TITLE PAGE

COMPUTERISED STUDENTS' ADMISSION PROCEDURES A CASE STUDY OF THE FEDERAL POLYTECHNIC, BIDA. NIGER STATE.

BY

ALARAPE, MOSHOOD ALABI
(PGD/MCS/2000/2001/991)

A PROJECT SUBMITTED TO THE DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA, NIGER STATE.. IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF POST- GRADUATE DIPLOMA (PGD) IN COMPUTER SCIENCE.

APRIL 2002

DECLARATION

I hereby declared that this project was written by me in partial fulfilment of the requirements for the award of Post-Graduate Diploma (PGD) in Computer Science.

Alarape

.....
Alarape, Moshood Alabi

17/4/2002

.....
Date

CERTIFICATION

This project titled "Computerised Students' Admission Procedures" by ALARAPE, MOSHOOD ALABI of the Department of Mathematics and Computer Science, Registration Number: PGD/MCS/2000/2001/991 meet the regulations governing the award of Post-Graduate Diploma (PGD) in Computer Science of the Federal University of Technology, Minna. Niger State.

....

Mal. Abubakar Yussuf
(Project Supervisor)

Date

....

L.N. EZEAKO
(Head of Department)

Date

....

(External Examiner)

Date

DEDICATION

This project work is dedicated, by the special grace of the almighty ALLAH, to my father, ALH. AKIBU ALARAPE whose words are always like an inspiration from God and to my dear sisters: Mrs. Fadhilat, Mrs. Sariyu, Mrs. K.A. Okunlola and Mrs. S.O. Ogunsuyi.

ACKNOWLEDGEMENT

All praise is due onto the Almighty Allah, who had in His infinite mercies see me through the programme.

My sincere thanks goes to my supervisor, Mallam Abubakar Yussuf whom Allah had used in making this work a great success. I pray to Allah to perfect His guidance on him and his family.

I am also indebted to the Head of Department and all the staff of the department of Mathematics and Computer Science, Federal University of Technology, Minna, who have made themselves available in various ways towards the success of this project.

I also wish to register my profound gratitude to my father, ALH. ALARAPE, my sisters: Mrs. K.A. Okunlola and Mrs. S.O. Ogunsuyi and her husband for their unflinching support and encouragement.

My special thanks also goes to my dear wife, Mrs. Toyibah Alarape for her endurance during the programme.

However, this column will not be complete without acknowledging the efforts of my friends Mr.& Mrs. Raji Tajudeen, Brother AbdulKabir Arigbabu, Brother AbdulAkeem Lawal, Dr. Nasirudeen AbdurRasheed, Dr. Ishiaq Solahudeen and the head of department of Maths,Statistics and Computer Studies, Federal Polytechnic, Bida, Mr. N.G. Emenogu for his academic advice and encouragement.

A very special appreciation goes to the director and staff of Brafat Computers for their assistance during the typing of the project report.

May Allah reward you all for your various contributions.

TABLE OF CONTENTS

ABSTRACT

The topic of this project – Computerised Students' Admission Procedures is a very interesting one that takes care of the most important element of any academic environment.

There is always a great need for standardization of admission procedures in order to enhance academic excellence of the institution.

In addition, the polytechnic environment of which the admission procedure is being studied is a mature one which aimed at excellence in the delivery of technical education in the country. That is why this research work can be said to be said to done in the right place and at the right time.

This work made a detailed study of the existing admission procedures and as well designed a new improved computer-based system that correct some anomalies in the present system by imposing standards for efficient and effective admission procedures in the polytechnics.

CHAPTER ONE

(GENERAL INTRODUCTION)

1.1 INTRODUCTION

It is of great importance for every academic institution to design the best and quality way of getting students enrolled in their institutions. This is due to the fact that it is the presence of students in the school that makes it to be what it is and therefore, the admission procedures form an integral part of the management responsibilities in any academic institution.

It is also the aim of every institution to ensure a lasting academic standard which started from the way and manner students are being admitted. Different schools have different standard set out to be used in admitting students, many, like most secondary schools consider the availability of facilities as the major factor while higher institutions not only look at the required and available facilities but also consider the level of grade pass in the former institution of the applicant.

The educational system in Nigeria make it mandatory for students applying to Polytechnics, Colleges of Education, and the Universities to go through standardized examinations conducted by various examination boards set up by the Federal Government. These examinations are the Polytechnics and Colleges of Education (PCE) examination and the Joint Matriculation Examination (JME) both handled by the Joint Admission and Matriculation Board (JAMB). Another important examination bodies that are preliminaries to JAMB; that is the basis for students admission into higher institutions in the country are WAEC and NECO (i.e. West African Examinations Council and National Examinations Council respectively), both of which the students in the nation's secondary schools complete their school with.

Some of the reasons for standardized admission procedures in our various higher institutions include:

(i) To ensure that the number of students admitted does not exceed the available vacancies or facilities to enhance quality educational services.

(ii) To ensure that the good and academically serious-minded students are admitted.

(iii) To create avenue for competition among students in the country so as to encourage hardworking.

(iv) To ensure that all students in the country (most especially those in the catchment area s and educational less developed states) are having equal chance of being admitted.

It is these importance of standardization that interest the researcher to attempt computerising the admission procedures so that all those concerned in the process can benefit from the use of the most sophisticated information technological equipment of our time – *Computer*.

So this work has attempted studying the admission procedures in the higher institutions with a case study of the Federal Polytechnic, Bida in Niger State.

1.2 BRIEF HISTORICAL DEVELOPMENT OF THE FEDERAL POLYTECHNIC, BIDA. NIGER STATE.

The Federal Polytechnic, Bida was established by law. It was founded in response to the recognition by the Federal Government that Nigeria is in dare need of Technical and Technological resources, and the empowerment of the citizens to meet the demands of the age.

The law formally establishing the Federal Polytechnic, Bida is Decree No 33 of 1979 which is now the Federal Polytechnics Act of 1990.

Originally, the institution was known as Federal College Kano. it was instituted on March 1, 1977 following the Federal Government decision to transfer the college, and

was finally moved to Bida on 27th July, 1977. The college in 1979 therefore was known as the Bida College of Technology.

The institution believes in and is firmly committed to a functioning philosophy of education in consonance with the National Policy on Education.

The polytechnic has clearly stated objectives which are as follows:

(i) Development and training of manpower.

(ii) Research for the development and adoption of appropriate techniques of problem solving and

(iii) Service to the immediate environment as well as the larger society.

The polytechnic has five schools (or faculties), namely: School of applied Arts and Sciences (SAAS); School of Business and Management (SBAM); School of Engineering Technology (SET); School of Environmental Studies (SES); and the School of Preliminary Studies (SPS).

There are many courses available in the polytechnic, and these courses are distributed or put under the different schools in the polytechnic. Examples are: Agricultural Engineering; Chemical Engineering; Civil Engineering; Electrical/Electronics Engineering; all in the School of Engineering Technology, also in the School of Applied Arts and Sciences; we have Statistics; Science. Laboratory Technology; Hotel and Catering Management; and Mass Communication. In the School of Environmental Studies, there are courses like Building Technology; Quantity Surveying; Town and Regional Planning; Land Surveying; Architectural Technology and Estate Management. The courses in the School of Business and Management includes: accountancy; Business Administration; Marketing and Secretariat Studies while the School of Preliminary studies handle the Pre-National Diploma courses in various courses mentioned above.

Another important element of the polytechnic is the Consultancy Services Unit (CSU) that handles various diploma and certificate courses including the part-time courses in the different schools as earlier listed.

There are many things to say about the polytechnic but for the purpose of our study we have limited ourselves to this little one.

1.3 AIMS AND OBJECTIVE OF THE STUDY

This research work is carried out with the following aims:

(i) To study and analyze the present admission procedures in the polytechnics in Nigeria taking the Federal Polytechnic, Bida as a case study.

(ii) To design a new improved system of admission which is going to be computer-based to enhance efficiency.

(iii) To fulfil the requirement for the award of a Post-Graduate Diploma in Computer Science.

However, the main objective is to obtain computerized admission procedure that could be applied in all polytechnics and the Federal Polytechnic, Bida in particular.

1.4 DATA COLLECTION METHODOLOGY

The researcher employed two methods of data collection for the various data used in developing this system. They are questionnaires and record inspection.

Three questionnaires were served to respondents as follows: one to the Deputy Registrar (Academics) in charge of the admission procedures in the polytechnic and the other two to two heads of departments in the school – the H.O.D. Building Technology and the H.O.D. Chemical Engineering.

Also, some of the past records on admission procedures were checked at the academic Affairs Unit of the Polytechnic to help in developing a more improved forms design for the project.

These two methods revealed the necessary and essential data/information needed for this work, although the strike actions embarked upon by various unions of Federal Polytechnics during the period deprived the researcher of some other valuable data that would have been used too.

The sample questionnaire served is attached as appendix V at the end of this project documentation.

1.5 LIMITATION AND SCOPE OF STUDY

This research work had been limited to the National Diploma students' admission procedures owing to time constraints and scarce resources.

However, the investigations had already made to cover the entire system (that is programmes in the polytechnic), which could be used in the future when upgrading the system.

So also, the students' admission procedures analyzed in this project is purely for the polytechnics and not the University system because of a little variation in their programmes.

1.6 SUMMARY

This chapter had so far attempted to give an introduction of the topic and the case study by explaining the concept of admission in academic institutions; clarifying the aims and objective of the project; the methodology of data collection for the project; and lastly the area covered by the research work.

CHAPTER TWO

(LITERATURE REVIEW)

2.0 INTRODUCTION

This chapter review some literatures related to the topic of project.

2.1 REVIEW OF LITERATURES ON ADMISSION AND COMPUTERISATION.

Admission as a topic is not a general one that one can easily find many literatures on. However, attempt is made here to see how the JAMB (Joint Admission & Matriculation Board) view admission.

According to JAMB (and as stated in its PCE Bronchure (2000/2001), admission needs to be guided by some guidelines. These guidelines are provided by the board as follows:-

1). That the proprietor of each institution provides with guidelines to be adopted in selecting candidates for the respective institutions. This is in respect of all state-owned and private institutions in the country.

2). That as for the Federal Institutions; the Federal Government stipulated that a certain percentage of the candidates should be selected on merit, another percentage on locality which in most cases is the geographical or socio-cultural area contiguous to the institution. And a proportion is also reserved for candidates from educationally less developed states (ELDS).

According to the same board, the Educationally Less Developed States are; Adamawa, Bauchi, Bayelsa, Beune, Borno, Cross-River, Ebonyi, Gombe, Jigawa, Kaduna, Kano, Kebbi, Kogi, Kwara, Nasarawa, Niger, Plateau, Rivers, Sokoto, Taraba, Yobe and Zamfara.

All these guidelines are working towards achieving what I had mentioned under the reasons for standardization in chapter one.

Admission process also goes further in the different institutions with different admission requirements (or entry qualifications) for different courses.

The entry requirements for National Diploma as specified by the Joint Admission and Matriculation Board are as follows:

Applicants must write the Polytechnics and Colleges of Education Matriculation Examination (PCE) in subjects relevant to the proposed course of study.

(i) SSCE/GCE O/Level or its equivalents with credit in 4 subjects relevant to the programme at not more than two sittings.

(ii) 4 credit passes in relevant subjects obtained at the final examination of an NBTE recognized preliminary ND programme offered in a Polytechnic or similar post-secondary technical institution.

(iii) The NTC/NBC with credit passes in all the trade modules. 4 academic subjects relevant to the programme and at least a pass in English Language.

(iv) A pass in the JAMB-PCE Examination.

(v) Holders of the Advanced National Technical Certificate (ANTC) may be given advanced placement in the ND programme provided the candidate has also met the minimum entry requirements into the ND programme and obtained good grades in the ANTC exams.

(Students Information Handbook of Federal Polytechnic, Bida. Section 2.0(B) page 5-6)

Computerisation:- This is a means of controlling the operations of a system be it biological, environmental, mechanical, educational and so on, using a computer. (J.O.A. Ayeni in "Fundamentals of Computing", 1992)

Therefore when I say the computerization of admission procedures, I mean the means of controlling the admission processes using a computer.

2.2 THE ROLES OF INFORMATION IN ACADEMIC INSTITUTIONS

Information refers to a refined data, which can be used by the management of any organization to make useful decision for the progress of the organization.

Therefore, information is the lifeblood of an organization and all hands must be on deck to ensure its free flow. (PC Magazine: Guide to the Intranets, May 1998)

The roles of information in any organization can be explained examining the general features of business organizations.

Looking at the pyramid of management, we have three levels of management, viz: the top or upper level management; middle level management and the lower level or rank and file. One will observed that while the decision taking by the top management members are well binding on the rest two levels, the middle level act as a medium to transporting information from the lower level to the top management and also interprets the policies (from decisions) of the top management members to the lower level. The lower level on the other hand serves as the source of information for the two upper levels. (Lecture Note on "Management Information System" by Bello H.K., 1994).

In an academic institutions like the case study of this research work and in relation to the admission procedures, we are going to have candidates applying for admission at the lower level, the academic departments of the candidates courses of study at the middle level and, the Academic Affairs Unit and the Joint Admission and Matriculation Board (JAMB) at the upper or top management level.

The value of a thing is best experienced when the thing is absent or not obtainable. therefore the important role played by information in the organization could be easily seen if the necessary characteristics of information is not obtainable in the one disseminated.

That is the characteristics of information (according to C.S. French in his book "Data Processing and Information Technology"), like accuracy, up-to-date, relevancy, reliability, timeliness, and understandability must be present in any information before it could be regarded as a good and fruitful information; otherwise we would regard it as a misinformation. So applying this to the case study of this project, it can be seen that if those at the middle level or any of those at the lower level decided to fool the recipient of the information from them there is bound to be disorderliness, misunderstanding, destabilization, pitfalls and finally the collapseness of the organization. This is to say that the stability and existence of any organization depends on the degree of good and reliable information system employed by the organization.

However, to be specific, the admission procedures or system in the polytechnic would have lost its integrity if there is no adequate information flow between all the components of the system, that is the Academic Affairs Unit, the different academic departments in the school and finally the Joint Admission and Matriculation Board (JAMB).

2.3 SUMMARY

This chapter had made a brief review of some literatures on the topics of Admission and Computerization.

CHAPTER THREE

(SYSTEM ANALYSIS AND DESIGN)

3.0 INTRODUCTION

This chapter is set out to reveal the result of the detailed study of the existing admission procedures in the Federal Polytechnic, Bida with a view to understanding the system and proceed for the design of the new computer-based system.

3.1 REVIEW OF THE EXISTING STUDENTS' ADMISSION PROCEDURES

The admission procedures covers the procedures used in admitting students into the National Diploma (ND), Higher National Diploma (HND), Certificate programmes and the school of preliminary studies.

There are various and specific criteria used in admitting students into any of these programmes but I had limited myself to the admission into the National Diploma (ND) programme.

Students seeking admission into the National Diploma (ND) programme in any of the polytechnics in the country are required to obtain the Polytechnics and Colleges of Education (PCE) admission form from JAMB and sit for examination before he/she can be considered for entrance into the institutions. However, if the students had gone through the School of Preliminary Studies of the polytechnic; he may be successful in getting admission direct through his performance when doing the pre-ND programme.

The results of students in the PCE examination are sent tot their polytechnics of choice for necessary consideration for admission. These results are sent with specific instructions by JAMB as to how the polytechnics would go about the admission of students.

The polytechnic Academic Affairs Unit collect these results and compile their own lists of students for admission based on the cut-off points (which are decided by merit; catchment areas and educationally less-developed states criteria) for different courses.

The lists of students for different academic departments in the school are sent to their respective heads of department who screened and sort-list the names of qualified candidates based on the available facilities and send back to the Academic Affairs Unit for onward transfer to JAMB.

The lists of the successful candidates are pasted on the notice board of the Administrative Block and some letters of admission are sent to some of the successful candidates. The pasted lists is meant for those who are not able to see their letters of admission sent to them to confirm from the school.

The major problem in the existing admission procedures here is the situation of having too many qualified candidates with limited vacancies. Other problems experienced include sentimentality of staffs in charge of admission and lack of standardization (that is limiting the number of batches of admission at times).

3.2 THE NEED FOR THE NEW COMPUTER-BASED SYSTEM.

The few problems being faced by the existing admission procedures make it so important to have a better and well-improved computer-based system.

The reasons for this are as follows:

1.) To ensure quick referencing or accessing of data and information.

2.) To remove the sentimentality and lack of standardization through the use of a computer program that imposes some good and well-managed standards.

3.) The opportunity of a computer enhancing high productivity without being tired is also one of the main reasons for this new system.

4.) Finally, for the purpose of overall efficiency generated by accuracy of processing.

3.3 SYSTEM DESIGN

A new system is designed with the sole aim of producing a better alternative to the existing system. In doing this, what first come to the mind of a system analyst is the

question : what is my target? That is to say the design of the output. It is this target that will now expose all the necessary ingredients needed for achieving the target (output) and this is the input design. After this, the files and procedures design will follow.

3.3.1 OUTPUT DESIGN

The output specification of this research work is the 'Admission List' which contain the names and important information about the successful candidates. It is designed in such a way as to include the following field elements organized into record for each candidate.

(i) Serial Number

(ii) Registration Number

(iii) Candidate Name

(iv) Sex

(v) State of Origin

(vi) Jamb Score.

3.3.2 INPUT SPECIFICATION

The following are the data to be entered as the inputs of the program.

(i) The total number of students to be admitted for the session in each department.

(ii) Jamb Cut-off marks- based on the different criteria as mentioned earlier and depending on the course of study.

(iii) Jamb Score (Data type is Numeric, length 3)

(iv) Serial Number (Data type is Numeric, length 4)

(v) Registration Number (Data type is Numeric, length 6)

(vi) Candidate Name (Data type is Character, length 20)

(vii) Sex (Data type is character, length 1

(viii) State of Origin (Data type is character, length 12)

The data in (i) and (ii) above are of Numeric data type and are of length 4 and 3 respectively.

3.3.3 FILES SPECIFICATIONS AND PROCEDURES

The different database files used in different modules of programs written are designed to contain the following fields; most of which are the major inputs to the system. They are:

(i) Serial Number (S_N)

(ii) Registration Number (Reg_No)

(iii) Candidate Name (Name)

(iv) Sex (Sex)

(v) State of Origin (State)

(vi) Jamb Score (Jamb_Sc)

(vii) Remark

All these are organized into row to form record that form different candidates information for admission processing.

The system is designed in such a way that the number of database files involved corresponds to the number of departments in the school. However, because of time constraints, this research work had limit itself to only four departments, each of which belongs to different schools in the polytechnic.

The procedure used was that the OPENING.PRG is first run and all other programs are connected from there, depending on the choice made by the user.

3.3.4 CHOICE OF PROGRAMMING LANGUAGE

The programming language used in the development of this new system is database (Dbase3+) and this language is being chosen because of its powerful database manipulation. Other reasons for the choice of this programming language are:

1.) It supports relational database model.

2.) It provides a large number of built in structure which includes mathematical functions and string manipulation functions.

3.) It has a screen design facilities to customize your input and output screens and to perform error checking and editing on input.

4.) It also allows multiple database files to be linked together to form a larger database.

5.) It provides a local area network operating mode which permits multi-users to access the same database on a local network system.

These and other advantages of this language (i.e. Dbase3+) make it the choice of the researcher.

3.3.5 COST-BENEFIT ANALYSIS

a cost-benefit analysis is very important at this stage, to determine the economic feasibility of implementing the new system. The primary objective of cost-benefit analysis is to find out whether it is economically worthwhile to invest in the project.

This is done by comparing the tangible costs with the intangible benefits that could be derived from the use of the system. This can be achieved using graphs or any analytical tools like tables.

As for the tangible costs, the tables below gives an estimated cost of the items involved.

Table 1. Equipment Costs

S/N	Items	Rate (₦)	Total Cost (₦)
1.	Acquisition of Computer Systems	90,000	180,000
	(at least 2 and a Printer) - Printer	60,000	60,000
	TOTAL		240,000
	OR		
	Computer System Leasing	50,000(yearly)	
	- Printer	30,000(yearly)	
	TOTAL	80,000	

Table 2. Installation Costs

S/N	Items	Rate (₦)	Total Cost (₦)
1.	Office Acquisition (rent)	30,000(yearly)	30,000
2.	Equipment Installation	-	2,000
	TOTAL		32,000

*But the total Installation Cost =₦2,000 if office is available.

Table 3. Developing Costs

S/N	Items	Rate (₦)	Total Cost (₦)
1.	Software Acquisition (from Consultant)	-	50,000
2.	Change-Over Costs	-	20,000
	TOTAL		70,000

Table 4. Personnel Costs

S/N	Items	Rate (₦)	Total Cost (₦)
1.	Staff Training	-	25,000
	(or)		
2.	Staff Recruitment	30,000monthly	360,000
	(2 staffs: one Snr., one Jnr.)		

Table 5. Operating Costs

S/N	Items	Rate (₦)	Total Cost (₦)
1.	Consumable materials: e.g. diskettes and other stationeries)	-	30,000 (yearly)
2.	Maintenance Cost	-	20,000 (,,)
3.	Insurance Cost	-	10,000 (,,)
	TOTAL		60,000

Table 6. Overall Cost

S/N	Items	Rate (₦)	Total Cost (₦)
1.)	Equipment Cost: - Acquisition	-	240,000
	(or) – Leasing	80,000	
2.)	Installation Cost	-	32,000
3.)	Developing Cost	-	70,000
4.)	Personnel Cost: - Staff Relocation	-	25,000
	- Staff Recruitment	-	360,000
5.)	Operating Cost	-	60,000

From table 6, it can be deduced that the total tangible cost, if equipment is acquired by purchase; staff trained and office is available, amount to the sum of ₦397,000 while the sum of ₦602,000 will be spent (in a year) if equipment is to be leased; new staff recruited; and office is rented.

The intangible benefits (though based on the morale of the user organization staff) are: improved output; high speed of obtaining relevant information from the new system; automatic updating of records and the overall efficiency.

Therefore, if we compare any of the total tangible costs (₦397,000 or ₦602,000) with the intangible benefits accruing from the use of the system as mentioned above, the user will be convinced that it is worthwhile to invest in the implementation and use of the new system in as much as the financial resources can be afforded.

3.4 SUMMARY

This chapter had been looking at the analysis of the existing system and the design of the new system. It also explains the cost implication of implementing the new system.

Further details of these designs are given in the next chapter.

CHAPTER FOUR

(SOFTWARE DEVELOPMENT AND IMPLEMENTATION)

4.0 INTRODUCTION

This chapter is a consequence of the previous chapter and it is set out to show the procedures used in developing the new system based on the various designs in chapter three. It also discusses the various ways by which the system changeover can be achieved.

4.1 PROGRAM FLOWCHART

In order to develop a well structured program codes or instructions to carry out any task, the pseudocode play an important role, just like an essay outline will do to a good essay or write-up. Pseudocodes are of two types; namely: algorithm and flowchart.

I made use of the flowchart as a form of pseudo-coding for this project.

A flowchart is a diagrammatic representation of the step-by-step procedures involved in carrying out a specific task.

The concept of flowcharting makes it easy for a programmer to convert the diagrammatically represented steps into program instruction lines of any suitable programming language.

The program flowchart for this newly developed system is given as appendix II at the end of this project report.

4.2 PROGRAM LISTING

The program listing is the hard copy of the program developed and it contains several lines of instructions that are used in achieving the research aims. This is given as appendix III at the end of this work.

4.3 PROGRAM INTERFACE

The program interface refers to the user interface or in a more clear terms the ways by which the user interact with the program.

This system incorporates in it a security measure and is also menu-driven. By menu-driven, I mean its activities are controlled by the use of menu at different stages of admission processes.

A menu is a list of options available for the user from which a choice could be made. However, the system requires the following software to be on any computer system on which it is to be run. These are:

(a) DOS (Disk Operating System)

(b) Dbase III plus package.

Having installed the new system onto your computer system, the following steps can be taken by any user of this system.

(i) From the desktop, use the mouse pointer to click the 'Start' button, then select 'Shutdown' option from the main menu that appear.

(ii) A dialogue box (tagged 'Shutdown') will appear with options. Choose the option 'Restart from MSDOS' and click OK button.

(iii) The DOS environment will be shown with the C:\WINDOWS> prompt. Carefully type CD\Dbase3 at the cursor position or any other word (if not Dbase3) as may be applicable. Then press 'Enter' key.

(iv) In front of the C:\Dbase3> that appears, type Dbase and press 'Enter' key. This will take you to the Dbase III plus environment.

(v) At the command prompt (i.e. with the cursor on the status line), type the following: DO OPENING and press 'Enter' key.

Follow all other instructions as will be provided by the program.

4.4 OUTPUT OF THE PROGRAM

The output of the program as earlier mentioned, are the admission lists of successful candidates for different department. I had decided to take the MATHS/STATISTICS

department as my sample since a department programming procedures is a replica of the other. This output is attached to this report as appendix V.

4.5 CHANGEOVER PROCEDURES

System implementation (or Conversion) refer to the process involved in changing over from an old system to a new system. There are four (4) methods of changing over from the existing system to a new system. They are:

1.) **Dual System method**:- This requires that the existing system be gradually phased out as the new system is gradually phased in.

2.) **Inventory method**:- It requires complete and one time changeover from the existing system to the new system.

3.) **Parallel Systems method**:- This involves the simultaneous operation of both the new and the existing system until such a time that the new system is adjudged to work effectively.

4.) **The Pilot System method**:- This requires that a small portion of the new system be implemented and evaluated (by parallel, dual or even inventory method) while the major portion of the workload continues to be processed through the existing system. If the implementation of this small portion succeeds, the entire system can be so converted. This method is the best out of the four as it does not waste time and resources and it takes care of the organisation resources in case the new system failed.

However, the intending user of this new system is free to choose from the four methods as it favours their condition at a particular period of time.

4.6 SUMMARY

This chapter had described the procedures used in developing the new system and also explains the various methods of system implementation to the intending user.

CHAPTER FIVE

5.1 ANALYSIS OF RESULTS

The results of the new system, which is the output of the program shows that the admission list contains the list of all candidates but those admitted are remarked admitted and any other candidate without this remark is not admitted.

Similar outputs (with the same format) can be obtained for the different departments in the school with the name of the department printed on top of the list.

With this, the program eliminates the biasedness that is inherent in the old system.

5.2 GENERAL SUMMARY

This project report contain five chapters and the contents of each of the chapters can be summarized as follows:

Chapter One:- This chapter gave an introduction of the project topic and the case study. It also clarifies the aims and objective of the project; discuss the methodology of data collection used and the areas covered by the study.

Chapter Two:- This review literatures on the topic of the project and other related topics.

Chapter Three:- The chapter explains the analysis of the existing system and how the new system is designed.

Chapter Four:- This chapter describe the procedures used in developing the new system and also explain the various methods of system implementation.

5.3 CONCLUSION AND RECOMMENDATION

5.3.1 CONCLUSION

It can be concluded that the aims and objective of this research work has been achieved: which is to study, analyze and design a new and improved computer-based system for processing the admission in polytechnics in the country.

5.3.2 RECOMMENDATIONS

Having tested the system and found effective, I am very confident to recommend the new system to all the Academic Affairs Units of the polytechnics in the country.

It is also part of my recommendation that if any future upgrading would be made on the system, emphasis should be laid on how to incorporate other programmes like the Higher National Diploma (HND), Certificate and Pre-ND programmes which the system could not cover owing to time constraint.

REFERENCES

Ayeni, J. O. A. — Fundamentals of Computing, First Edition, University of Lagos Press, 1992.

Capron, H.L. — Essentials of Computing. Second Edition. The Benjamin/Cummings Publishing Company, 1995.

French, C. S. — Computer Science, 5th Edition, Ashford Colour Press, Gosport, Hants, 1999.

Hutchinson S. E., Sawyer S.C. — Computers: The Users Perspective, Second Edition (Lotus edition), Richard D. Irwin, Inc., 1990.

Oliver E.C., Chapman R.J., French C.S. — Data Processing and Information Technology, Ninth Edition. DP Publications, 1993.

Sue Schofield — The Daily Telegraph: Guide to the Internet. Addison-Wesley Publishing Company, 1995.

P.C. Magazine — Guide to the Intranets. May 1998 Issue.

Manual on 'Programming with Dbase IV'. Borland Int. Inc.

Brief Historical Background of the Federal Polytechnic, Bida. (1986)

NBTE/Federal Polytechnics Staff Manual. June (1986)

JAMB-PCE Bronchure (2000/2001).

The Federal Polytechnic, Bida Students Information Handbook.

Badmus, R. O. — PGD Lecture Note on System Analysis & Design. Unpublished, 2001.

Bello, H.K. — Lecture Note on Management Information System. Unpublished, 1994.

Hakimi, D. — Lecture Note on Database Management System. Unpublished, 2001.

APPENDICES

APPENDIX I

QUESTIONNAIRE

)ear Respondent,

'his questionnaire is set out to collect some information about the admission procedures r the polytechnic. The researcher therefore beg your indulgence for actual facts as regard ıe following questions; so as to enable him get the right computerization of the system one. It is purely for academics and all information shall be held confidential.

Thank you.

NSTRUCTION: Please fill/tick where necessary.

1.) Name:.....

2.) Department:..... Rank:.....

3.) Years of Service in the Polytechnic:.....

4.) What are the different programmes existing in the Polytechnic?

i.) .....

ii.) .....

iii.) .....

5.) Do you always receive instruction(s) from the Joint Admission and Matriculation Board (JAMB) for regulation of admission procedures? Yes ( ), No ( ).
If your response is YES; can you kindly state (briefly) the type of instruction you use to receive?

.....

.....

6.) What are the criteria used in admitting students into different programmes in the Polytechnic?

.....

.....

.....

.....

7.) What is the relationship between your office and the other academic departments in the school (or vice-versa as the case may be) with respect to admission process?

.....

8.) Do you always have a specific population of students to be admitted at a particular period or session? Yes ( ), No ( ). Please state the range:.....

9.) How many batches of admission do you always have?
Two ( ), Three ( ), More than three ( ).

10.) Is any of the batches called 'Rector's list'? Yes ( ), No ( ).
If Yes, please state the criteria for admitting students on this list (if different from the one stated earlier in this questionnaire).

.....

.....

.....

.....

11.) What are the problems you have been encountering in the present admission procedures or method. (If any)?

.....

.....

.....

.....

12.) Do you think there is any need for computerization of the admission procedures in the polytechnic? Yes ( ) No ( ).
If your answer is YES, state your reasons.

.....

.....

.....

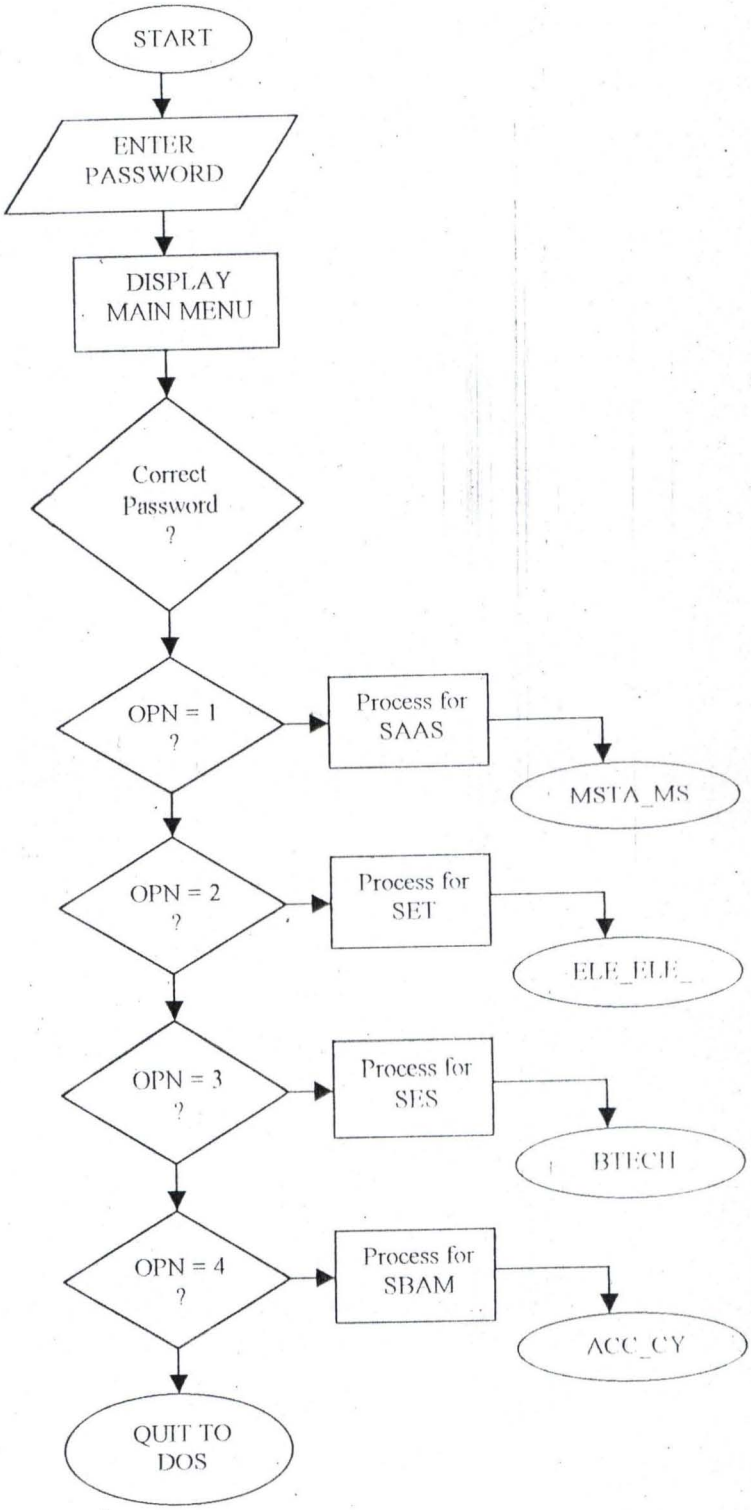
.....

Thanks.

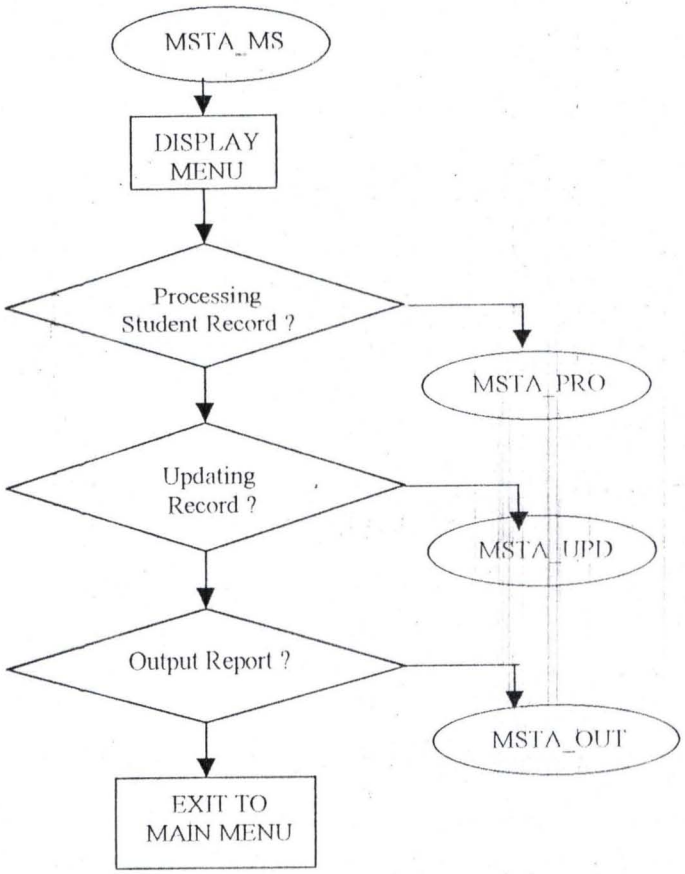
APPENDIX II

PROGRAM FLOWCHARTS

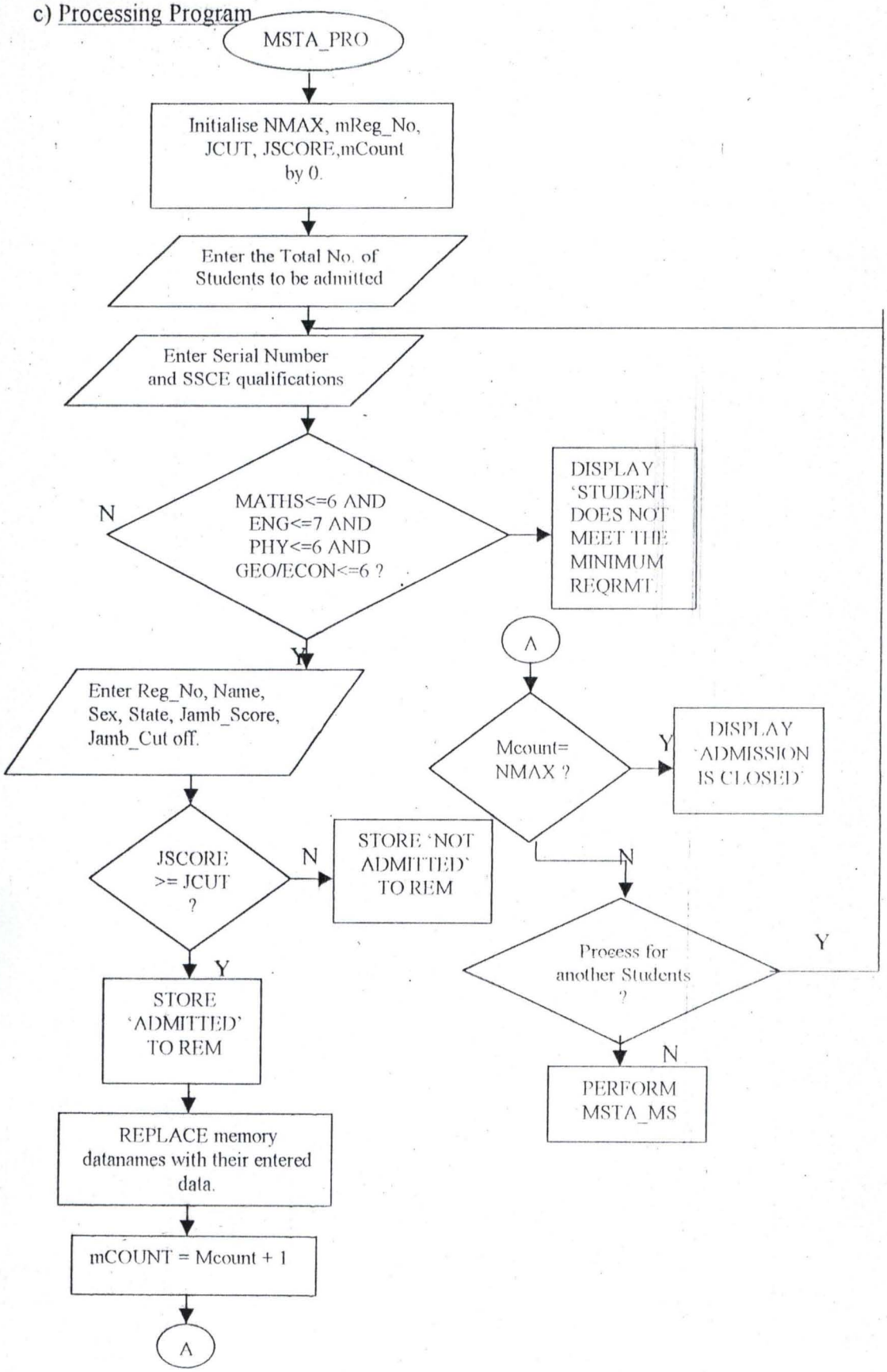
a) Main Program:



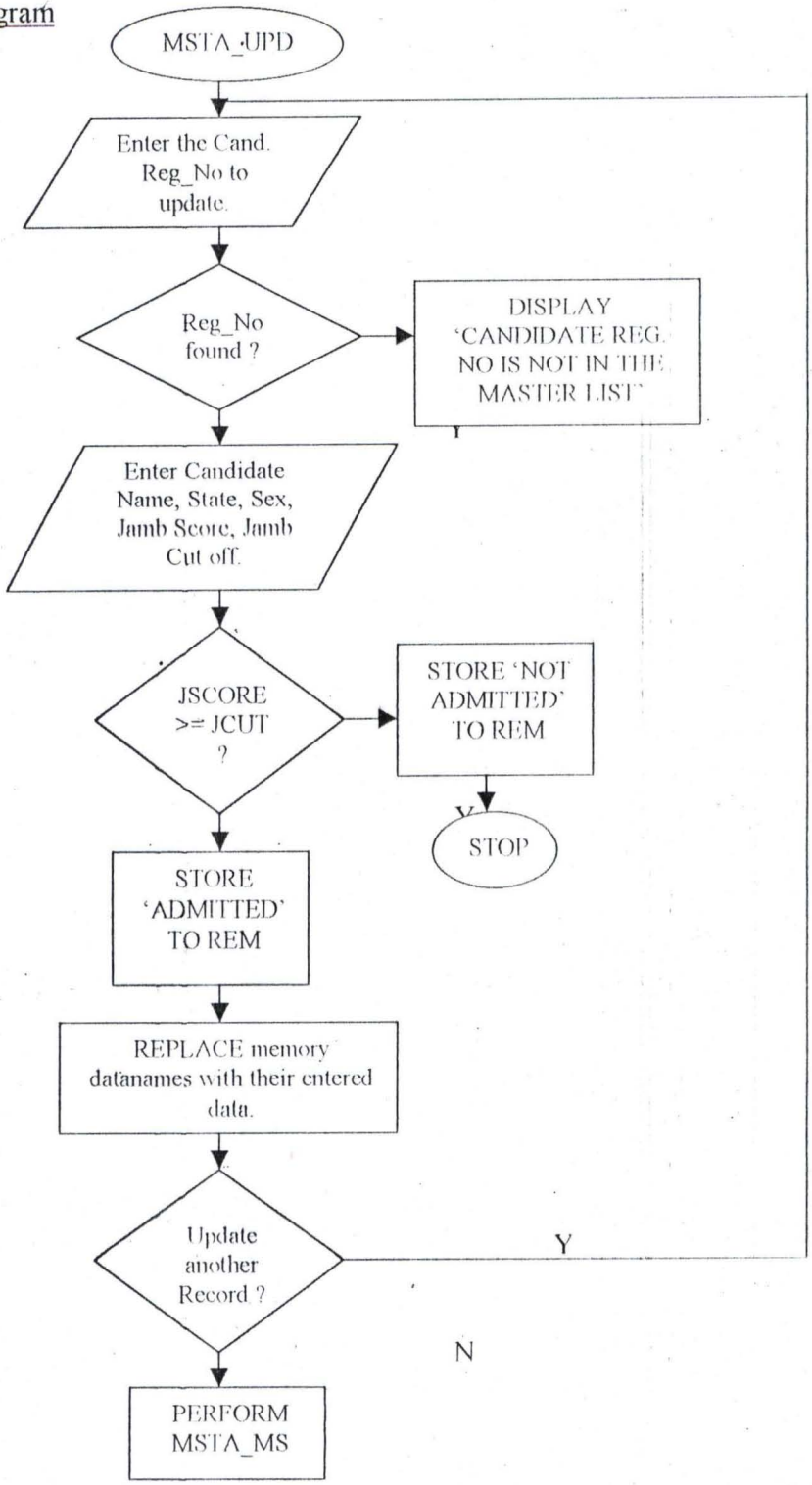
b) General Menu Program



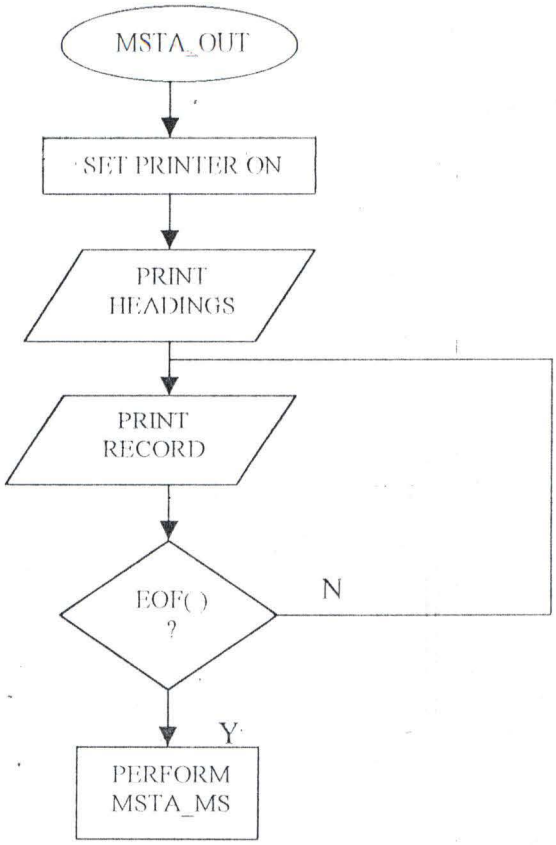
c) Processing Program



d) Updating Program



e)Output Program



```
 3
WHILE J < 20
J SAY "IS UPDATING CORRECT, Y/N?"
AD
PL S_N WITH SN, NAME WITH MNAME
PL REG_NO WITH MREG_NO
PL STATE WITH MSTATE
PL SEX WITH MSEX, JAMB_SC WITH JSCORE
ORE SPACE(1) TO MUP
3 TO 7,60 DOUB
T COLO TO W+
,5 SAY "ANY MORE CANDIDATE FOR UPDATING, Y/N?" GET MUP PICT "@!"
ALID (MUP $ "YyNn")
AD
T COLO TO
 MUP $ "Yy"
OP
SE
DI
DD
 MSTA_MS
```

```
TALK OFF
STAT OFF
PRINTER ON
STAT
A
**********************************************************************"
*************** FEDERAL POLYTECHNIC BIDA************************"
*******************NIGER STATE*********************************"
******************SCHOOL OF APPLIED ARTS & SCIENCES*************"
*************MATHS/STATISTICS  DEPARTMENT**********************"
********************ADMISSION LIST*****************************"
**********************************************************************"
_N  REG_NO       NAME       SEX       STATE     JAMB_SC  REMARK"
TOP
WHILE .NOT. EOF()
N,REG_NO,NAME,SEX,STATE,JAMB_SC,REMARKS
                                                                    "
P
D
 COLO TO B+*
,5 SAY "PRESS ANY KEY TO CONTINUE...."
T
 PRINTER OFF
MSTA_MS
```

APPENDIX IV

SAMPLE INPUT DATA

Total Number of Students to be admitted = 45

S_N	REG_NO	NAME	SEX	STATE	JAMB_SC
1	311233	ENAGI ZAINAB	F	NIGER	203
2	240027	MOH'D YUNUS	M	KANO	195
3	100253	ADARANIJO H.A.	M	LAGOS	215
4	600767	ALARAPE M.A.	M	OSUN	200
5	711177	MOH'D NDAKO	M	NIGER	185
6	800187	SHEHU ALFA	M	KADUNA	190
7	213133	DAUDA KHADIJAT	F	SOKOTO	180
8	587682	IDRIS MEMUNA	F	OGUN	188
9	600988	TAIWO IBITOYE	M	OYO	207
10	711234	SAYIDU NNAKOGI	F	ABUJA	202
11	347833	MAMUDU DAUDA A.	M	SOKOTO	191
12	991002	MURAINA W. BOLAJI	M	OYO	212
13	145236	NDAKO MOHAMMED	M	NIGER	195
14	500126	NWOBODO CHRISTY	F	DELTA	184
15	993343	OJEWE SAMUEL O.	M	RIVER	175
16	107257	OLORUNTOBA O. I.	F	LAGOS	207
17	771118	OLUBUNMI R. K.	F	OGUN	185

JAMB CUT-OFF = 185

N.B. The candidates SSCE/NECO result are also part of the input and are assumed to be taken from a source document from JAMB.

APPENDIX I

SSIST
JIT
* END RUN dBASE III PLUS

****
********** FEDERAL POLYTECHNIC BIDA**********
**********NIGER STATE**********
**********SCHOOL OF APPLIED ARTS & SCIENCES**********
**********MATHS/STATISTICS DEPARTMENT**********
**********ADMISSION LIST**********
****

	REG_NO	NAME	SEX	STATE	JAMB_SC	REMARK
1	311233	ENAGI ZAINAB	F	NIGER	203	ADMITTED
2	240027	MOH'D YUNUS	M	KANO	195	ADMITTED
3	100253	ADARANIJO H. A.	M	LAGOS	215	ADMITTED
4	600767	ALARAPE M.A.	M	OSUN	200	ADMITTED
5	711177	MOH'D NDAKO	M	NIGER	185	ADMITTED
6	800187	SHEHU ALFA	M	KADUNA	190	ADMITTED
7	213133	DAUDA KHADIJA	F	SOKOTO	0	
8	587682	IDRIS MEMUNA	F	OGUN	188	ADMITTED
9	600988	TAIWO IBITOYE	M	OYO	207	ADMITTED
10	711234	SAYIDU NNAKOGI	F	ABUJA	202	ADMITTED
11	347833	MAMUDU DAUDA.	M	SOKOTO	191	ADMITTED
12	991002	MURAINA W. BOLAJI	M	OYO	212	ADMITTED
13	145236	NDAKO MOHAMMED	M	NIGER	195	ADMITTED
14	500126	NWOBODO CHRISTY	F	DELTA	0	
15	993343	OJEWE SAMUEL O	M	RIVER	0	
16	107257	OLORUNTOBA O. I.	F	LAGOS	207	ADMITTED
17	771118	OLUBUNMI R.K.	F	OGUN	185	ADMITTED