RELATIONAL DATABASE FOR POLICE RECRUITMENT

CASE STUDY: NIGER STATE POLICE COMMAND

BY

DADA OLUMUYIWA AYODELE

REG. NO. PGD/MCS/173/96

A PROJECT SUBMITTED TO THE DEPARTMENT OF

MATHEMATICS COMPUTER SCIENCE

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE

POST GRADUATE DIPLOMA IN COMPUTER SCIENCE

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CERTIFICATION

This Project title "RELATIONAL DATABASE FOR POLICE RECRUITMENT, A CASE STUDY OF NIGER STATE POLICE COMMAND" written by DADA OLUMUYIWA AYODELE (MR) has been read and approved as meeting the requirement of the Department of Maths/Computer Science of the Federal University of Technology, Minna.

MR. L. N. EZEAKO DATE

SUPERVISOR

PROF. K. R. ADEBOYE DATE

HEAD OF DEPARTMENT

EXTERNAL EXAMINER DATE

DEDICATION

This work is dedicated to God almighty, my Mother who always pray and contribute to my educational career.

ABSTRACT

For the past few years, some departments in the Nigeria Police Force have been computerised, but due to one reason or the other, progress have been very slow.

This project is my humble contribution to this challenge. I will focus on recruitment of Policemen only.

Furthermore, this project is to appraise and reveal the advantages of the computer in Police Recruitment System in Niger State, such as accuracy, efficiency, timeliness, easy retrieval of information and the implementation without the need for labourous recalculation applicant/candidate each time a reference has to be made.

So this project is adequately structured along the following lines.

1. Introduction: In chapter one, I tried to introduce the project and later discussed the aims and objective of the project with reason for choosing Relational Database.

2. This chapter two talked about Police history, their Organisational Structure, Recruitment Procedure and why I have decided to computerise.

3. In this chapter, I tried to design a program which is called a new system for recruitment, later I spoke about the configuration of the new system and approaches to Database models.

4. This chapter four is the implementation of the system.

5. This is conclusion and recommendation chapter.

Moreso, there is no point saying that the implementation of a computer system, even it is factual and complete is not the end of the matter, but systems are on-going so there is the need for continuous re appraisal and regular maintenance in order to keep their efficient and up to date.

AIMS AND OBJECTIVES

The proposed new system solely aim to overcome the ragging problems associated with the existing system and add effectiveness to the system.

The objectives of the new system are:

1. Production of the desired information, at the right time, in the right process, with an acceptable level of accuracy and in the form required at an economical cost.
2. Incorporation of checks and controls which are capable of detecting the dealing with exceptional circumstances and errors.
3. Need to minimise the cost and the time spent on recruitment exercise.
4. Need to minimise the cost and time spent on recording source data.
5. Need to minimise the cost and time spent on processing data.
6. Effective safeguards for the prevention of favouritism and nepotism.
7. Security measure to avoid loss of data stored in master files.
8. Adequate design of documents and reports.
9. Coding systems to and identification, comparison, sorting, verification and the elimination of ambiguity.

CHAPTER TWO

LITERATURE REVIEW

NIGERIA POLICE A PERSPECTIVE

Before the advent of the British, there were local law enforcement agencies operating under the control of our natural rulers in different parts of this Country. Cheap and quick justice was in fact dispensed from the places. Traditional law enforcement developed in pre-colonial communities in order to correct breaches of customary laws. Local communities by policing themselves and adopting such restraints on anti social behaviour such as traditional religion, moral compulsion, customary law and values, maintain law and order.

It is however, true that such institutions performed additional duties as guarding the natural rulers, delivering messages and arresting offenders - duties later emphasised, expanded and controlled by imperial might and force.

With the coming of the British, the assistance of these natural rulers was sought for the protection of imperial trade interest and the abolition of slave dealings. Sometimes, there were open confrontation between the British representatives and the chiefs on political and commercial ground. About 1890, some rulers in Cross River area blocked the British trade routes and harassed natives loyal to British Officials.

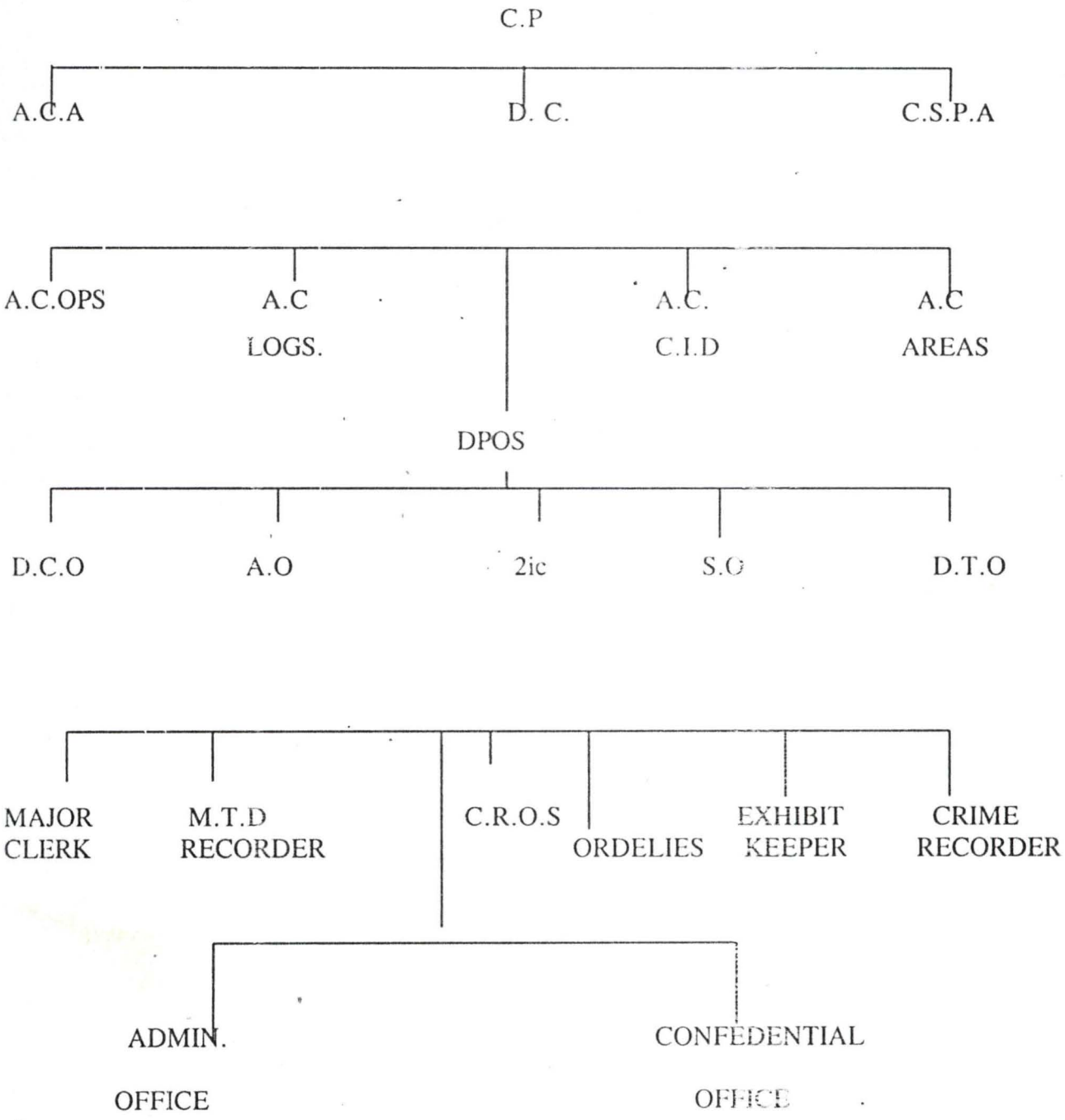
The acting consul then arrest was forced to raise the Oil Rivers Protectorate police force whose duties were essentially military to stop the molestation by the natives because of the atrocities committed by this force, it was disbanded and replace by Hausa

Commissioner of Police with the Inspector General of Police as the overall head at the force Headquarter in Lagos. In April 1964, the Nigeria Police Force was priviledged to be headed by L. O. Edet, the first Nigerian Inspector General of Police.

In 1972, the local government police in different parts of the country were merged with the Nigeria Police Force. The unique contribution of the constitution of the Federal Republic of Nigeria 1979, its provision that there exist no other force than the Nigeria Police Force in this country (section 194 (1)) of constitution.

Having said that it is good to trace how Niger State Police Command also emerged. This Command was formerly under the North ~~Western~~ Central States and by then Bosso Division serves as Minna Division, but later in 1976 when the State were created; the Police Command was based in Paiko Road Police Station, with the Directorate of Logistics and Supplies was the first Police Headquarters and presently moved to Dutsen kura .

NIGER STATE POLICE COMMAND ORGANOGRAM



RECRUITMENT PROCEDURE

In the Nigeria Police, recruitment exercise normally starts at the same time in all States of the Federation and Federal Capital Territory (Abuja).

Today, the condition for enlistment were slightly modified to enable the force enlist men and women with better educational requirement was raised from middle IV certificate to a pass in at least five subjects at G.C.E. (ordinary level) or West African School Certificate including Mathematics and English Language. Minimum height requirement was raised from 1.68 meters and 1.65 meters to 1.73 meters and 1.68 meters for men and women respectively. The central entrance examination system was introduced to ensure uniformity and standard.

In order to promote police public relations, and effectiveness of the force, the force continued her on the job re-training and re-education of all cadres of its personnel, through service of development and special courses. During the year under review, a total of 19,050 members of the Inspectorate and rank and file attended these course. A total of 674 commissioned Officers and Constables attended three month development courses. 438 Sergeants attended a three month Sergeant and Inspectors promotion courses in the year under review.

Details of other courses, with the number of participants are as follows:

Courses	Number of Participants
Induction Course	221
Traffic Course	624
Signal Course	181
Out Riders Course	001
Instructions Course	027
Detective Course	275
Anti-fraud Course	129
Modus Operandi Course	110
Prosecution Course	130
Fingerprint Course	081
Photographic Course	141
Mobile Units Course	3,291
Weapon Training Course	119
Anti-crime Course	127

'A', 'B', 'C' and Senior Advanced Detective Course

RECRUITMENT AND DIFFICULTIES INVOLVED

Some States of the Federation initially encountered some difficulties in getting men and women recruited into the force. This was as a result of the upgrading of the minimum education requirements; consequently the Inspector General of Police had to

grant dispensation to some States, to enlist applicants with Teachers Grade II Certificate.

4 CADET CORPS-GENERAL

The idea of Cadet Corps was hatched in the late fifties, to inject young and enlightened elements into the police force. It formally started with recruitment of Cadet Inspectors in 1956.

This group of youngsters, must possess West African School Certificate or its equivalent qualification. In 1969, another scheme for Cadet Assistant Supritendents of Police was established. This is for university graduates physical fitness and educational qualification for enlistment into the force, remained unchanged in the year 1986. The Cadet Inspectors was scrapped in January, 1986. This became necessary in view of the new minimum education qualification for enlistment of Constables into the force.

5 PHYSICAL REQUIREMENT

The requirement remains as follows:

Height	1.68 meters
Chest Expansion	0.86
Physique	Must be medically and physically fit without any deformity.

6 **EDUCATION**

Cadet Inspectors:- A minimum of West African School Certificate or its equivalent with credit in four subjects, including mathematics and english language. Qualified serving members of the Rank and File, who possess the required educational qualification, but without credits in mathematics or english language, were allowed to join the Cadets after their 'direct entrants' basic thing.

Cadet A.S.Ps:- A minimum of a second class honours degree from a recognised university or H.N.D. in addition to a certificate of good character.

PERIOD OF INITIAL TRAINING

The force policy on the basic and advanced training for the Cadet ASPs and Cadet Inspectors remained unchanged during the year. The syllabus for the Cadet schemes reviewed in 1983, were implemented in 1984, to reflect the need for higher standard of performance. Successful candidates for the Cadet Officer's Course, are to undergo a two year initial training.

8 **CADET INSPECTORS-DIRECT ENTRY**

The course covers twelve months, slight into six month basic training covers a wide range which includes a four-week leadership course, a four week attachment to various police stations in the State Commands to acquire a practical knowledge, a four week lectures course and the last three months are devoted for studies in criminal law, procedure and police duties, at the college before passing out.

9 **CADET INSPECTORS-FORCE ENTRY**

Qualified serving members joined the Direct Entrants on completion of the laters' basic training for the six month advanced course.

10 **CADET ASPs**

The Cadet ASPs course was reviewed and restructured into a two year Cadet Officers programme. This was to give room for some practical attachments during the course and to incorporate detective and police mobile force training courses.

Having concluded all recruitment the next stage is training which is normally between six month and one year respectively. Candidates that are successful in this level will go to the next level of posting which is attachment to stations in a particular state of the federation.

The final stage is called the probation which now leads to the confirmation of appointment. Now the officer is fully enlisted to the police force and he/she will be addressed as men and officers of the Nigeria Police Force.

AIM AND OBJECTIVE OF STUDY

When data are stored in separate files for each application, managing information becomes difficult. Sometimes, many files, may contain many of the same data items, it can be seen then that in a data processing environment where each department has its own file, the computer is of little value addressing questions such as police recruitment

implications of change in an entry condition or war, accident associated with a crime wave. By contrast, in a database environment, a database system is like a super clerk who rushes from one department orders to another searching and matching data.

The structure of data is defined in advance so that therein inter department access is possible. Ideally, a database systems make information access and retrieval easier, cheaper,quicker and more flexible for the user. As a repository of information, stored data must be accurate, current and protected from unauthorised user.

In this study, our aims and objectives are geared towards providing the following:

.2.1 Accuracy and integrity: In a database system an accuracy controls assure that the system does not have conflicting versions of the same data items that may be in various stages of updating. Integrity means reliability. Uncontrolled file redundancy and multiple updates often lead to integrity problems.

1.2.2 Clarity and easy of use:- A feature of a user friendly database is that users understand and know what data in an easy, straight forward fashion. Related to this is the further requirement that the database structure can be updated without having to change the procedure for accessing the data.

1.2.3 Database Independence: An important objective of database is to be able to change physical on logical storage representation without having to rewrite application programs, this is known as data independence. The ability of the DBMS to migrate data without impact in programs is clearly a good measure of the degree of data independence.

1.2.4 Quick Recovery from Failure:- An integrated database is usually accessed by many users simultaneously and is usually available at all times. With so much dependence on the database, its important that quick recovery after system failure is assured without loss of transaction. This objective help maintain data accuracy and integrity and promote system performance.

1.2.5 Powerful Inducer Language:- A major objective of a database and a DBMS is to make it possible for a novice user to query, search or modify data without having to write a program. The ease with which user retrieve information makes a database application quite attractive.

1.2.6 Security:- Data should be protected as a matter of policy. For database to be protected from unauthorised access, security measures are taken as part of the DBMS and the design of the database. An effective database security ensures that the data are protected from destruction or unauthorised alteration access.

1.3 METHODOLOGY

This project looks at database system in relation to the three logical models which are:

(1) Relational Model

(2) Hierarchical Model

(3) Network Model

2.1 DEFINITION OF RECRUITMENT IN THE POLICE FORCE

Before defining police recruitment it is of great importance to say a few words about the POLICE itself. so for the purpose of this study, I will define a policeman as an unenviable man in the midst of urban problems of increase in crime, civil disturbance, riots and student demonstrations to mention a few. One of the cardinal duties entrusted on the police is the maintenance of peace in the society and ensuring that members of the community are safeguarded in their persons and property so that their energies are not exhausted by the business of self protection.

POLICE RECRUITMENT

Entry into the force, you must have made up your mind to join the police force, there are five main entry points into the Nigeria Force.

(1) General Duty Officers

(2) Specialist or Professional Uniformed Officers

(3) Civilian Employees

(4) Recruit Constables

(5) Women in the Force

Having listed the major ways of recruitment in the Police Force, it is good to talk on them one by one.

(1) General Duty Officers:- The General Duty Officers are mainly concerned with the statutory duties of the Force as laid down by law such as:

(i) The protection of life and property

(ii) The prevention and detection of crime

(iii) The apprehension and prosecution of offenders

(iv) The maintenance of law and public order

In the Officer cadre, they serve in the field as Divisional, Crime and Administrative Officers. They also serve as Staff Officers in the Area Command and Force Headquarters. General Duty Officers are recruited into the Force as Cadet Assistant Supritendents of Police, Cadet Inspectors of Police or as Recruit Constables from both sexes.

(a) Cadet Assistant Supritendent

As a scheme for the appointment of graduates as General Duties Cadet Assistant Supritendent of Police was started in 1969. The scheme is intended to encourage young Nigerian graduates to join the Nigerian Police Force with a view of meeting the pressing needs of the service for future leaders who are not only able to deal with the complexities of our modern society but who will also apply creative thought to practical police problem.

Qualification for Entry

To qualify for appointment as a Cadet Assistant Supritendent of Police, an applicant must satisfy the following entry conditions.

Age: Applicant must not be below twenty-three years or above twenty-eight years of age.

Physical Fitness: Applicant must be certified by a government Medical Officer as being physically and mentally fit for service in the Force.

Education: Applicant must be in possession of a pass degree from a University recognised by the Federal Ministry of Education.

Financial Status: Candidate must be free from financial embarrassment

Character: Candidate must be of exemplary character.

(ii) A male candidate shall not be less than 1.67 meters in height and shall have an expanded chest measurement of not less than 86cm.

(iii) A female candidate shall be unmarried and shall not be less than 1.63 meters in height.

Method of Recruitment

When vacancies occur for the appointment of qualified civilians direct to the post of Cadet in the Force, such vacancies are advertised in all the national newspapers, the principal newspapers and in the Federal Republic of Nigeria Official Gazette. Interested candidates obtain application forms from the Secretary to the Police Service Commission at No. 7 Okotie Eboh Street, S.W. Ikoyi, Lagos. Intending applicants in the service of government or statutory corporations apply through their Heads of Departments. Completed application forms are returned to Secretary, Police Service Commission with photostat copies of the applicant's credentials. Thereafter, candidates are notified of the

dates for the interview.

Selected candidates are informed in writing to report on a given date at the Police Staff College, Jos, for training and attestation as Cadets on probation. It is after this that various training starts which usually spread over twelve months.

(a) Three months basic training in general police duties and drill.

(b) One month leadership and citizenship training course at one of the leadership training centres e.g. Shere Hills.

(c) Another three months advance training in general police duties, law and drill.

(d) Two weeks attachment.

(e) A short break of about two weeks.

(f) Three months training in the duties of superior police officers, including law and drill.

(g) One month attachment.

The next stage is attachment period which is usually used to gain as much experience as possible in the various types of police work under the close supervision of experienced Officers who can guide them in their work.

Posting

On the successful completion of the training, candidates are posted to police division as Assistant Supritendent of Police on probation. They thus join the group of "Superior Police Officers" deployment of Ex-cadet Assistant Supritendent is done in such

a way as to enable them acquire further experience in all the following fields in rotation.

Now the next is confirmation of appointment which means an Officer will be on probation period and it usually last for two years including the year of training. Two years after the date of enlistment in the Force. Candidates will be eligible for confirmation of their appointments subject to their passing the examination in law, civil service rules, financial instructions, practical police duties and provides their conduct and work are satisfactory.

Failure to pass the confirmation examination within the time specified will result in the termination of appointment or the deferment of confirmation or the suspension of increment (which ever is appropriate to the circumstances of appointment). Cadet Assistant Supritendents are subject to force discipline and to the provisions of all rules, regulations and orders governing the force.

HOW CADET INSPECTOR ARE RECRUITED

The qualification to be a Cadet Inspector for either male or female is ordinary level certificate (G.C.E.) which must have passes in four subjects including English and mathematics while West African School Certificate (W.A.S.C) must have credit in at least four subject. Apart from educational requirement, one must certify by a government Medical Officer as being physically and mentally fit for service in the Police Force.

They must be exemplary character and must be free from financial embarrassment. The required height for male should be 1.67 meters and shall have an expanded chest measurement not less than 86cm. While female shall be unmarried and shall not be less than 1.63 meters in height.

Training

On appointment, a direct Cadet Inspector of Police shall undergo twelve months training at the Police College, Ikeja which include:

(a) Six months basic training in law and drills

(b) Two weeks attachment for training in practical police work at a police station.

(c) One month leadership and citizenship training course at a recognised center.

(d) One month first aid lay lectures course

(e) Three months advanced training in law drills, and the duties of his future substantive rank

(f) A final period of attachment to a police formation for further training in practical police work.

At the end of the training a leave period of not more than fourteen days may be granted him.

Appointment

Successful candidate will later be interviewed by the Inspector General of Police, and may be appointed by the Police Service Commission to the rank of Inspector or on a two years probation.

Probation Period

During the two years period of probation, an Inspector of Police shall be required to pass a confirmation examination which comprises part A law proceeding and evidence, part B, miscellaneous act, part C, police duties and part D, force orders.

Inspectors of Police who pass the examination shall be confirmed in the rank after the period of probation. The services of a Cadet Inspector of Police may be terminated by the Police Service Commission at anytime during the training on grounds that may be deemed sufficient by the Commission to justify such termination of appointment. Cadets whose services are so terminated will normally be given one month notice in writing, or if the circumstances warrant it, one months salary in lieu of notice.

HOW THEY RECRUIT CONSTABLES

These are candidates who possess the West African School Certificate but failed to obtain the educational qualifications specified above for Cadet Inspectors may apply

to be recruited into the Force as recruit Constables. This also applies to persons who possess the General Certificate of Education (G.C.E.) ordinary level below the educational qualification required for Cadet Inspector. Candidates who have completed the fourth form in a secondary school, but for one reason or the other, have not been able to complete the full Secondary School Course and possess Secondary class four certificates are eligible for consideration. So also are those who have completed a full secondary school but failed to obtain any certificate other than the school leaving certificate at the end of the school course.

When a recruit successfully completes his training which lasts six months, he becomes a Constable and can be posted to any part of the Country for service. Constables who display exceptional ability and devotion in the performance of their duties, with good conduct and discipline shall be entitled to accelerated advancement on the recommendations of their Superior Officers.

TRANSFER FROM CIVILIAN DEPARTMENTS

Civilian Officers in other government departments or agencies with good liberal education who have attained a rank not below Executive Officer may be considered for secondment to the Police Force as Cadet Assistant Supritendent of Police. Such Candidates selected from other government departments on secondment for training are transferred back to their original department if unsuccessful.

Senior Officers in civilian departments may also be accepted on secondment up to the rank of Assistant Commissioner. This category of Officers are usually on

secondment in the first year in the Force after which they may be transferred to the Force if they are found suitable. These Senior Officers are required to attend a three month conversion course in either the staff college or the police college, Ikeja or Kaduna in the first instance short in-service courses are also arranged for them as may be necessary.

HOW WOMEN CAME INTO THE POLICE FORCE

Women have not been left out by the Nigerian Police Force, they have equal employment opportunities in the various cadres of the Force. Police Women Officers receive the same salary as men in the same rank, and shoulder similar responsibilities and equal rights.

They are employed on duties which are connected with women and children that is:

(a) Investigation of sexual offences against women and children.

(b) Recording of statements from female witnesses and female accused persons and from children.

(c) Attendance when women or children are being interviewed by male Police Officers.

(d) The searching, escorting and guarding of women prisoners to and from Police Station.

(e) School cross duties.

(f) Crowd control when women and children are present in large numbers.

Women Police Officers recruited into the General Duties Branch of the Force may in order to relieve male Police Officers from these duties be employed in any of the

following office duties.

(a) Clerical duties.

(b) Telephone duties

(c) Office duties.

Women Police Officers are not taught arms and riot drills and are never engaged in such duties. They must remain unmarried for the first three years but are allowed to marry men of their choice on approval of the Force after the stipulated period.

HOW UNIFORMED TECHNICAL AND PROFESSIONAL STAFF ARE RECRUITED

There are excellent employment opportunities in the Force for qualified and interested Nigerians who wish to serve as Specialist Uniformed Officers in marine engineering, automobile engineering, medicine, music, telecommunications, ballistics, architecture, civil engineering, aeronautics, stores management and armament.

Technical and professional men are granted direct entry into the Officer cadre of the Nigeria Police Force by the Police Service Commission such Officers are subject to the same conditions of service and force discipline but usually spend three months at Police College, Ikeja under going a conversion course during which they are given general training in basic Police Duties, Law, Drill e.t.c.

The qualifications required for appointment to the Superior Officer ranks of the specialist and professional branches are as follows.

MUSIC BRANCH

Apart from the conditions of enlistment as General Duty Men as contained in the Police regulation, the following conditions are also required of a prospective Senior Officer in the Nigeria Police Force Bands.

A Musician seeking appointment into the Force as a Bandmaster must possess G.C.E. or W.A.S.C. or its equivalent in addition to the following professional qualifications.

(i) Must possess at least an associate certificate in Military Bandmatership from a recognised school or college of music.

(ii) Must possess a sound practical knowledge of all instruments of a military band.

LAND TRANSPORT BRANCH

Automobile workshop Officers must be in possession of the W.A.S.C. or G.C.E. (ordinary level). A candidate is required to have served a recognised apprenticeship of not less than seven years in a motor industry with reputable firm or a government department or recognised professional engineering body and in addition, must be in possession of one or more of the following certificates or diplomas:

(a) City and Guilds certificate in Motor Vehicle Electronic's work;

(b) City Guilds certificate in Motor Vehicle Technician's work;

(c) Higher National certificate in Mechanical Engineering;

(d) Associate Membership of the Institute of the Motor Industry;

(e) An acceptable and relevant University Degree or Diploma.

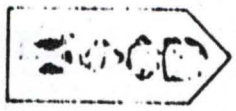
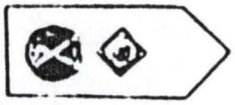
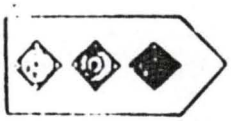
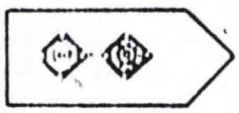
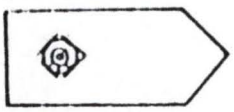
SIGNALS BRANCH

Two classes of Officers, Operational or Technical are recruited in the signals branch. Candidates for the post must be in possession of W.A.S.C or G.C.E. (ordinary level) with credit or its equivalent in four subjects including English and Mathematics

Signals Officer (Technical) is required to be a graduate or at least possess the final City and Guilds certificate in Telecommunication or Electronics or equivalent qualification recognised by the Federal Ministry of Education. Alternatively, he is required to have at least seven years practical experience of wireless workshop procedure and subject to oral and practical test in order to assess his capabilities.

While candidate for the post of Signals Officer (Operation) in addition to educational qualification must have considerable experience in all aspect of radion network and ancillary equipment. He must be able to pass 25 words per minute in the code in both reception and transmission and further knowledge of all international Q codes.

NIGERIA POLICE RANKS AND BADGES OF RANKS

 INSPECTOR GENERAL	 DEPUTY INSPECTOR GENERAL	 ASSISTANT INSPECTOR GENERAL
 COMMISSIONER	 DEPUTY COMMISSIONER	 ASSISTANT COMMISSIONER
 CHIEF SUPERINTENDENT	 SUPERINTENDENT	 DEPUTY SUPERINTENDENT
 ASSISTANT SUPERINTENDENT	 ASSISTANT SUPERINTENDENT (Unconfirmed)	 CHIEF INSPECTOR
 INSPECTOR	 INSPECTOR (Unconfirmed)	 SERGEANT MAJOR
 SERGEANT	 CORPORAL	NIL CONSTABLE

Finally, departments like Marine, Supply, Works, Armament, Airwing, Medical, Veterinary, Police Surgeon, Pathologist, Scientific, Programme Analyst, or System Analyst, Data Processing Supritendent, Archivist, Librarian, Pharmacist, Nursing Sister, Catering Supervisor at the point of entry into any of these positions will depend on the candidate's qualifications and experience. Their condition of service are the same as those of their counterpart in civilian departments.

FILES, DATABASE, DATABASE MANAGEMENT SYSTEMS

Suppose you are a Programmer in Police Command Minna, and you are writing a program to keep Police record showing Police Name, Age, Salary System, Marital Status, Location and Medical Fitness when they were enlisted to the Police Force, what department they were posted to after completing their training which usually include mental and physical exercise. In order to write the program, you decide to record such data as Police Name, Location, Year of Enlistment, Department he has worked and incremental date, Amount e.t.c.

Your Police record system should consist of a program or possibly several other programs organised to input, validate, store, read, write, and print record about these various data fields of the file. Assuming that the Commissioner of Police also want the program in (SIIB) State Intelligent and Investigation Bureau outfit to write a program to keep crime records in his system so as to produce a register of Policemen who has been

working very hard to reduce the crime rate which will show their Names, Department, How the Officer has been useful in crime detection and Methods he has been adopted.

The Police Command is also interested in revenue generation to the government during the periodical auction sales which usually comes up in various divisions at a period fixed by the auctioneer, verification unit, audit unit and the account department respectively.

The Divisional Police Officer (DPO) instead of getting information directly from the Divisional Police Officer, he decided to go to the Police pay office (the department that control the Police in States). He asked the Programmer in the account department to write a program to produce list of auction sales showing the list of items, date of auction sales, division in which the auction took place and the money realised, auctioneer commission among others. As with the three of the above files the General Duty Officer and Civilian employees, the Police Account fill will consist of the data ems such as Police Name (DPO), Divisional Headquarters and Date of Auction Sales among others. Here below we have six files with the following data items.

Here we have six files.

(1) GENERAL DUTY OFFICER (GDO)

- Age
- Name
- State of Origin
- Bill of Clean Health

- Grade Four
- School Certificate
- OND/Advance Level
- HND/BSc
- Height
- Medical Fitness
- Marital Status

SPECIALIST OR PROFESSIONAL UNIFORMED OFFICERS (SPUO)

- Name
- Age
- State of Origin
- First Degree (major field of study)
- Height
- Chest
- Marital Status
- Bill of Clean Health
- Experience

CIVILIAN EMPLOYEES (CE)

- Age
- Name
- First Degree

- Secondment
- Short-Service

RECRUIT CONSTABLES (REC)

- Age
- Name
- State of Origin
- Medical Fitness
- Height
- Chest
- Grade Four Certificate
- Ordinary Level Certificate /G.C.E.
- Six Months Training

WOMEN IN THE FORCE (WF)

- Age
- Marital Status
- State of Origin
- Duties Associated to Women/Children
- Education

SUPRITENDENT OF POLICE (SPOs)

- Age

- Qualification
- State of Origin
- Height
- Chest
- Medical Fitness

INTEGRATED SYSTEMS

In the above, we have six files, which are assumed to be working nicely or same time, each on a different computer. The Police authorities decided that those separate activities be allowed to be together in a large computer system. This means that all the above six (GDO, SPUD, CE, REC, WF, SPOS) files have to be merged to form one large file. This all embracing environment or integrated file in which each program or file will become a small part of the total data is called integrated or fill will become a small part of the total data is called INTEGRATED DATA SYSTEM, when the file is so combined, one notice that some of these files use data which are very similar to that used by others.

NAME/FILE	GDO	SPUO	CE	REC	WF	SPOs
NAME	X	X	X	X	X	X
AGE	X			X	X	X
STATE OF ORIGIN	X	X	X	X	X	X

ILL OF CLEAN HEATH	X	X	X	X	X	X
RADE FOUR CERTIFICATE	X			X	X	
SCHOOL CERTIFICATE	X			X	X	
OND/ADVANCE LEVEL	X			X	X	
HND/BSC (FIRST DEGREE)	X	X	X		X	X
HEIGHT	X	X	X	X	X	X
CHEST	X	X	X	X	X	X
MEDICAL FITNESS	X	X	X	X	X	X
MARITAL STATUS				X		
FIRST DEGREE (MAJOR FIELD						
OF STUDY)		X	X			
EXPERIENCE		X	X			
SECONDMENT		X	X			
SHORT SERVICE		X	X			
SIX MONTHS TRAIING			X		X	
DUTIES ASSOCIATED TO WOMEN					X	

TABLE 2.1

X shows the data relevant to each file. You will notice the field such as:

- Name;
- Medical Fitness;

- Qualification;
- Height;
- Secondment; and
- Chest., are used by several of the programs where as data such as;
- Short Service;
- Six Months Training;
- Duties associated with Women; and
- Marital Status., are only used in one file. This means that data that are used by several files would be held on several different files. With the Integrated Data System, data which is used by a particular program could be made available to program but the other users can ignore it. This was not possible when each file hold the data needed first by one user, Holding the data in several places can have the following serious disadvantages.

(i) It takes up more room;

(ii) There may be inconsistencies in the data; and

(ii) Should the Police change address, (State Command) only Force Headquarters may know because they are responsible. Thus the information about the Police is different in many files.

If the billing department does not have information about the order, the order could easily go unnoticed. Something must be wrong.

We can see then that when data is stored in separate files for each application, managing information becomes difficult. As shown in figure 2.1, a system without a database requires a sort/merge method that combines selected data items from several files to produce the required information. There are many files that contain many of the same data items.

It can be seen then that in data processing environment where each department has its own files, the computer is of little value addressing questions such as personnel implications of a change in a marketing strategy or labour cost, associated with a surge of sales. By contrast, in a database environment a database is like a super Clerk who rushes from one departments books to another searching and matching data. The structure of data is defined in advance so that inter departmental access is possible. The general theme behind a database is to make possible for an organisation to handle its information as an integrated whole. This means no more independent files for separate applications. This pool of inter-related data can now be accessed by multiple users using a procedure that controls for accuracy and integrity.

FLOW CHART OF A CONVENTIONAL FILE

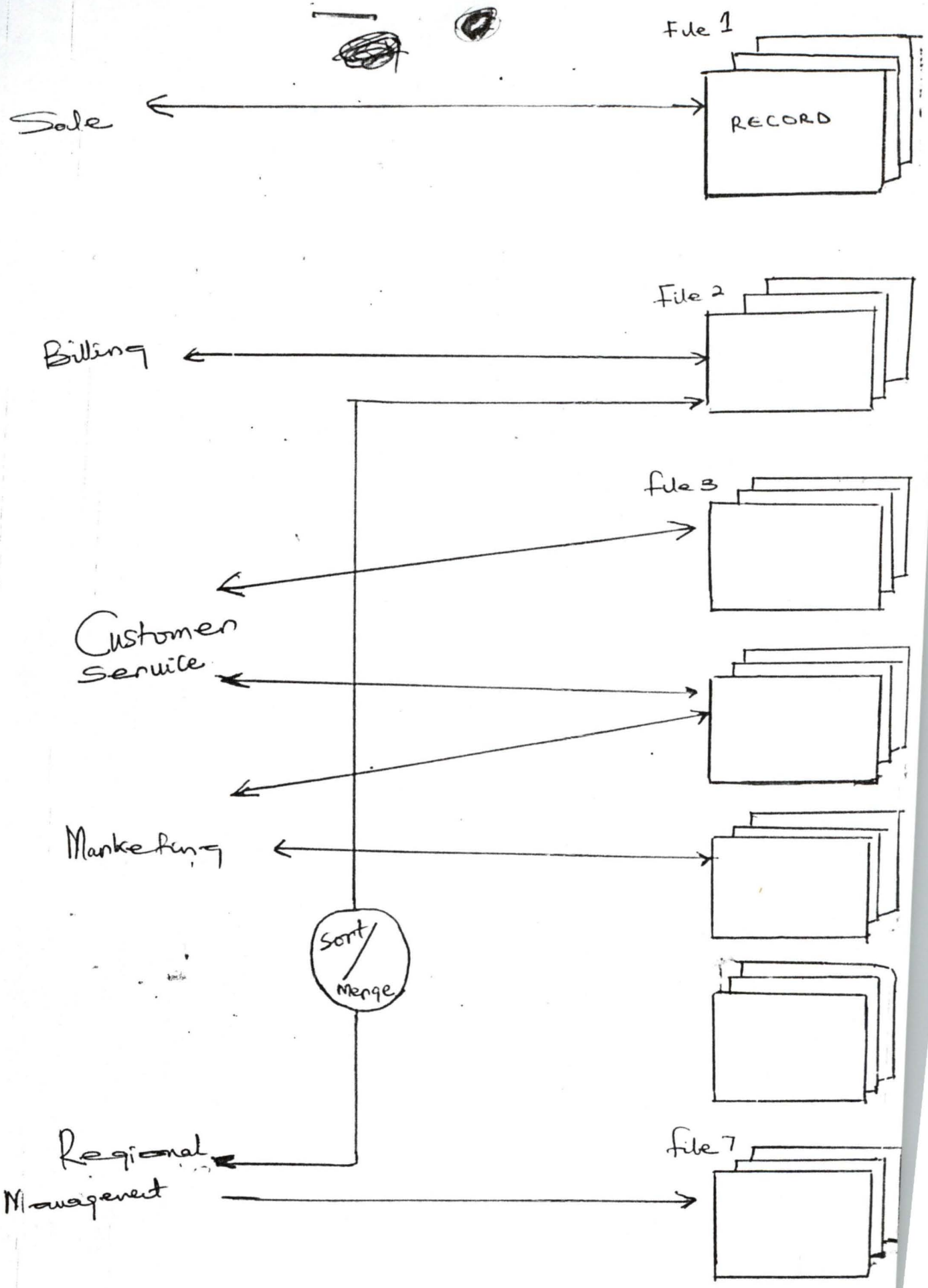


Fig 2-1 : Conventional file environment.

CHAPTER THREE

SYSTEM DESIGN AND ANALYSIS

A System is an aggregate of object united by form of regular interaction. system could have different forms such as:

Biological System

Data System

Mathematical System

Business System

Education System

Computer System

Operative System

In Computer based solution, specification system must:

(i) Be purposeful or be meant to achieve some objectives

(ii) Have components which must be related to each other

(iii) Have a flow i.e. something going though the whole system such as water or data

(iv) Have inputs and outputs

(v) Be self regulated

(vi) Be self connected; interact or do not interact with the environment and

(vii) Receive feed-back

Basically, in this process of system we have three basic elements namely: input, processing, and output. The type of input and process will actually determine the output it is therefore necessary to describe the input, output and the files used during processing this project.

DESIGN

The following could be taken as give (or could be easily be obtained in a system study).

(1) Suitable environment, organisational objectives, climate and structure.

(2) Available facilities and constraints

(3) Processes and standards for evaluating effectiveness and efficiency factors

(4) System objectives.

In our recruitment exercise, observing a system as former mentioned elements in which the three must be identifiable . A schematic design illustrating the relationship between these three elements is given below:

INPUTS ---------PROCESS ---------OUTPUTS

This basic elements of a recruitment system can be identified as:

INPUTS: Raw data i.e. Age, Name, Qualification, State of Origin, Chest, Height, Foot, Medical Fitness.

PROCESS: They are the above raw data that are being processed.

OUTPUTS: Qualified, Not Qualified, Go for Training.

INPUT DESIGN

The input type used in this project contains the following information.

CANDIDATE

NAME

AGE

STATE OF ORIGIN

BILL OF CLEAN HEALTH

GRADE FOUR CERTIFICATE

SCHOOL CERTIFICATE

OND/BSC (FIRST DEGREE)

HEIGHT

CHEST

FOOT

MEDICAL FITNESS

MARITAL STATUS

FIRST DEGREE (MAJOR FIELD OF STUDY)

EXPERIENCE

SECONDMENT

SHORT SERVICE

SIX MONTHS TRAINING

DUTIES ASSOCIATED TO WOMEN

INPUT DESCRIPTION

The fields allocated memory spaces as described below:

DATA/FILE	GDO	SPUO	CE	REC	WF	SPOs
NAME	X	X	X	X	X	X
AGE	X			X	X	X
STATE OF ORIGIN	X	X	X	X	X	X
BILL OF CLEAN HEALTH	X	X	X	X	X	X
GRADE FOUR CERTIFICATE		X		X	X	
SCHOOL CERTIFICATE	X			X	X	
OND/ADVANCE LEVEL	X			X	X	
HND/BSC (FIRST DEGREE)	X	X	X		X	X
HEIGHT	X	X	X	X	X	X
CHEST	X	X	X	X	X	X
MEDICAL FITNESS	X	X	X	X	X	
MARITAL STATUS				X		

FIRST DEGREE			
(MAJOR FIELD STUDY)	X	X	
EXPERIENCE	X	X	
SECONDMENT	X	X	
SHORT SERVICE	X	X	
SIX MONTHS TRAINING		X	X
DUTIES ASSOCIATED			
TO WOMEN			X

FILE ORGANISATION

The method of file organisation chosen for this project is relational database. The records in a relational file have the following characteristics.

(1) Entries in a table are single valued.

(2) Entries in any column are all of the same kind for example, the age column shows only numbers representing age.

(3) Each column has a unique name. The order of the column is immaterial.

(4) No two rows in the table can be identical key. The order of the row is immaterial.

REPORT DESIGN

Different reports are reproduced with the new system designed for the Police

recruitment. This includes going for training for certain numbers of months with salary.

Note: See appendix for the report.

PROCESSING CHARTS

Problems analysis is greatly enhanced by the use of flow charts. A flow chart is a graphical representation of the analysis and solution of a problem in which symbols are used to represent operations data flow, equipped and so on. In computer program clarity flow charts form a good representation of how diagram can be used to explain a complicated process.

In a flow chart all operations to be performed and all paths of processing are indicated. There are two types of flow charts viz: System flow chart and program flow chart. A system flow chart is a description of system activities. In essence it is a design of an efficient data structure that allows one to access a data item in the program and move from one data item to another until enough of item is found. It is a diagram of a flow of data through manual machine and machine process.

A program flow chart is a representation of the program to give steps in standard clarity symbols. Each step connected to another indicating the parts through the computer solution from start to stop.

Flow chart in its real sense of definition is a pictorial design of a problem representing value. In this alternative patches are more vividly seen.

REQUIREMENT SPECIFICATION FOR THE PROPOSED SYSTEM

HARDWARE REQUIREMENT

(i) Intel pertion 100MH3 SVGA (1024 x 768 pixel)

(ii) 8MB RAM (expandable to 64MB)

(iii) 2.2GB 1 DE Hard disk

(iv) 2 serial, 1 parallel port

(v) 4 free expandable slots

(vi) 3.5 floppy disk drive

(vii) 8 x CD Rom Drive with multi media facilities

(viii) 101 entranced keyboard

(ix) HP laserjet 6L

(x) power supply UPS 1.2KVA

(xi) Stablizer 1.2KVA

SOFTWARE REQUIREMENT

(I) System software - MS - DOS 6.22

(ii) Application software - Dbase IV

APPROACHES TO DATABASE MODELS

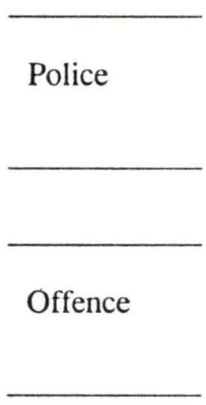
3.0 DATA STRUCTURE\DESIGN OF THE DATABASE

Database structure according to the data model. Relationship between entities make up a data structure. The data model represents the data structure.

3.1 DATA STRUCTURE DIAGRAM (DSD)

A data structure diagram is means by which we can depict entities and the relationship between them. A data structure diagram is a picture of the data encountered within a computer system and enables us to study the effect of holding and not holding the data which users need. DSD can be regarded as a model to study the way in which a computer system behaves. Then we can regard it as a data model or a logical model on an entity - relationship model.

The following is a DSD for the Police allocation system



An example of how a tree is represented using a list is shown in figure 3.2. A vendor may send various invoices and payments each having different items and payments respectively. The tree structure is easy to design when the information structure is inherently hierarchical .

Unfortunately, few real information structures confirm to a joint account we are representing a no tree structure which makes the DBMS description quite complex. The alternative is often resolved using a network structure.

DIAGRAM

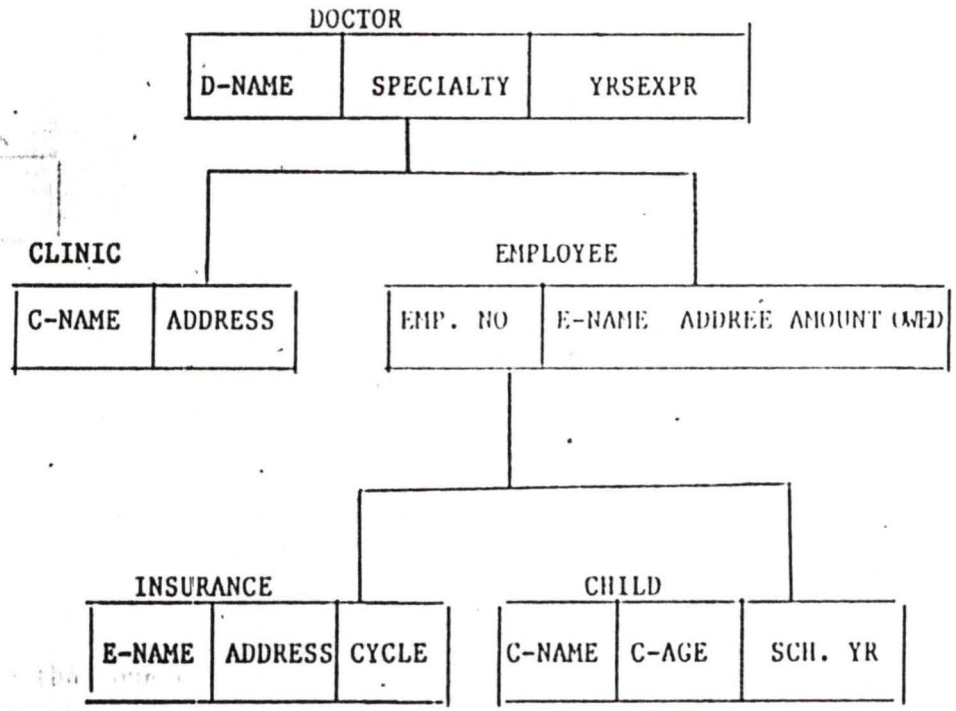


Fig: 3.4 A DOCTOR CLINIC & EMPLOYEE-Insurance and child databse.

3.4 SCHEMA IN HIERARCHIES

The physical database is made up of hierarchical tree structure composed of segment types. A segment is made up of an arbitrary number of data fields. A segment corresponds with the record in conventional file management and to the BDTG record types. The smallest unit of data that may be accessed and transferred by DML is a segment. The following figure shows a hierarchical IMS database containing five segment types: Doctor, Clinic, Employee, Insurance and Child. Note that this is the same data base used in exemplifying the DBTG system earlier.

DIAGRAM

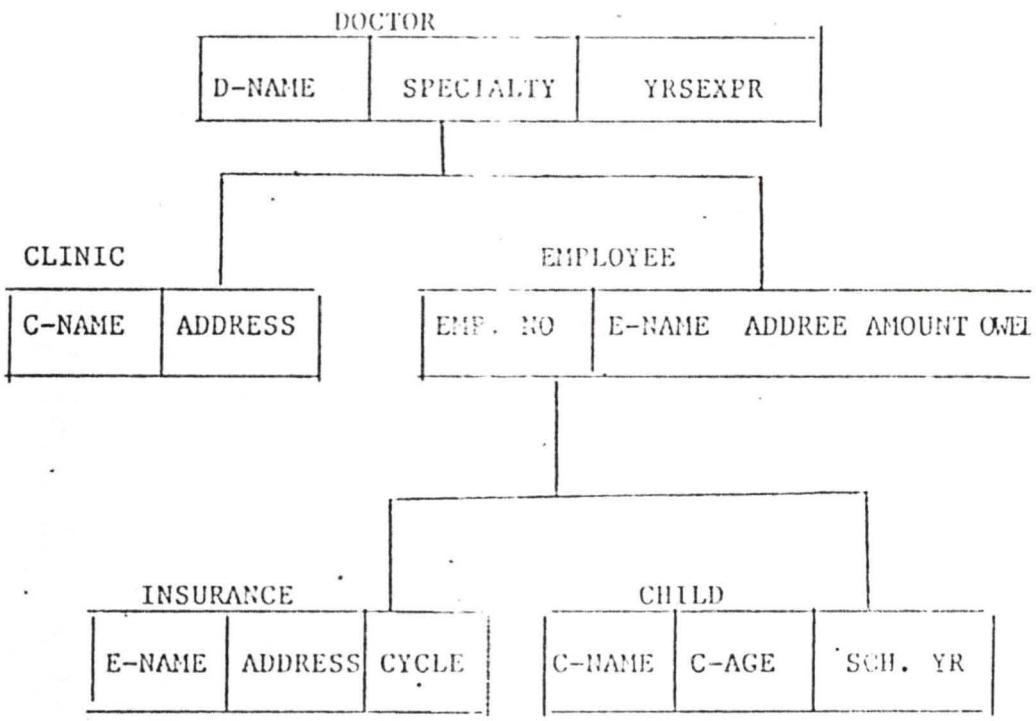


Figure 3.5 - A Doctor Clinic and Employee - Insurance and Child Database.

The ROOT segment types is the doctor's segment which is at the top. All other segments are department segments arranged in the structure in physical parent child relationships. A parent segment type normally has at least one child segment type: For example, the parent of EMPLOYEE is the doctor. A parent does not have to have at least one child. A child can not have more than one parent which are not parents of any segment types. The term parents always refer to the parent immediately above.

DIAGRAM

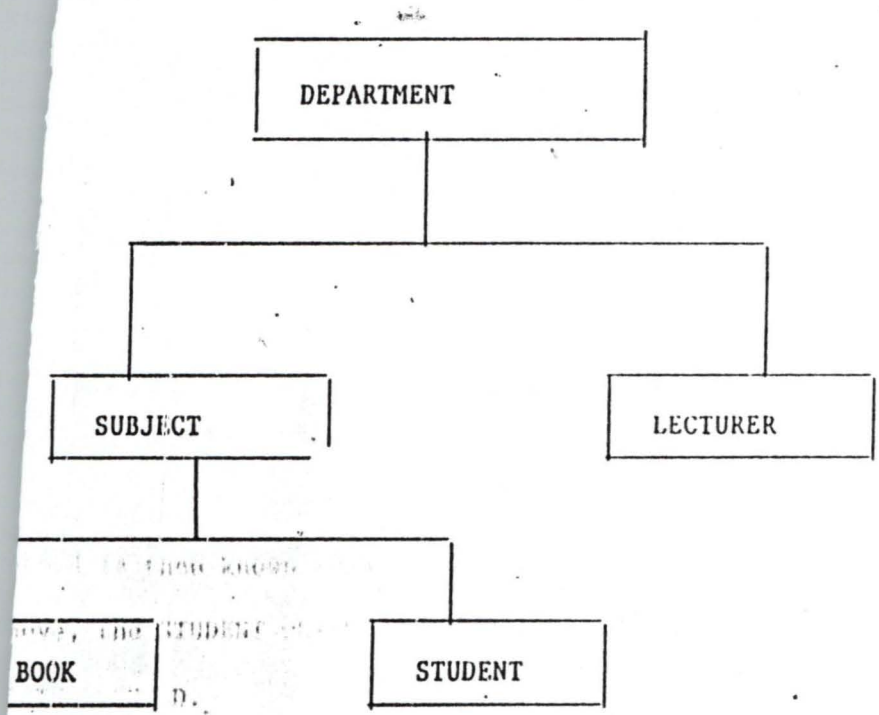


Figure 3.6 A PLEX STRUCTURE

In this diagram, the Police is a child of both offence and suspect which do not make it a tree. It must be simplified before they can be implemented by a hierarchical database. This can be achieved by duplicating the mode which is present in more than one relationship as shown.

DIAGRAM

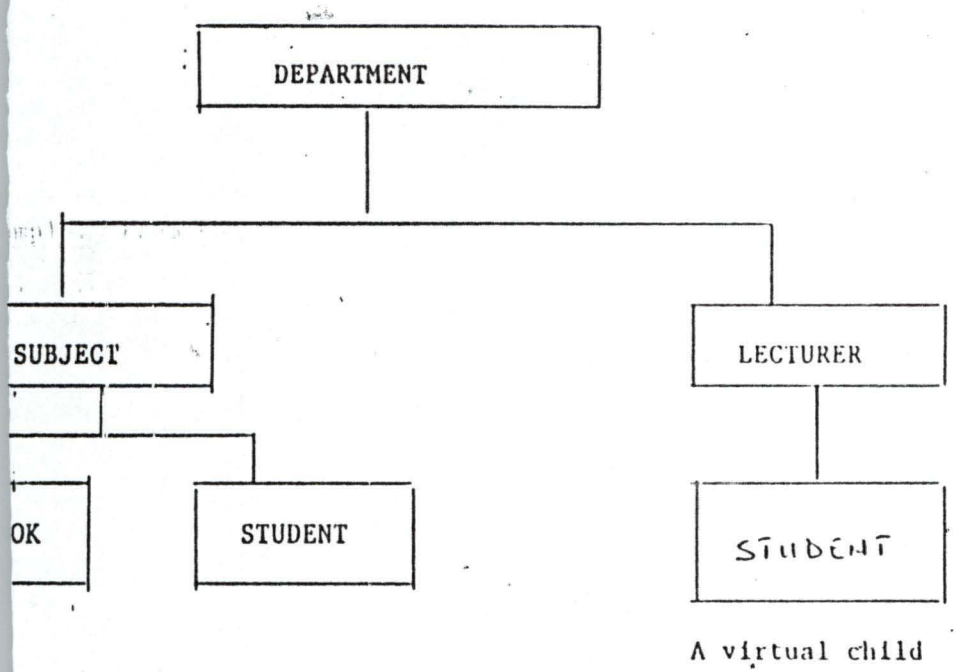


Figure 3.7 A TREE STRUCTURE

A potential duplication of data which this implies is avoided by using virtual records on pointer record. Such a record is then known as a VIRTUAL CHILD. In the tree structure above, the POLICE which is the child of both offence and suspect is a virtual child.

The number of segments which you pass going from top to bottom of a tree is the hierarchical level. The above tree structure has three (3) levels since we pass three nodes in going down the path from the top to one of the bottom nodes (POLICE/OFFENCE) of the tree.

4.2 THE HIERARCHICAL SUB SCHEMA: PCB'S AND PSB

A sub schema is a logical and consistent subset of the schema. In hierarchical structure the program communication block (PCB) or a set of PCB which are collectively called a program specification block (PSB) constitute a sub schema.

The set of occurrences of a PSB constitute the database of the application program containing the PCB or PSB declaration.

PCB - Program Communication Block

PSB - Program Specification Block

Example: From the DOCTOR - CLINIC - EMPLOYEE SCHEMA, we can derive the sub schema below:

DIAGRAM

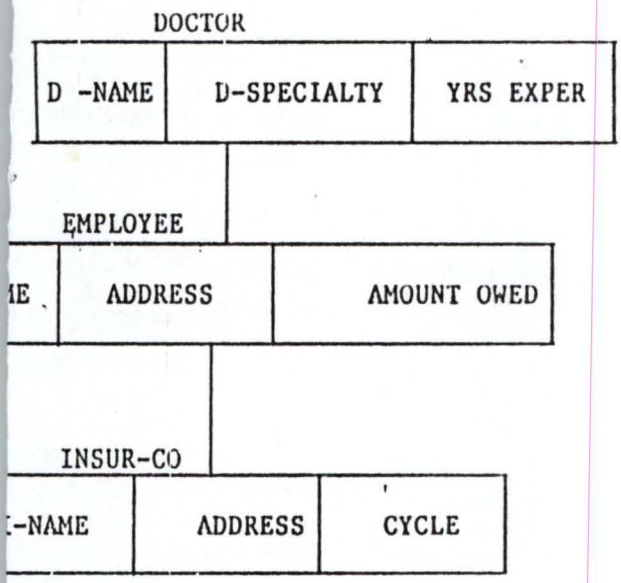


Fig 3.8. A subschema for doctor data base

Some rules for forming a sub schema are as follows:

(1) Form it as a hierarchical arrangement of;

(2) Since the PCB is a sub tree, it must have the same root segment;

(3) Different PCB can overlap;

(4) All data fields of a segment declared in the database design must be included in the PCB.

The sensitivity of a program refers to the segment type that are seen by an application program. The sensitive segments are all those included in the PCB's declared for the program.

PCB DECLARATION FOR THE SUB SCHEMA

(1) PCB TYPE = DBO NAME = DOCTOR DB

(2) SENSES G NAME = DOCTOR

(3) SENSES NAME = EMPLOYEE, PARENT = DOCTOR

(4) SENSES NAME = INSURED, PARENT = EMPLOYEE

(5) PSBGEN LANG = COBOL

(6) END

Statement I shows that this is a DB type

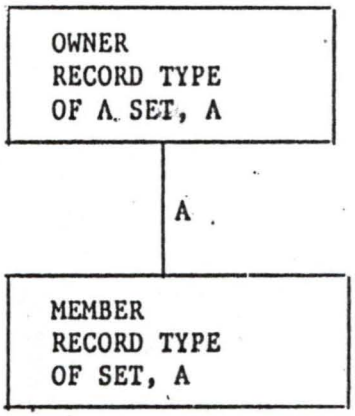
Statement 2 declares that root segment and type

Statement 3 declares employee as the next sensitive segment

3. SETS

A set type is named relationship between record types arranged as a two level tree. A multi level and network structures are built using multiple two level trees. A large database is thus composed of various record types and sets. The simplest set that may be defined involved two record types and is represented in the following figure.

DIAGRAMS (2)



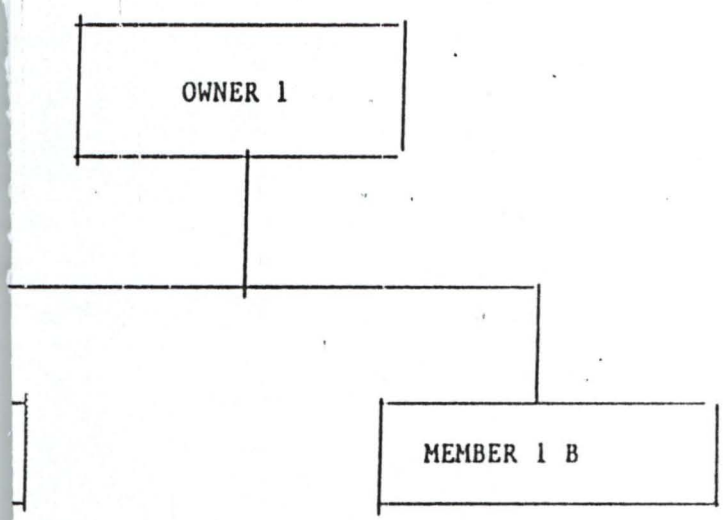
3.16 (a): The CODASYL DBTG set

The name of the set (A) appears next to the arrow. The tail of the arrow always start on the record type which is the owner of the set, the point of the arrow ends on the record type which participates as a member of the set. The mechanisms are the building blocks which can be used to construct complex multi-level and network database. The main rules for the formation of sets are summarized below;

(1) A set type must be uniquely named, must have one owner record type within the set type.

(2) Any record type may be the owner of one or more set types, for example the following set shows a record type and owner of three different sets.

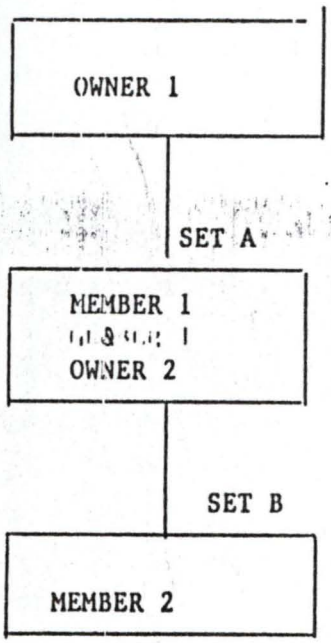
DIAGRAM



16 (B) Two record types a member of a single set.

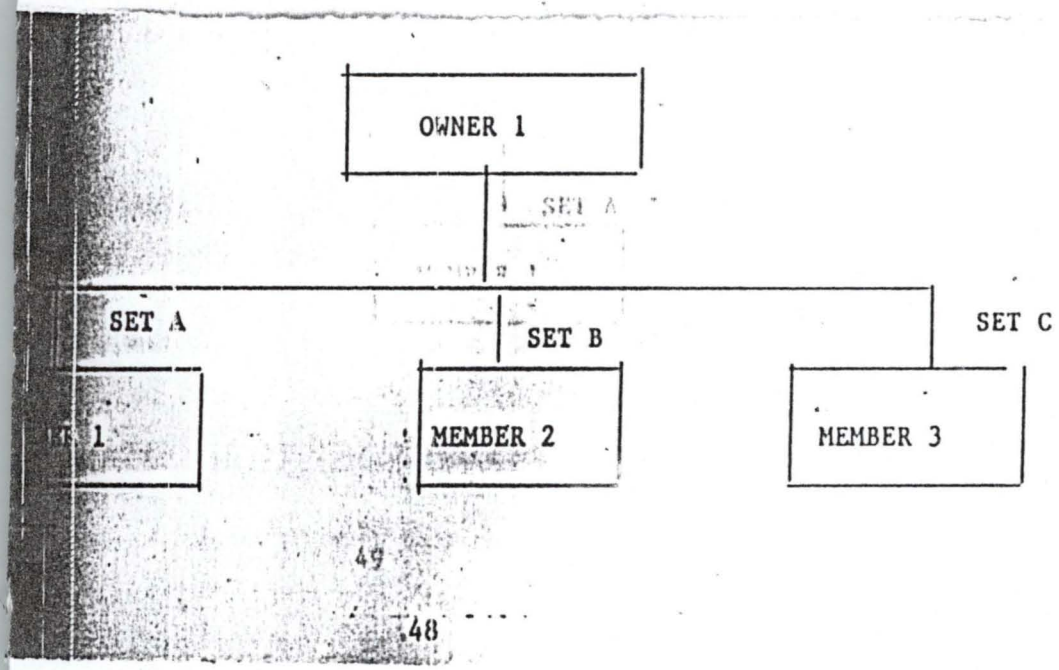
(3) A record type as member of two sets (two owner records, each in different sets)

(4) Any record type may be both or owner of one or more set types and member in one or more different set types.



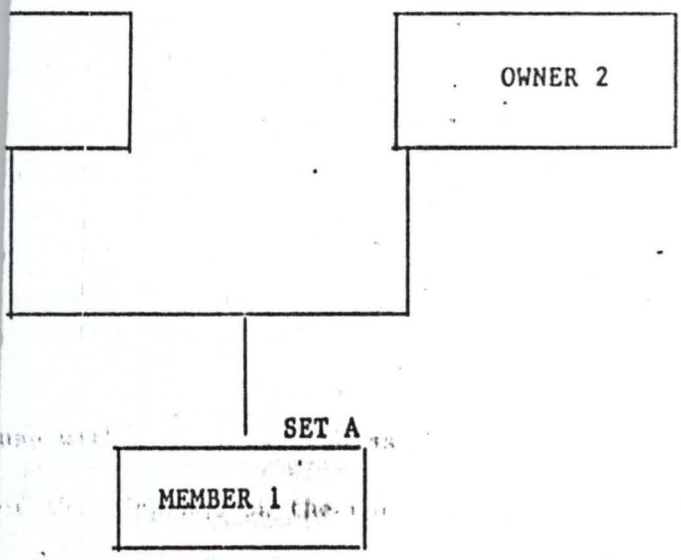
A Record type with two or more owners within the set is not allowed.

DIAGRAM



(5) A record type with two or more owners within the same set is not allowed.

DIAGRAM



3. THE RELATIONAL DATABASE APPROACH

The relational database approach has data and relationships represented in a two dimensional (rows and columns) table called relation. A relation is another name for file on table of records. Each row represents a record. A row is also called a tuple. Figure 3 is a relationship describing the entity EMPLOYEE by four attributes. ID, Name, Years with the Firm and Salary.

The relation is an 8-tuple (rows) file to illustrate, suppose a relational structure consist of two relations: The EMPLOYEE relation (fig 3) and EMPLOYEE EDUCATION (EMPED) relation. Table (3.).

A query requesting the employee(s) with three or more years with the firm and Bs would result in the following routine.

(1) A temporary table of employees with three or more years is generated from the EMPLOYEE RELATION and placed in the file. This file is deleted once the query has been answered.

(2) The information is the temporary table compared to the tree on network structure, a relational database offers three big advantages.

(a) Data Independence: Perhaps the most important advantage of a relational database. Data Independence means isolating the user's logical view of a database from the hardware's physical software requirements.

(b) Ease of use with relational tables, it is idea for novice users. Much of this depends on the user query language.

(3) Easy to modify the structure and implement the system.

	ID	NAME	YEAR WITH FORM	SALARY
Tuples (8)	127	Arnold	2	18,500
	241	Davis	14	26,500
	362	Elen	7	27,000
	180	Mandelbaum	6	21,000
	820	Sibly	1	16,000
	762	Tnauis	3	19,000
	215	Unger	5	20,010
	500	Zieglen	9	23,145

Table 3:1:3 EMPLOYEE (EMP) RELATION.

ID	NAME	DEGREE
124	Arnold	B.SC
241	Davis	B.SC
362	Elam	Ph.D
180	Mawelbaum	MBA
820	Sibly	B.SC
762	Tnauis	M.A.

Table 3: EMPLOYEE EDUCATION (EMPED) RELATION.

The model's first objectives are Specified as follows:

(1) To allow a high degree of data independence. The application program must not be affected by modification to the internal data representation particularly by the changes of the organisation, record ordering and access paths.

(2) To provide substantial grounds for dealing with data semantic, consistency and redundancy problems. These two objectives can not easily achieved by the network on hierarchical models, but by the relational model, mainly because of the supplication of the relational views presenting the data in two dimensional tables and the application of the normalisation theory to database design as we shall see later in the programme.

CHAPTER FOUR

4:0 IMPLEMENTATION

4:1 IMPLEMENTATION OF THE SYSTEM DESIGN

After the system design, the following step is the implementation stage. This involves a set of change process in which an existing system is assisted to move smoothly and successfully from one organisational state to the other.

The new system should be established in such a way that they fit well with enlistment expectation and values so that a set of solid, technical administrative and economic relationship is developed which both leads to greater efficiency and job satisfaction.

Project development stage requires a project plan for the development and implementation (i.e installation) of the system. The activities that are normally present in this stage include:

Programming

Documentation

Data collection

Program testing

Data entry

System test

Training.

In implementation and development of a system. There is a need for change over from old system to the new system, that is changing from manual system to Computer System.

These are methods of changing over dual method, inventory method, pilot method, parallel method.

In explanation, dual method is a method where old system is been face out, the old system according to their components and replace with new ones.

Inventory change over is a one time change over which could be very disadvantageous in the sense that it leads to crisis in change over when the new system fails for one reason or the other.

Pilot method makes a new system tested with random data in the system while the system continue to be processed by the old system (existing system).

While in parallel method, the old system is run along with the new system for a period of time and if the expected result is observed the new system is then carried on leaving existing system infunctioning.

The implementation of this new system computerization of police recruitment is carried out using DBASE IV programming language. DBASE IV is one at several other languages such as BASIC, FORTRAN, COBOL but these could not meet the needs of the new system designed adequately. The main reason that the other language are not data are driven while DBASE III+ is. DBASE IV+ is a 3rd generation language and it has the ability to meet many needs to the user.

DBASE IV is a database management system (DBMS) the most basic function of

DBASE is to give one way to enter and store information, and to retrieve it speedily.

The power of DBMS lies in its ability to let one compare and manipulate information. DBASE IV programming language allows one to sent and select pieces of information, perform calculation, and "mix and match" or "cut and paste" to bring to high new relationships between data.

With DBASE IV programming language, one can produce fancy report and form letters, print mailing labels, prepare invoices, and fill in pre-printed forms with data from created database file, one can derive a report consisting of the enlistment standings.

The programme written from the recruitment of police i.e mean to be data - drives and DBASE IV i.e a data driven programming language. It thus become imperative and adequate to use the language, more over, with DBASE IV, one does not need to supply data on information action each time is the programme is to be executed. When once the data has been supplied through the Database files. Other parts of the programme can be processed.

The flexibility of DBASE IV is another reason to justify its choice for this project. It is a general purpose package: not only can it do many different kinds of data. In absence, DBASE IV create a room for easy editing facilities which assists the add on amend records when necessary.

4:2 IMPLEMENTATION ENVIRONMENT

This system was developed using IBM PC I model 80-311. The hardware configuration used is the IBM 80 -386 micro. It has a ram capacity of 4MB. The system uses hard disk and floppy disk drive. It can accommodate 360KB diskette (5.75 inch) 720KB Diskette (3.5inch) and 1.2 megabytes diskette (5.75 inch) it has multi-colour monitor. The printer used are Epson and Laser Jet.

4:3 SOFTWARE FACILITIES

The type of MS-DOS Version used is the 3.30 version. Wordstar profession release 5 word used in the processing of this project. The compiler used for program compilation is DBASE III+ compiler.

4:4 NEW SYSTEM ADVANTAGES OVER THE MANUAL SYSTEM

A number of advantages are discovered in the new system such as:

(1) production of the desired information at the right time, with the right cost, with an acceptable level of accuracy and in the form required economical cost.

(2) it incorporates checks and controls which are capable of detecting the detecting with exceptional circumstances and errors.

(3) There is effective sategoblands for the prevention of manipulation.

(4) Effective security measures in order to avoid lost of data stored in master files.

(5) There is efficient design of documents and reports.

(6) Adequate handling of exceptions to normal situation.

(7) Ability to process large volume of data accurately.

(8) They have the ability to carry out complex manipulation of data.

(9) They provide a compact medium for the storage of data and information.

(10) Accessibility to information and easy retrieval of save is greatly enhanced from the computer system.

4:5 NEW SYSTEM LIMITATIONS

Special peculiar problems are inherent in the adaptation and implementation of the computerised recruitment system. These are:

(1) There is high initial acquisition costs,

(2) It needs special operation.

(3) Processing of data and storage is in machine sensible form investigate any transaction processed within the system.

(4) Their use often results in high dependance on a single equipment for data processing activities.

(5) The initiation of the system often pose a feeling of uneasiness in the minds of the recruitment officers. .The idea which I believe may probably be closely followed by changes within the board might be very disturbing to some people. This may cause

resentments which could give use to various disc functional behaviour such as sabotaging the system blaming the system for all problems, refusing to co-operate with systems analysis on simply ignoring the system.

CHAPTER FIVE

SUMMARY AND CONCLUSION

This project implements the database system from the recruitment of policemen in the Niger State Police Command. It has been assumed that the activities of the enlistment and training have no short comings.

This implies that the force numbers of policemen and their divisions are obtained easily. In practice, this is not so, the database management system can therefore be extended to cope with the activities of the enlistment and training departments. Police establishment agrees that for recruitment to be effective, accurate and minimise cost computerisation should be adopted, and this can be used to solve the entire police problem, on a selected database system can be used.

These organisation realise the potential contribution which computerisation of police recruitment can bring to their work over the manual system. Despite the limitation of costs in terms of time effort and finance required for the initial development and implementation of computerised police recruitment the production advantages of the information at the right time, with the cost and acceptable level of accuracy which required at an economical cost has gained world recognition.

A selected database implies a significantly higher level of sophistication in which a number of autonomous database system at different department are made to interact with each other under some form of overall control.

The implementation of database systems technology is a significant step in the process of innovation of an organisation. Since DBMS represent an important innovation process in information technology.

I have in this project emphasized the fact that a deliberate and determined computerisation of the police recruitment system would contribute in no small measure to translate their plans into reality.

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APPENDIX

```
set score off
set status off
set talk off
Set Color To R/W
Clear
TY = "RELATIONAL DATABASE FOR POLICE RECRUITMENT"
L = Len(Ty)
K = 1
M = 8
Do While K <= L
   @3,M Say Substr(Ty,K,1)
   Do Delay2
   K = K + 1
   M = M + 1
Enddo
I = 1
Do While I <= 78
   @1,I Say Chr(219)
   Do Delay
   I = I + 1
Enddo
I = 1
Do While I <= 24
   @I,78 Say Chr(219)
   Do Delay
   I = I + 1
Enddo
I = 78
Do While I >= 1
   @24,I Say Chr(219)
   Do Delay
   I = I - 1
Enddo
I = 24
Do While I >= 1
   @I,1 Say Chr(219)
   Do Delay
   I = I - 1
Enddo
Set Color To R/Br
```

```
@6,22 Clear To 21,61
Set Color To W/B+
@5,20 Clear To 20,59
@6,26 Say "A  Pgd   P R O J E C T"
@10,20 Say "Submitted To The Dept. Of Maths/Computer"
@12,30 Say "F U T,   M I N N A."
@15,40 Say "By"
@18,30 Say "Dada Olumuyiwa Ayodele"
@20,30 Say "Reg. No. Pgd/Mcs/173/96"
N = 1
Do While N <= 10000
  N = N + 1
Enddo
Mclose = 0
Do While Mclose <= 24
@Mclose,00 Clear To Mclose,79
Mclose = Mclose + 1
Do Delay2
Enddo
Do Personel
Procedure Delay
Delay = 1
Do While Delay <= 1000
  Delay = Delay + 1
Enddo
Return
Procedure Delay2
Delay = 1
Do While Delay <= 500
  Delay = Delay + 1
Enddo
Return
□


**********************
*Menu Section
**********************
mChoice = 0
clear
```

```
*fallguy(3,0, "R E L A T I O N A L  D A T A B A S E  F O R  P O L I C E  R E C R U I T M E N
T",2000)
set Message to 18 center
set wrap on
  clear
  set color to gb+,,gr
  set color to w/b
  @9,24 clear to 16,50
  @9,24 to 16,50
  do while .t.
  @10,25 prompt "Add information"  message "Use this option to  add Recruitment data to file"
  @11,25 prompt "Modify/Delete record" message "Use this option to modify or delete record"
  @12,25 prompt "Recruitment Processing" message "Use this option for the real Recruitment"
  @13,25 prompt "Reports  section" message "This option to get Report"
  @14,25 prompt "Exit program" message "This module takes you out of the program"
  menu to mChoice
  save screen to n_save
  do case
    case mchoice ==1
      do add_rec
    case mchoice ==2
      do modify
    case mchoice ==3
      do process
    case mchoice ==4
      do report
    case mchoice ==5
       quit
  endcase
enddo

*~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
*This section Accepts Data into the personnel file**
*+++++++++++++++++++++++++++++++++++++++++++++++++++++++++
procedure Add_rec
set talk off
set status off
set score off
set date british
set bell off
set color to wg/rB
J = 0
Do while J <= 24
@ J,0 Say Replicate(CHR(179),80)
J =  J + 1
enddo
```

```
set color to GR/WN
@0,0 CLEAR TO 2,79
@1,0 SAY "R E L A T I O N A L  D A T A B A S E  F O R  P O L I C E  R E C R U I T M E N
T"
@2,22 say "Niger State Police Command"
Store "Y" to Ans
Do While upper(AnS) = "Y"
  store space(15) to Mname
  store 0 to mage
  store space(13) to mstate
  store space(3) to mbill_ciea
  store space(3) to mquali
  store space(1) to mstatus, msex
  store space(1) to mfoot
  store 0.00 to mheight, mchest
  store space(15) to mprofess
  store space(3) to mexperien
  store space(3) to msecondmt
  store space(3) to mshort_ser
  store space(3) to msix_month
  store space(15) to mduties
  @5,4 clear to 22,76
  @5,4 to 22,76 double
  @4,25 say " Data Entry Section into personel file" Color '*W'
  @6,5 say "Name : " color 'w'
  @6,10 get mname pict "@!X" color 'gr/wn'
  @6,28 say "Age : " color 'w'
  @6,32 get mage pict '999' color 'gr/wn'
  @6,36 say "Foot [F => Flat foot or N => Not flat :"  color 'w'
  @6,42 say "F" color 'r+'
  @6,60 say "N" color 'r+'
  @6,75 get mfoot pict '!' valid mfoot $ 'FN' color 'gr/wn'
  @8,5 say "State of Origin :" color 'w'
  @8,25 get Mstate pict '@!X' color 'gr/wn'
  @8,40 say "Qualification :" color 'w'
  @8,55 get mquali pict '@!X' color 'gr/wn'
  @8,65 say "Sex {M/F}:" color 'w'
  @8,70 SAY "M/F" COLOR 'R'
  @8,74 get msex pict "!" valid msex $ 'FM' color 'gr/wn'
  @10,5 say "Status {S/M}" color 'w'
  @10,13 SAY "S/M" COLOR 'R'
  @10,18 get mstatus pict "!" valid mstatus $ 'MS' color 'gr/wn'
  @10,23 say "Height : " color 'w'
  @10,36 get mheight pict '99.99'  color 'gr/wn'
  @10,50 say "Chest : " color 'w'
  @10,60 get mchest pict '99.99' color 'gr/wn'
```

```
@12,5 say "Profession : " color 'w'
@12,25 get mprofess pict '@!X' color 'gr/wn'
@12,45 say "Experience : " color 'w'
@12,60 get mexperien pict '@!X' color 'gr/wn'
@14,5 say "Secondment : " color 'w'
@14,25 get msecondmt pict '@!X' color 'gr/wn'
@14,45 say "Short service : " color 'w'
@14,60 get mshort_ser pict '@!X' color 'gr/wn'
@16,5 say "Six months Training : " color 'w'
@16,28 get msix_month pict '@!X' color 'gr/wn'
@18,10 say "Bill of clean health :" color 'w'
@18,40 get mbill_clea pict '@!X' color 'gr/wn'
@20,10 say "Duties Associated with Women : " color 'w'
@20,40 get mduties pict '@!X' color 'gr/wn'
save screen to msave
read
if lastkey() = 27
  clear
  set color to gb+,,gr
  set color to w/b
  @9,24 clear to 16,50
  @9,24 to 16,50
  return
endif
Use Personel
Append Blank
Repl Name with Mname
Repl Age with mage
Repl State with mstate
Repl Bill_clea with mbill_clea
Repl Quali with mquali
Repl Height with mheight, Chest with mchest
Repl Profess with mprofess
Repl Experience with mexperien
Repl Secondmt with msecondmt
Repl Short_ser with mshort_ser
Repl Six_month with msix_month
Repl Duties with mduties
if mfoot = "F"
  repl Foot with "Flat foot"
endif
if mfoot = "N"
  repl Foot with "Not flat"
endif
repl Sex with msex
if mstatus = "M"
```

```
    Repl Status with "MARRIED"
   ENDIF
   if mstatus = "S"
     Repl Status with "SINGLE"
   ENDIF
   @23,19 clear to 23,59
   @ 22,19 to 24,60 double
   @ 23,20 Say "more data entry(Y/N)" get ANS pict "!"
   Read
   restore screen from n_save
 ENDDO
   clear
   set color to gb+,,gr
   set color to w/b
   @9,24 clear to 16,50
   @9,24 to 16,50
*rest screen from n_save
return
**************************
*procedure modify/delete
**************************
clear
procedure modify
store recno() to mrem
set cursor off
set color to wg/rB
J = 0
Do while J <= 24
@ J,0 Say Replicate(CHR(179),80)
J =  J + 1
enddo
use personel
do while .t.
if Reccount() >0
  do showdata
endif
mkey =0
mkey = inkey(0)
 do case
  case mkey = -1
    do editt
  case mkey = 3
    if .not. eof()
      skip
      do showdata
    endif
```

```
    case mkey = 18
     if .not. bof()
       skip -1
       do showdata
     endif
     case mkey = 7
      delete
      pack
     case mkey = 27
      exit
  endcase
 loop
enddo
 set color to gb+,,gr
 set color to w/b
 @9,24 clear to 16,50
 @9,24 to 16,50
 rest screen from n_save
 return

procedure editt
set color to wg/rB
J = 0
Do while J <= 24
@ J,0 Say Replicate(CHR(179),80)
J =  J + 1
enddo
set color to GR/WN
@0,0 CLEAR TO 2,79
@1,0 SAY "R E L A T I O N A L  D A T A B A S E  F O R  P O L I C E  R E C R U I T M E N
T"
@2,22 say "Niger State Police Command"
  Store Name to Mname
  Store Age to mage
  Store State to mstate
  Store Bill_clea to mbill_clea
  Store Quali to mquali
  Store Height to mheight
  store Chest to mchest
  Store Profess to mprofess
  Store Experience to mexperien
  Store Secondmt to msecondmt
  Store Short_ser to mshort_ser
  Store Six_month to msix_month
  Store Duties to mduties
  Store substr(Foot,1,1) to mfoot
```

```
store substr(Status,1,1) to mstatus
store sex to msex
@5,4 clear to 22,76
@5,4 to 22,76 double
@4,25 say " Data Entry Section into personel file" Color '*W'
@6,5 say "Name : " color 'w'
@6,10 get mname pict "@!X" color 'gr/wn'
@6,28 say "Age : " color 'w'
@6,32 get mage pict '999' color 'gr/wn'
@6,36 say "Foot [F => Flat foot or N => Not flat :"  color 'w'
@6,42 say "F" color 'r+'
@6,60 say "N" color 'r+'
@6,75 get mfoot pict '!' valid mfoot $ 'FN' color 'gr/wn'
@8,5 say "State of Origin :" color 'w'
@8,25 get Mstate pict '@!X' color 'gr/wn'
@8,40 say "Qualification :" color 'w'
@8,55 get mquali pict '@!X' color 'gr/wn'
@8,65 say "Sex {M/F}:" color 'w'
@8,70 SAY "M/F" COLOR 'R'
@8,74 get msex pict "!" valid msex $ 'FM' color 'gr/wn'
@10,5 say "Status {S/M}" color 'w'
@10,13 SAY "S/M" COLOR 'R'
@10,18 get mstatus pict "!" valid mstatus $ 'MS' color 'gr/wn'
@10,23 say "Height : " color 'w'
@10,36 get mheight pict '99.99'  color 'gr/wn'
@10,50 say "Chest : " color 'w'
@10,60 get mchest pict '99.99' color 'gr/wn'
@12,5 say "Profession : " color 'w'
@12,25 get mprofess pict '@!X' color 'gr/wn'
@12,45 say "Experience : " color 'w'
@12,60 get mexperien pict '@!X' color 'gr/wn'
@14,5 say "Secondment : " color 'w'
@14,25 get msecondmt pict '@!X' color 'gr/wn'
@14,45 say "Short service : " color 'w'
@14,60 get mshort_ser pict '@!X' color 'gr/wn'
@16,5 say "Six months Training : " color 'w'
@16,28 get msix_month pict '@!X' color 'gr/wn'
@18,10 say "Bill of clean health :" color 'w'
@18,40 get mbill_clea pict '@!X' color 'gr/wn'
@20,10 say "Duties Associated with Women : " color 'w'
@20,40 get mduties pict '@!X' color 'gr/wn'
save screen to msave
read
if lastkey() = 27
  return
endif
```

```
  Use Personel
  Append Blank
  Repl Name with Mname
  Repl Age with mage
  Repl State with mstate
  Repl Bill_clea with mbill_clea
  Repl Quali with mquali
  Repl Height with mheight, Chest with mchest
  Repl Profess with mprofess
  Repl Experience with mexperien
  Repl Secondmt with msecondmt
  Repl Short_ser with mshort_ser
  Repl Six_month with msix_month
  Repl Duties with mduties
  if mfoot = "F"
    repl Foot with "Flat foot"
  endif
  if mfoot = "N".
    repl Foot with "Not flat"
  endif
return
*****************************
procedure showdata
*****************************
  store recno() to mrem
  @1,30 say "Record Num. " color 'gr/wn'
  @1,40 say mrem color 'gr/wn'
  set color to GR/WN
  @5,4 clear to 22,76
  @5,4 to 22,76 double
  @4,25 say " Data Display Section from personel file" Color '*W'
  @6,5 say "Name : " color 'w'
  @6,10 say name pict "@!X" color 'gr/wn'
  @6,28 say "Age : " color 'w'
  @6,32 say age pict '999' color 'gr/wn'
  @6,40 say "Foot :"  color 'w'
  @6,50 say Foot  color 'gr/wn'
  @8,5 say "State of Origin : ' color 'w'
  @8,25 say state pict '@!X' color 'gr/wn'
  @8,40 say "Qualification :" color 'w'
  @8,55 say quali pict '@!X' color 'gr/wn'
  @8,65 say "Sex :" color 'w'
  @8,74 say sex  color 'gr/wn'
  @10,5 say "Status" color 'w'
  @10,18 say status  color 'gr/wn'
  @10,23 say "Height : " color 'w'
```

```
   @10,36 say height pict '99.99'  color 'gr/wn'
   @10,50 say "Chest : " color 'w'
   @10,60 say chest pict '99.99' color 'gr/wn'
   @12,5 say "Profession : " color 'w'
   @12,25 say profess pict '@!X' color 'gr/wn'
   @12,45 say "Experience : " color 'w'
   @12,60 say experience pict '@!X' color 'gr/wn'
   @14,5 say "Secondment : " color 'w'
   @14,25 say secondmt pict '@!X' color 'gr/wn'
   @14,45 say "Short service : " color 'w'
   @14,60 say short_ser pict '@!X' color 'gr/wn'
   @16,5 say "Six months Training : " color 'w'
   @16,28 say six_month pict '@!X' color 'gr/wn'
   @18,10 say "Bill of clean health :" color 'w'
   @18,40 say bill_clea pict '@!X' color 'gr/wn'
   @20,10 say "Duties Associated with Women : " color 'w'
   @20,40 say duties pict '@!X' color 'gr/wn'
   @ 22,29 Clear To 22,62
   @ 22,29 Say "F2" Color '+GR/BR'
   @ 22,31 Say ":Edit;" Color 'g+/BR'
   @ 22,37 Say "Del" Color '+GR/BR'
   @ 22,40 Say "ete;Pg" Color 'g+/BR'
   @ 22,46 Say "Up" Color '+GR/BR'
   @ 22,48 Say ";Pg" Color 'g+/BR'
   @ 22,51 Say "Dn" Color '+GR/BR'
   @ 22,53 Say ";" Color 'g+/BR'
   @ 22,54 Say "Esc" Color '+GR/BR'
   @ 22,57 Say ":Exit " Color 'g+/BR'
   set cursor on
return
**************************
procedure process
**************************
set talk off
use personel
clear
do while .not. eof()
  if  ((alltrim(State) = "NIGER") .And. (Age <=25) .and. ((height >=1.68 ;
     .or. height <=1.73));
     .and. (alltrim (Foot) = "Not Flat") .and.  (alltrim(Status) = "SINGLE");
     .and. (Chest >=0.86))
     Repl Formation with "GDO"
   ENDIF
   if  ((alltrim(State) = "NIGER") .and. ((height >=1.68 .or. height <=1.73));
     .and. (alltrim (Foot) = "Not Flat") .and.  (alltrim(Status) = "SINGLE");
     .and. (Chest >=0.86);
```

```
      .and.  ((alltrim(Quali) ="HND") .or.  (alltrim(Quali) = "BSC"));
      .and. (!empty(profess)) .and. (Experience = "YES"))
       Repl Formation with "SPUO"
     ENDIF
     if  ((alltrim(State) = "NIGER") .And. (Age <=25) .and. ((height >=1.68;
       .or. height <=1.73));
       .and. (alltrim (Foot) = "Not Flat") .and.  (alltrim(Status) = "SINGLE") ;
       .and. (Chest >=0.86);
       .and.  ((alltrim(Quali) ="HND") .or.  (alltrim(Quali) = "BSC")) ;
       .and. (Secondmt ="YES") .and. (Short_ser = "YES"))
        Repl Formation with "CE"
     ENDIF
     if  ((alltrim(State) = "NIGER") .And. (Age <=25) .and. ((height >=1.68;
       .or. height <=1.73)) .and. (alltrim (Foot) = "Not Flat") .and.;
       (alltrim(Status) = "SINGLE").and. (Chest >= 0.86) .and. (Six_month ="YES"))
       Repl Formation with "REC"
     ENDIF
     if  ((alltrim(State) = "NIGER") .And. (Age <=25) .and.;
       ((height >=1.68 .or. height <=1.73));
       .and. (alltrim (Foot) = "Not Flat") .and.  (alltrim(Status);
       == "SINGLE") .and. (Chest >=0.86).and. (Sex = "F"))
       Repl Formation with "WF"
     ENDIF
     if  ((alltrim(State) = "NIGER") .And. (Age <=25) .and.;
       ((height >=1.68 .or. height <=1.73));
       .and. (alltrim (Foot) = "Not Flat") .and.((alltrim(Status);
       = "SINGLE") .or. (alltrim(Status) = "MARRIED")).and. (Chest >=0.86);
       .and.  ((alltrim(Quali) ="HND") .or.  (alltrim(Quali) = "BSC")) .and.;
       (empty(profess)) .and. (Experience = "YES"))
       Repl Formation with "SPOs"
     ENDIF
     skip
   skip
ENDDO
rest screen from n_save
return

procedure report
set talk off
use personel
clear
i =1
n =5
m = 7
if !isprinter()
  err_msg('The Printer is not Ready')
```

```
   clear
   set color to gb+,,gr
   set color to w/b
   @9,24 clear to 16,50
   @9,24 to 16,50
  restore screen from n_save
  return
endif
set device to printer
@n,00 say "S/no"
@n,5 say "       Name   "
@n,23 say " Age "
@n,29 say "State of Origin"
@n,46 say "Qualification"
@n,60 say "Height"
@n,68 say "Chest"
@n,74 say "Marital Status"
@n,92 say "Formation"
@n+1,00 say replicate('=',101)
Do while .not. eof()
  if !empty(formation)
     @m,00 say i pict '999'
     @m,5 say  Name
     @m,23 say Age
     @m,31 say State
     @m,50 say Quali
     @m,60 say Height
     @m,68 say Chest
     @m,76 say Status
     @m,96 say Formation
     m = m+2
     i = i+1
     skip
     else
     skip
  endif
enddo
set device to screen
```