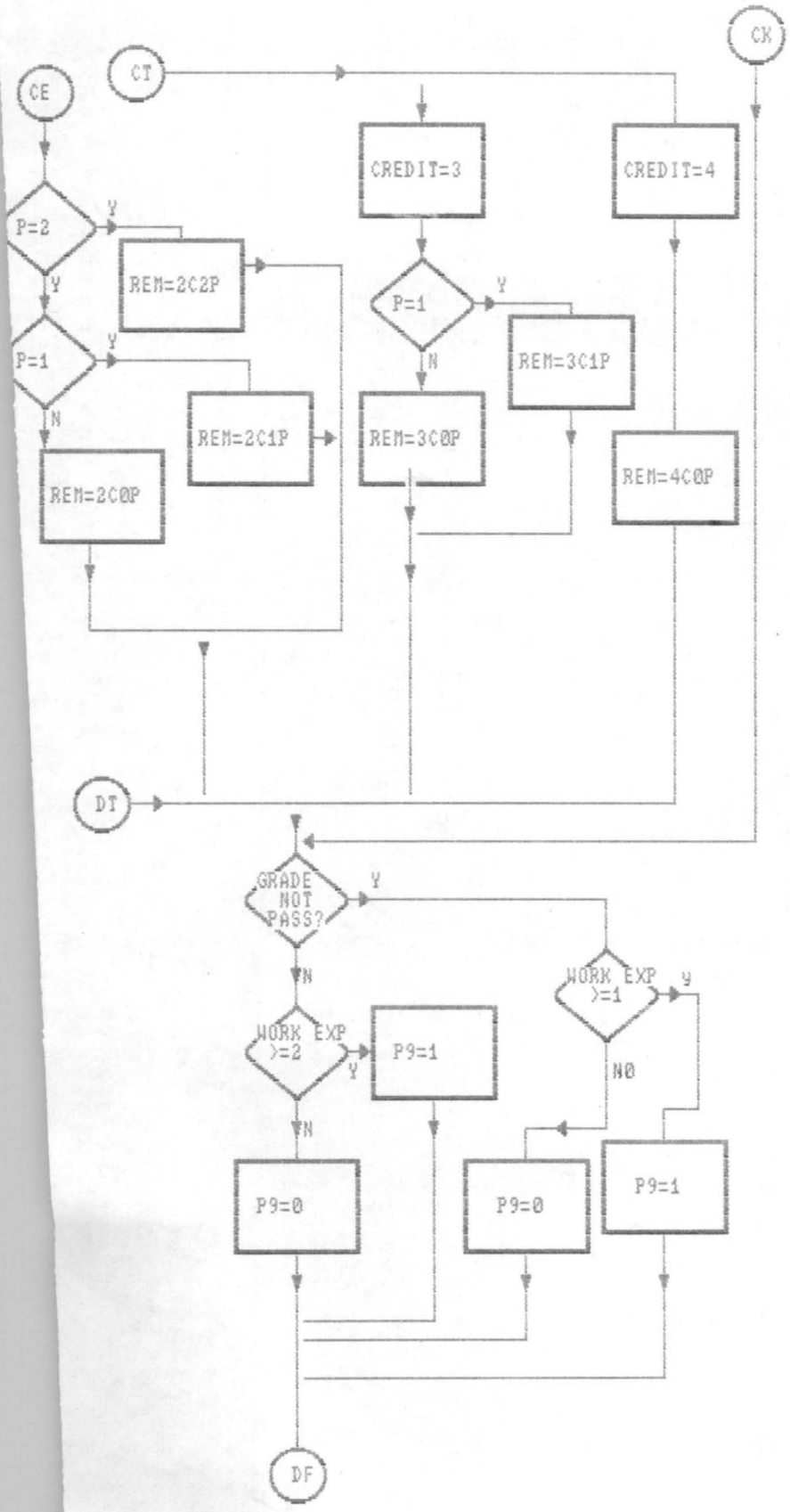


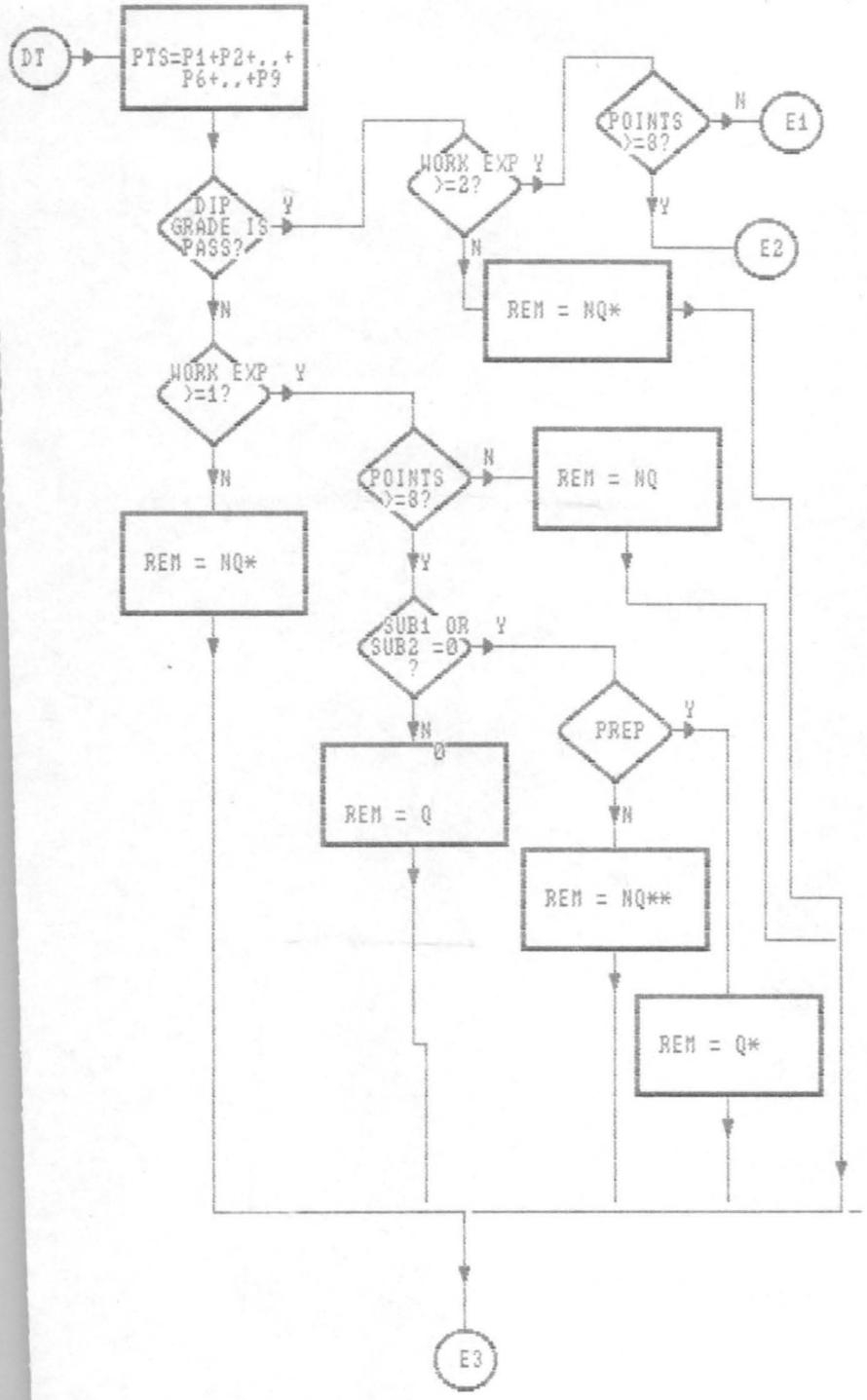

PROCESS PROGRAM
START
SET WORK ENVIRONMENT
DECLARE VARIABLE
SELECT WORK ENVIRONMENT
PROCESSING BEGINS
E4
SELECT 1
EOF
N
Y
STOP
E5
PROCESSING IN PROGRESS
VARIABLE INITIALISATION
WEXP=MYADMIS-MYGRAD
DIST
Y
P1 = 4
UC
P1 = 3
LC
P1 = 2
PASS
P1 = 1
H1

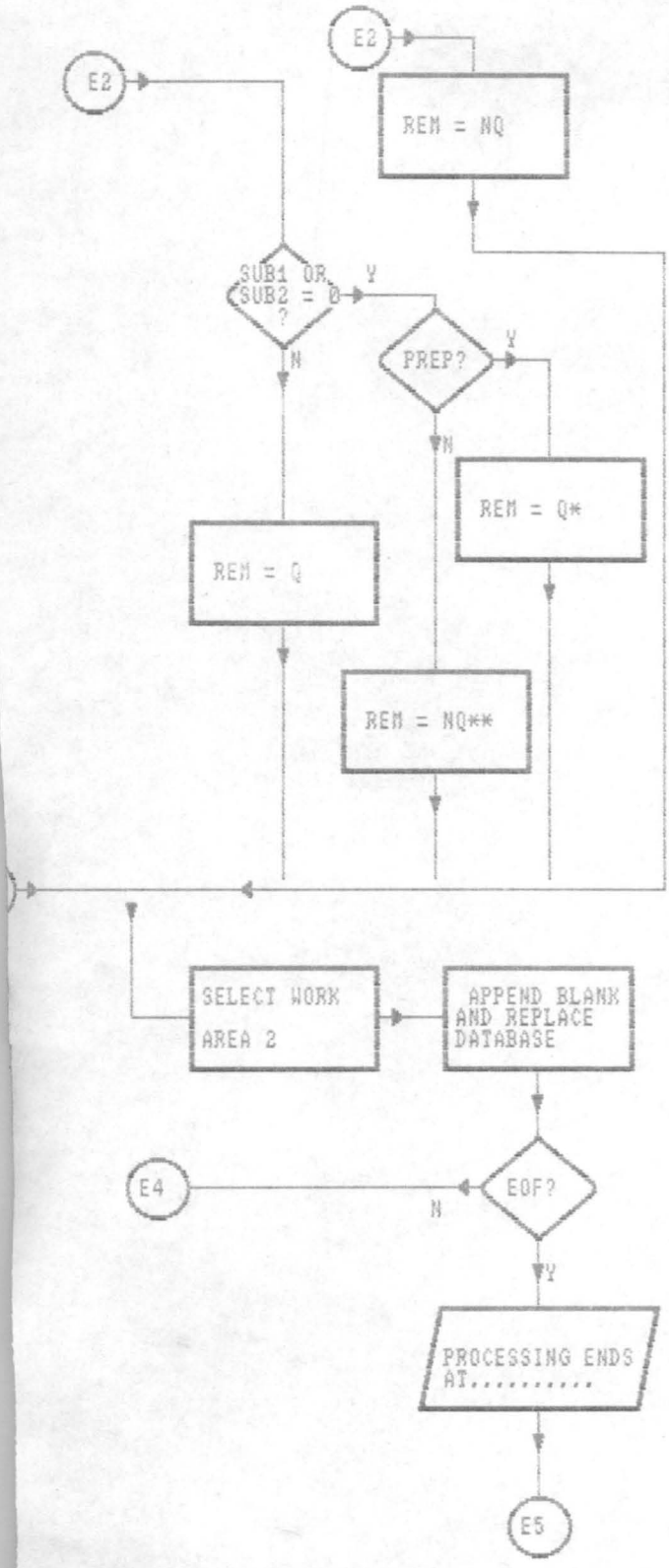

PRE?
Y
P2 = 1
N
P2 = 0
SUB1?
N
Y
SUB1>0<=3
P3 = 3
SUB1>3<=6
P3 = 2
SUB1>6<=8
P3 = 1
OTHERWISE
P3 = 0
SUB2?
N
Y
SUB2>0<=3
P4 = 3
SUB2>3<=6
P4 = 2
SUB3>6<=8
P4 = 1
OTHERWISE
P4 = 0
* OTHER SUBJECTS FOLLOW SAME LOGIC
SUB6>0<=3
P8 = 3
SUB6>3<=6
P8 = 2
SUB6>6<=8
P8 = 1
OTHERWISE
P8 = 0
H2


h2
SUB1?
Y
SUB1>0<=6
C2=C3=0
C1 = 1
SUB1>6<=8
C1=C3=0
C2 = 1
OTHERWISE
C1=C2=0
C3 = 0
SUB2?
Y
SUB2>0<=6
)1 = 1
)2=D3=0
SUB2>6<=8
D2=1
D1=D3=0
OTHERWISE
D1=D2=D3=0
* OTHER SUBJECTS FOLLOW SAME LOGIC
SUB6>0<=6
H1 = 1
H2=H3=0
SUB6>6<=8
H2 = 1
H1=H3=0
OTHERWISE
H1=H2=H3=0
H3


H3
CR = C1+D1+..+H1
PA = C2+D2+..+H2
CREDIT >=0 ?
N
CK
Y
CT
CREDIT=1
CREDIT=2
CE
REM=0C4P
REM=0C3P
RWM=0C2P
REM=0C1P
P=1
P=2
P=3
REM=1C1P
REM=1C2P
REM=1C3P
REM=1C0P
DT


CK
CT
CE
CREDIT=3
CREDIT=4
P=2
Y
REM=2C2P
Y
P=1
Y
N
REM=3C1P
P=1
Y
N
REM=2C1P
REM=3C0P
REM=4C0P
REM=2C0P
DT
GRADE NOT PASS?
Y
N
WORK EXP >=1
y
N0
WORK EXP >=2
Y
P9=1
N
P9=0
P9=0
P9=1
DF


DT
PTS=P1+P2+..+P6+..+P9
DIP GRADE IS PASS?
Y
N
WORK EXP >=2?
Y
N
POINTS >=8?
N
E1
Y
E2
REM = NQ*
WORK EXP >=1?
Y
N
POINTS >=8?
N
REM = NQ
Y
REM = NQ*
SUB1 OR SUB2 =0 ?
Y
N
PREP
Y
N
REM = Q
REM = NQ**
REM = Q*
E3


E2
E2
REM = NQ
SUB1 OR SUB2 = 0 ?
Y
N
PREP?
Y
N
REM = Q*
REM = Q
REM = NQ**
SELECT WORK AREA 2
APPEND BLANK AND REPLACE DATABASE
E4
EOF?
N
Y
PROCESSING ENDS AT.....
E5