

**COMPUTERIZATION OF HUMAN RESOURCES
MANAGEMENT
(CASE STUDY OF FEDERAL POLYTECHNIC MUBI)**

BY

**IRMIYA IBRAHIM
PGD/MCS/05/1195**

**MATHEMATICS / COMPUTER SCIENCE DEPARTMENT
FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA, NIGERIA**

FEBRUARY, 2008.

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**A PROJECT PRESENTED TO
THE DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE,
SCHOOL OF POST GRADUATE**

**FEDERAL UNIVERSITY OF TECHNOLOGY
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**A PROJECT WORK SUBMITTED TO THE DEPARTMENT
OF MATHEMATICS / COMPUTER SCIENCE, FEDERAL
UNIVERSITY OF TECHNOLOGY, MINNA
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR
THE AWARD OF POSTGRADUATE DIPLOMA IN
COMPUTER SCIENCE**

FEBRUARY, 2008.

CERTIFICATION

This is to certify that this project was carried out by Irmiya Ibrahim with registration number, PGD/MCS/05/1195 of the department of Mathematics and Computer Science, Federal University of Technology, Minna, Nigeria.

Mr. Abraham Ochoche
(Project Supervisor)

Date

Dr. N.I Akinwande
(Head of Department)

Date

External Examiner

Date

DEDICATION

I dedicate this project to God who ever assured me that it is well in all things that are righteous.

I wish to also dedicate this work to my daughter Chimadde Irmiya for her patience the time she needed me in her tender age when the program began.

ACKNOWLEDGEMENT

I am grateful to God Almighty for his sustenance through the study period and for bring it to a successful end.

I wish to sincerely commend the effort of my project supervisor in person of Mr. Abraham Ochoche who despite a very tight schedule was able to squeeze out time to offer some objective and constructive criticisms, reviewing the project work at all levels. I really say a big thank you for all the guidance and advice given which brought this work to its completion. I am also grateful to the Head of Department of Mathematics and Computer Department, Dr. N. I. Akinwande for coordinating the affairs of the Department. I must sincerely acknowledge the effort of the program coordinator in person of Mallam A. Ndanusa for his unreserved support during this program. Furthermore, I am highly indebted to all my faculties who have supported me in various dimensions of this academic training. But I am particularly grateful to Mr. Jiya Mohammed and Mallam Adamu Mohammed who out of their tight schedule were able to give valuable assistance to bring this academic work to its completion. May God grant you the ability to also excel in your future carrier.

I am also grateful to all my course mates who assisted me in both academic and psychological support at the time I almost dropped because of long distance to cover before attending lectures.

I must sincerely express my gratitude to my family especially my wife for her exceptional understanding while being away. Thank you for the whole support you gave that brought this work to completion. I also acknowledge the kind and wonderful moral support the family of my elder brother Deacon & Mrs. Ezekiel S. Ibrahim offered while undergoing this training. Thank you for the most challenging prayer life. Finally, I wish to sincerely thank the efforts of all those who contributed in one way or the other that has not been mentioned; indeed your efforts have made me what I have become.

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ABSTRACT

This project is centered on developing an automated Human Resources Management System. It is an attempt to replace the existing manual system being associated with difficulties of storing and retrieval of information and easy manipulations of record.

Federal Polytechnic Mubi is taken as a case study of this project to test the workability of the new system. Therefore, computer application package was developed using Visual Basic being integrated with Microsoft Access database to allow easy storage and retrieval of information. To achieve this objective, an in-depth system analysis was conducted to streamline procedures and eliminate areas of repetitions in the designed solution.

CHAPTER ONE

1.0 BACKGROUND OF THE STUDY

Federal Polytechnic Mubi was established by the Federal Polytechnic Decree (33) of 1979 which also established the following institutions in the country; Federal Polytechnic Bauchi, Federal Polytechnic Nassarawa, Federal Polytechnic Bida, Federal Polytechnic Idah, and Federal Polytechnic Ado-Ekiti.

The Federal Polytechnic Mubi was initially established as Federal Polytechnic Yola which was sited on the rocky hill by the side of River Benue in Yola. But following the Presidential directives in 1982, the Polytechnic moved to Mubi to takeover from the then Federal College of Arts and Science.

The institution is engaged in the training of low and middle level vocational, engineering, science and technical manpower development for the commercial and industrial facets of the Nigerian economy.

The increasing number of students enrollment in the institution as a result of the continued expansion program, this has made it very necessary for a simultaneous increase in the number of both academic and non-academic

manpower to cope with the challenges of manual processing of information in the registry department.

The continued sustenance of integrity and good governance within the administrative system lies on the ability to produce reliable information on time and execution of administrative procedures as scheduled. Furthermore, absolute removals of unnecessary bureaucracy also tend to create efficiency within the public sector in terms of generating executive information for managerial decisions.

This project therefore, is aimed at designing a complete human resources application package that would address frequently asked questions by new employees or new administrators such as:

- (a) What is the exact number of employees in the organization that are drawing monthly salary?
- (b) How many of these staff are pension able and are actively participating in the contributory pension scheme. And how much is the officer's financial retirement benefit from the contributory pension scheme if worked for a number of years.
- (c) How do we ensure integrity of records entered into the computer to avoid manipulations by unauthorized persons?

1.1 STATEMENT OF THE PROBLEM

Having surveyed the manual system of operation within the registry department, the following problems were encountered by the administrators.

- i. Problems of records retrieval: Retrieval of stored records, staff manuals, circulars and other information has become very difficult as compared to an automated system against the manual system in use.
- ii. Delays in processing data: With an increasing number of personnel, manual processing of staff promotion list, list of staff due for annual incremental step (national increment) tends to be slow as records cannot be predetermined in advance for scrutiny before the promotion period. This system therefore creates promotions to be in arrears. The manual system may also tend to omit some names unintentionally from the records so prepared.
- iii. The manual system in operation also creates a serious problem in times of management decision process. Some major statistical cannot be obtained automatically. Records like; staff strength according to their categories, levels, gender and records from units/departments requiring additional staff due to increasing volume of job in the unit.

- iv. Problem of poor file management: The manual processing of physical files tends to expose such records to various hazards of mutilations, flying away of papers, problems of whether changes or moisture if kept in humid areas.
- v. Problem of office space: manual system is also associated with the problem of having insufficient office space required for storage of large file cabinets where records shall be kept. Ordinarily, in an automated system, less space would be required either on the computer or external storage device.

1.2 OBJECTIVES OF THE STUDY

The objectives of this project work is geared towards developing a human resources application package that has addressed all public service requirements that suits the operations of the federal polytechnics in particular, these objectives are:

- i. To design a computerized network based multi-user system that would incorporate all data processing functions of the registry department.
- ii. To carry out a thorough investigation into the existing system to analyze the present information requiring changes.

- iii. To identify Critical Success Factor (CSF) of this project that would bring about efficiency in the public service.
- iv. To design a computer database that would allow quick querying of records for easy display on screen.
- v. The system should be able to provide most frequently required reports for management decision.
- vi. The application so developed should have an absolute control of data and records. Therefore a reliable system of checking valid users and password is then put in place to guard against fraudulent manipulation of records by unauthorized persons. During update of master file, only one authorized user should be granted access. To other password is only granted to the system developer.

1.3 SIGNIFICANCE OF THE STUDY

This project when fully designed and implemented, it would increase efficiency, quick access to information, storage and easy retrieval of information within the data processing unit of the Polytechnic Registry department.

This project is also aimed at reducing the number of workforce required in the manual processing. Thereby reducing personnel cost through

a marginal reduction in the number of staff that would have been engaged and the manual processing of information that may not be relied upon absolutely because of some elements of inaccuracy.

This project work would also enable the registry staff know their work better through automation of some ambiguous process that may be simplified.

The project would be of great benefit to the researcher as it would broaden the understanding level of the researcher. It would also be of great benefit to future software developers who may want to develop application programs in the areas of human resources management.

1.4 SCOPE OF THE STUDY

Just as mentioned above, the project is centered on the case study – Registry department of the Federal Polytechnic Mubi being taken as a sample to represent other self accounting higher Institutions in Nigeria. The project is set to cover all the data processing activities on personnel records and all information processing procedures in the public service. Personnel management in private and non-governmental organization may vary slightly from the public sector.

These procedures would be simplified in order to generate reports either on individual staff, group of staff performing the same function, staff

departmental records, cost implication of staff hire, staff promotions etc.

These reports should be displayed on screen for immediate use r can be printed on hard copies for management decision.

2.2 Human Resources Management (HRM)

Human Resources Management (HRM) is the strategic and coherent approach to the management of an organization's most valued assets – the people working there who are individually and collectively contributing to the achievement of the organizational objectives.

According to Armstrong, Michael (2006), the terms “Human Resources Management” and “Human Resources” have largely replaced the term “Personnel Management” as a description of the processes involved in managing people in organizations. Human Resources Management is both an academic theory and business practice that addresses the theoretical and practical techniques of managing a workforce.

The theoretical discipline is based primarily on the assumption that employees are individuals with varying goals and needs, and as such should not be thought of as basic business resources such as trucks, computers, buildings etc. This takes a positive view of workers, assuming that virtually all wish to contribute to the development of the organization, and that main obstacle to their efforts are lack of knowledge, insufficient training, and failure of process.

Human Resources Management is seen by practitioners in the field as a more innovative view of workplace management than the traditional approach. Its

techniques force the managers of an organization to express their goals with specifications so that they can be understood and undertaken by the workforce and to improve the resources needed for them to successfully accomplish their assignments.

Synonyms such as *Personnel Management* are often used in a more restricted sense to describe activities that are necessary in the recruiting of a workforce, providing its members with payroll and benefits, and administering their work-life demands. According to Torrington and Hall (1987), defined personnel management as “a series of activities which: first enable working people and their employing organizations to agree about the objectives and nature of their working relationship and, secondly, ensures that the agreement is fulfilled”. But according to Miller (1987), suggest that Human Resources Management relates to those “decisions and actions which concerns the management of employees at all levels in the business and which are related to the implementation of strategies directed towards creating and sustaining competitive advantage”.

From the academic point of view, the goal of human resources management is to help an organization to meet strategic goals by attracting, and maintaining employees and also to manage them effectively. Miller, (1989) argued that HRM approach seeks to ensure a fit between the management of

an organization's employees, and the overall strategic direction of the organization. The academic theory stressed the theory of HRM that humans are not machines; therefore we need to have an interdisciplinary examination of people in the workplace. Fields such as psychology, industrial engineering, industrial and organizational psychology, industrial relations etc play a major role.

From the business perspective, HRM comprises several processes. Together they are supposed to achieve the collective organizational goals. Some of these processes can be performed by the HR department, outsourced to professional consultants or undertaken by line managers of other department or by a recruitment committee. These processes include:

- Workforce planning
- Recruitment (Sometimes separated into attraction and selection)
- Induction and orientation
- Skill management
- Training and development
- Personnel administration
- Compensation in wage or salary
- Time management

- Travel management (sometimes assigned to accounting rather than HRM)
- Payroll (sometimes assigned to accounting rather than HRM)
- Employee benefits administration
- Personnel cost planning
- Performance appraisal.

2.3 MANAGEMENT INFORMATION SYSTEM

Brightman (1986), defined management information system as a system that stores and retrieves information and data, processes them and presents them to management as information to be used in making decision. The Management Information System (MIS) provides administrators with information that best serves management functions. Considering the Federal polytechnic Mubi as a formal organization and which it is indeed, personnel information system is put in place, it will just be like any other MIS that serves the basic functions of management. These functions include planning, organizing, staffing, directing and controlling.

Planning looks to the future and requires information that helps predict it. Organizing assembles the organization's resources – physical assets, personnel, financial assets and other resources to meet its objectives. Staffing recruits and assigns the best personnel to do the work. Directing sometimes considered synonymous with leading, coordinating all other activities and resources. Controlling evaluates the result and makes adjustments accordingly. All of these functions require information. It is the duty of the MIS to provide the information required.

According to Dimsdale (1986), stressed that managers view the information system as a tool that provides them with the job. If an information system is good, its product – that is the information it provides is accurate, timely, complete and concise.

Inaccurate information is often worse than no information at all. Incomplete information almost invariably leads to erroneous conclusion. Information that is not concise obscures the essentials. Information that is too late is no help. The greatest job of information system, is the final analysis, it is not just extracting facts and figures from it but producing information that has the above characteristics and is easy to maintain.

2.4.1 IMPORTANCE OF IT SYSTEM PLANNING AS WELL AS SYSTEM PLAN

Information technology system (*IT*) planning is the process that uses the goals, strategies, objectives, processes, and information requirements of your organization as a foundation for identifying and selecting which IT system should be developed and when to develop them. System planning answers

the questions concerning what IT system should be developed in your organization and when. This process has five stages namely:

- a) Aligning organizational goals and information technology.
- b) Identifying specific information process
- c) Identifying specific information
- d) Evaluating information technology systems
- e) Planning for what you can't live without.

These five steps create an information technology system plan (IT system plan) that documents the results of this planning. The IT system plan documents is the key end results from the IT system planning process. It provides a map that will tell you how IT supports the business and furnishes input into the systems development process.

2.4.2 HOW TO IDENTIFY SPECIFIC PROCESSES AND INFORMATION NEEDS REQUIRING IT SUPPORTS.

One method for identifying specific processes is the value chain which views the organization as a chain – or series – of processes, each of which adds value to the product or services for the customer. The value chain is used to identify the top value-adding processes, as well as the top value-reducing processes. Both of these process types require IT support.

To identify information requirement of an organization are information architecture, critical success factor, and business system planning.

- a) Information architecture for an organization describes what information your organization needs and which people within your organization need that information. The architecture should reflect the time, content, and form dimension of information.
- b) Critical success factor (CSF) is a factor critical to organizational success. Identifying information required to support CSF's identifies required IT system.
- c) Business System Planning (BSP) identifies information requirements by documenting the relationships between business processes and information classes.

2.5 DEFINITION OF TERMS

2.5.1 SHARED INFORMATION: According to Stephen Heag and Maeve Cummings (1998), a shared information refers to the placement of information in a database and giving people software to

- a). Provide specific updates to the database and
- b). Drill down through the database to find any information they need

2.5.2 MANAGEMENT INFORMATION SYSTEM: This provides periodic and predetermined reports that summarize information within a database. Primarily, information processing task which include creating and conveying of information.

2.5.3 MANAGEMENT / EXECUTIVE INFORMATION: These are highly interactive MIS combined with various decision support systems and artificial intelligence to help people identify and address problems and opportunities. Primary information processing task include creating and conveying.

2.5.4 ARTIFICIAL INTELLIGENCE (A.I): This is the science of making machines imitate human thinking and behaviors. When viewing the field of AI, always remember the keyword is “artificial”. Even though AI system can mimic human intuition and thought process, a programmer is still required to program them to do so. Computers are incapable of thinking and reasoning on their own, so their intelligence is really artificial.

CHAPTER THREE

3.0 SYSTEM ANALYSIS

System analysis can be defined as a detailed study of the current system being carried out leading to the specification of new system.

The analysis undertaken covers the entire manual operations of the registry department which includes:

- i. Recruitment
- ii. Staff placement
- iii. Training and development
- iv. Motivation
- v. Payment of benefit
- vi. Discipline, etc

All these elements of personnel is to be computerized in order to make the systems operations very fast accurate and to produce management information for decision making.

3.1 FEASIBILITY STUDY

The feasibility of this project is broadly grouped into the following:

- (a) **Operational feasibility:** This entails the study of all encompassing activities that takes place in the registry department of the institution. This is where all human resources management takes place. These activities include personnel planning, training, staff motivation, promotions, placements, transfers, discipline. All these functions are done manually which should now be automated and only valid users should be granted access to make modifications on personnel file.
- (b) **Technical feasibility:** This study deals with the sourcing of hardware and software to accommodate user requirement.

For this project, a HP-Server Computer minimum of 1.8GHz RAM, 80GB memory capacity IV, 60-80GB memory capacity for distributed network station, 1.8 RAM. A LaserJet printer, 2015N and APC 2KVA UPS is recommended to be installed to guard against electric power interruption.

The software recommended for this design is a window based application. Therefore a visual basic and MS-Access is recommended.

3.2 COST AND BENEFIT ANALYSIS

The cost and benefit analysis of a new project is concerned with the assessment of the marginal benefit a user could drive from the implementation of the new system compared to with the cost incurred while operating the manual procedures. In other words, it is the process of evaluating information technology systems for development by comparing system costs with system benefit.

If for instance, the cost of implementing a computerized system is one million naira and personnel cost annually is six hundred thousand naira, a prudent management would opt to computerize the system even though the personnel cost annually is less than the implementation of a new system because they can leverage on the accuracy of information obtained from the system. Information retrieval is also very fast and two or more staff can work concurrently independent of other schedule.

3.3 ANALYSIS OF THE EXISTING SYSTEM

When an office is being declared vacant, the registry department begins to source for credible and qualified staff to occupy the office provided that provisions have been made in the personnel budget of the fiscal year in question. The terms of the employment contract is signed and delivered to a

successful candidate that has the relevant qualification. By the time when an officer is being engaged, a dedicated file and its number is established to contain all his records. At the time of allocating file number to new staff, there are possibilities of duplicating such number or two files to single individual.

Following the criteria outlined for promotion in the civil service rule, that, concerned staff must have scored a minimum of 50% in the annual evaluation for at least three consecutive years or else no promotion. On the other hand, staff must present additional qualification or an outstanding performance that the chief executive may waive same pre-conditions. All these processes are done manually.

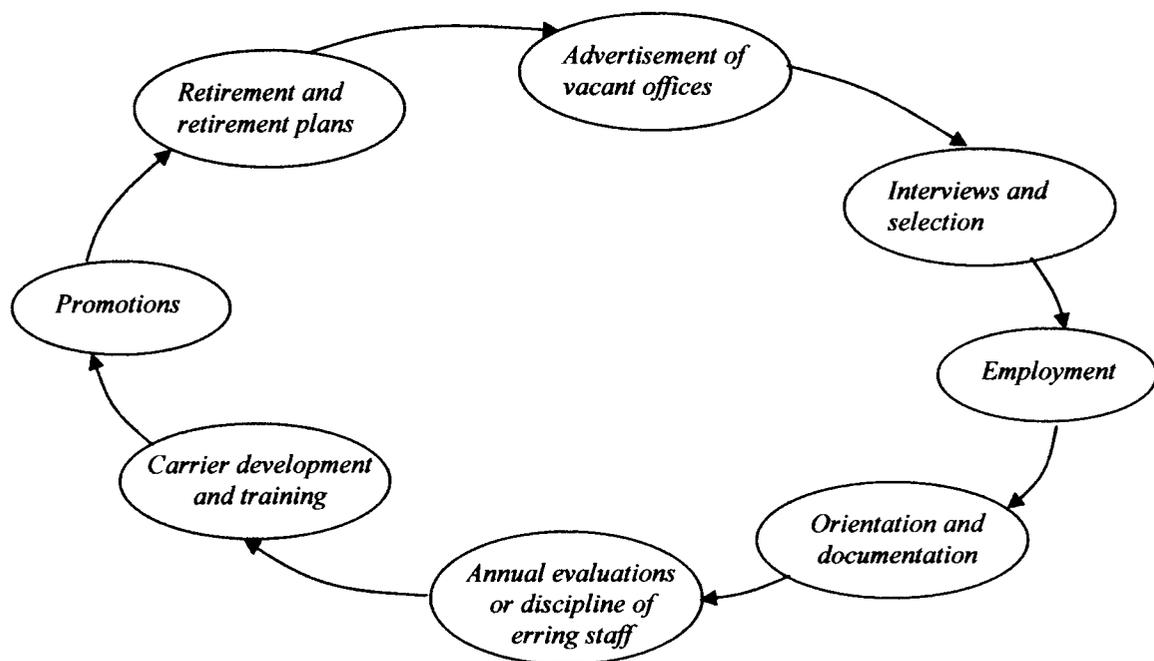
As part of staff motivational policy, any staff who must have successfully worked for at least twelve (12) calendar months is entitled for one additional notch annually with its financial benefit. The determination of financial benefit and names of persons eligible for notional increment is still being processed manually. This manual compilation of names cannot be relied upon absolutely since it is vulnerable for some names to be omitted.

In the event where a staff has committed an offence and punishment is served, the tenure of such penalty may be completed but records of such completion may not be reversed giving rise to staff spending about ten (10)

years without further promotion because record of punishment is still hanging against him.

It is quite evident in public service that date of birth of staff has always been a subject of alteration. Some people out of the desire to have more years of service, these records may be altered despite having worked for the period specified in the civil service guidelines. In a computerized system where internal control system is strong, making such alteration on papers may not be perpetuated easily. The system would generate a predetermined names of staff that are due for retirement (i.e. staff who served for at least 35 years or whose date of birth is 65 years which ever is earliest) is sent to pensions unit for the computerization and verification of retirement benefits.

Diagrammatic Human Resources Activities



3.4 PROBLEMS OF THE EXISTING SYSTEM

The existing manual system is contending with some weakness in both procedural operations and internal control system in its data processing activities. Some of these problems include:

(a) Lack of prompt update of records

Personnel files are not always updated as at when due to reflect their current status. This leads to staff promotions are being delayed more than the period they are supposed to be. It is also seen that compilation of vacant offices for advertisement is not done immediately except where such office is highly sensitive that would require immediate replacement. During staff documentation, there is the possibility of single file number two persons.

(b) Inefficient Record Keeping

Kept or poorly kept, the system would be like a blind person and decision of where and how to go lies in the hand of its captain. Most government establishment is being confronted by problems of basis for decision making.

In manual operations, it is difficult to sort out staff in accordance to their departments immediately. It is also difficult to obtain accurate statistical records with its inherent staff cost on the payroll. Lack of this information makes personnel planning a very difficult task.

Due to continuous movement of physical files, the papers are exposed to varying degree of environmental factors. Sometimes, the papers in a file may tear away or others may deliberately destroy some records.

(c) Delays in Retrieval of Information

As a result of manual processing of information, management decisions are being hampered with. Sometimes this would lead to understaffing or overstaffing of personnel leading to redundancy of man hour. Now the decision either to hire or not to hire is not guided by any information.

Also as a result of insufficient information, records of terminal benefits staff may be difficult to be determined easily if necessary information in the file established for more than thirty years is not available. There is therefore difficulty in determining such benefits under a contributory pension scheme.

3.5 ANALYSIS OF THE NEWLY COMPUTERIZED SYSTEM

This computerization of personnel record is born out of the desire for complete automated records system. This is an interactive and user friendly system that accepts input, processes it to give out results in form of report for management decisions. The system is simple to operate and made provision

for future development to make it an integrated payroll and human resources management system.

The application is a menu-driven and granting of access privileges is restricted to only users with valid password are given access. The new system is basically designed as a multi-user application but can also run as a single-user system.

3.6 CHOICE OF PROGRAM

Computer programming language is a means through which a user communicates with the computer system without necessarily knowing what goes around in the computer or what the internal structure looks like. The choice of programming language is basically chosen taking into consideration the kind of task it intends to achieve and they are designed to be machine-independent. The proposed system however, is a windows driven with an integrated database management system. Hence, visual-basic (VB 6) programming language is being chosen because it is integrated into MS-Access and Structure Query Language (MS-SQL) is used to tailor the application package.

The relational database management system uses the logical relationship to link integrated data tables of different types. It also serves as a

connector between the user and the data in such a way that the user is able to record organize select, summarize and extract data stored in the database.

The following are the main reasons why visual basic is integrated with MS-Access as the programming language used for this project.

- i. Interactive user interface. Visual Basic (VB) uses an interactive approach for development; it interprets the codes as you enter it, hence tracks of errors and couples the codes as it is highlighted in the code. One can fix the error and continue compiling without having to start all over again.
- ii. Easy to write and understand: VB provides facilities for easy understanding. This is because most of the commands are English-like verbs which can be understood very easily.
- iii. VB provides easy facilities for retrieval of information and is very fast.
- iv. Debugging of error is very easy: since the translator of VB is complier, it executes the whole program at once, generates the errors present in the program and displayed it on the screen. For example, if there is no IF command to match with END IF, i.e. END IF used without beginning with IF, the program.

- v. VB has the capability to handle complex mathematical computation at a high speeds.
- vi. Since VB is integrated with MS-Access, it produces a virile data base capable of storing data for a very long period of time.

3.6.1 Database Management System

The term database management and data base are words used interchangeably. According to Joseph, A. Ojeniyi (2004), Database is a collection of pertinent data about an organization with minimum duplication, servicing as a pool of information for many users. The term database on its own refers to the application software that manages the database. This software is generally called relational database management system and manages the database.

Database management is a computer program used for maintaining the database ease extraction of information from it. All database software has the capabilities to:

- (i) Add (Append) a record, delete, or modify records in a database
- (ii) Extract and list out records from the database to meet a specified criteria
- (iii) Sort out records

- (iv) Generate reports of information from the database.

3.7 SYSTEM DESIGN

System design is a crucial stage of this system development because it must meet detailed user requirements. One of the objectives of this computerization of Human Resources activities is to actualize a transformational system of converting manual procedures of personnel management to an automated system. It should also generate a accurate management information based on is activities to enable meaningful decision making. The design specification of this system will be discussed under the following sub-headings.

3.7.1 Users Output Specification Requirement

It is very important to consider the output expectation from the users of the program before thinking of how it goes into system and the processes input would undergo before producing out that expectation from the system.

The expected output from this system will be in form of soft copy views and printed hard copies. On demand, this information system is able to display the records pertaining to any employee in any desired format. On the other hand, the database that supports the system can be queried based on a

specified condition. For instance list of employees in a specified department or employees that are due for pension. Using the query, filter, and the information system would be able to print out a list of records of such personnel.

Integrating information from different files, the system should generate views (queries) like the ones in the appendix attached.

3.8 INPUT SPECIFICATION ANALYSIS

The data items that are input into and used in this system are analyzed as specified below:

Personnel file: The personnel file is a table structured to contain all data relating to individual records of staff as in a file shown below:

Data item	Data type	Field size	Format	Decimal place
File number	Text	20		
Surname	Text	20		
First name	Text	20		
Middle name	Text	20		
Grade level	Number	Long integer		Auto
Step	Number	Long integer		Auto
Present post	Text	20		
Cadre	Text	20		
Annual incremented date	Date/time		Medium date	
Division/school	Text	20		
Department/cost centre	Text	20		
Section/Unit	Text	15		
Date of present appointment	Date/time		Medium date	
Days for salary payment	Number	Long integer		Auto
Bank 1 for salary	Text	15		
Account number	Text	20		
Sex	Text	6		
Terms of appointment	Text	15		
Quarter type	Text	15		
Staff category	Text	10		
Confirmation date	Date/time		Medium date	
Staff suspended	Text	3		
Active staff	Text	20		
Date of birth	Date/time		Medium date	
Marital status	Text	3		
Nationality	Text	3		
State of origin	Text	20		
Local Gov't Area	Text	20		
Higher education qualification	Text	20		
Post on first Appointment	Text	20		
Grade level on first Appointment	Text	20		
Pension Pin No	Text	20		

PFA	Text	20		
Pension custodian	Text (bank)	20		
Residential address	Text	30		
Residential phone No.	Number	Long integer		
Next of kin(s)	Text	20		
Address of next of kin	Text	25		
Date of active status	Date/Time		Medium date	
Last leave date	Date/Time		Medium date	
Date of last promotion	Date/Time		Medium date	
Next lave date	Date/Time		Medium date	
Next incremental date	Date/Time		Medium date	
Last incremental date	Date/Time		Medium date	
Evaluation score (year 1)	Number	Integer		
Evaluation score (year 2)	Number	Integer		
Evaluation score (year 3)	Number	Integer		
Promotion evaluation	Number	Integer		

For easy navigation and quick data entering of record, various data entry forms are designed as an interface to the database. The input design consists of verification modules which ensures that data are entered accurately and in the correct specification. This is a control mechanism embedded in the application. The new input design will eliminate duplication of records contained in both open and secrete files of an employee as in the case of manual system being employed thereby eliminating tendencies of errors.

3.9 FILE AND STORAGE SPECIFICATION

The records in the file elements, serves as a link between the input and the output. This file holds the input data introduced into the system and supplies the data elements appearing in the output file.

In a computerized human resources management application, it is obvious to have more than one file would be required to store various data elements. A collection of the separate files form a database that would support the computerized systems. This project therefore considers the following files used in the database:

- i. Promotion table: This is a table that stores all data relating to al staff promotions within the database.
- ii. Disengagement table: This is a storage location that keeps record when an employee is being disengaged from service of the institution.
- iii. Bank 1 table: This is a table structure that keeps various list of banks used as employee pay point.
- iv. Terms of appointment table: This serves as a reservoir that keeps various types of appointments that can be offered for workers serving for more than a month period.
- v. Users table: This is a table that would contain records of all users that would be granted privileges to the system.

- xiv. Cadre table: This table keeps record of various cadres available for various disciplines and professions in the organization.
- xv. Leave table: The leave table keeps record of all proposed leave days and records of leave enjoyed by the personnel.
- xvi. Unique deductions table: This is a table that keeps record of specific deductions attached to an employee file that can be made as a lump sum deduction or in splits.
- xvii. State of origin table: This table contains list of all states of the federation including the federal capital. This table also contains list of other nationalities.
- xviii. Transfer table: This table keeps record of all staffs relocations and other staff movement.
- xix. Medial record table: This table keeps track records of information required by the national health insurance scheme as the primary medical provider.
- xx. Basic salary tables: This table keeps record of the annual salaries according to grade levels, and steps. Information here is those that make up employment contract binding.

- xxi. **Harmonized deduction table:** This table makes reserves for all deductions being stated in employee engagement contract which affect virtually everybody within the organization.
- xxii. **Tax deduction table:** This table keeps record of all taxes paid by employees from their income. These taxes deducted are used for administration purposes.
- xxiii. **Harmonized allowance:** Just as the harmonized deduction table, the harmonized allowance table keeps record of all allowances that has a global effect on either a department, organization or having effect on just on a section.

Considering the quick access time required from the system, random file organization is not appropriate. As such, the storage medium for these files should be the one that supports random access to the stored records in the table. Thus both floppy and hard disk are required as a storage device.

3.10 PROCESSING SPECIFICATION

Processing is an essential block of task being carried out to obtain the desired output from the system and relationships among the tasks.

The new system being designed is an automated human resources management application that maintains all defaulted records of personnel. Each record is entered individually into the computer. If there is an input error during the input process, a verification module of the program will display an error message to the operator and the operator will make necessary correction before the record is stored finally on a computer storage device.

With regards to the input process, an authorized user can use the record and the other information regarding a particular staff, such displayed view are generated on demand. Based on some query filters, records of staff can be listed out. This will serve as report for management decision.

Where there are changes on employee's record like change in cadre, movement from one location to the other, and such records are modified to reflect the current status after which the updated records would be saved again. All redundant records can be deleted to effect adequate system maintenance of the database.

3.11 SYSTEM SECURITY AND BACKUP

To ensure confidence in the system and protecting data integrity it is important to develop a system that establishes a comprehensive set of control and good backup mechanism. This is to a bid loss of large pool of date in the

3.9 FILE AND STORAGE SPECIFICATION

The records in the file elements, serves as a link between the input and the output. This file holds the input data introduced into the system and supplies the data elements appearing in the output file.

In a computerized human resources management application, it is obvious to have more than one file would be required to store various data elements. A collection of the separate files form a database that would support the computerized systems. This project therefore considers the following files used in the database:

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- iii. Bank 1 table: This is a table structure that keeps various list of banks used as employee pay point.
- iv. Terms of appointment table: This serves as a reservoir that keeps various types of appointments that can be offered for workers serving for more than a month period.
- v. Users table: This is a table that would contain records of all users that would be granted privileges to the system.

- vi. Staff accommodation table: This table keeps record for all quartered employees of the organization.
- vii. Pension custodian table: The table is basically to keep list of various bank who are custodians of all pension funds deducted from employees' salary. This custodian banks vary from banks used as employee pay points.
- viii. Suspension table: Where employee is serving some punishment, such as suspensions, records of all these punishment are kept and reversed when it is over.
- ix. Pensions table: This table keeps the detailed data of pensions on employee's record.
- x. Local government table: This table is mean to store various local governments of the federation where various employees hail from.
- xi. Divisions table: This table keeps the list of all schools and the list can be expanded to accommodate more schools ad divisions.
- xii. Department table: The department table contains various list of departments within the divisions/faculty.
- xiii. Unit table: This table contains the various units linked to various departments.

PFA	Text	20		
Pension custodian	Text (bank)	20		
Residential address	Text	30		
Residential phone No.	Number	Long integer		
Next of kin(s)	Text	20		
Address of next of kin	Text	25		
Date of active status	Date/Time		Medium date	
Last leave date	Date/Time		Medium date	
Date of last promotion	Date/Time		Medium date	
Next lave date	Date/Time		Medium date	
Next incremental date	Date/Time		Medium date	
Last incremental date	Date/Time		Medium date	
Evaluation score (year 1)	Number	Integer		
Evaluation score (year 2)	Number	Integer		
Evaluation score (year 3)	Number	Integer		
Promotion evaluation	Number	Integer		

For easy navigation and quick data entering of record, various data entry forms are designed as an interface to the database. The input design consists of verification modules which ensures that data are entered accurately and in the correct specification. This is a control mechanism embedded in the application. The new input design will eliminate duplication of records contained in both open and secrete files of an employee as in the case of manual system being employed thereby eliminating tendencies of errors.

database. The use of password will allow only some category of users will be granted privileges of access through the use of valid names and password. This would serve as a control measure in the system. The system developer is to have an absolute access to the entire application and the coded program while the system administrator would have a restricted to file management functions. The operators or clerks on the other hand would have further restriction to perform clerical positions, update of files, etc.

- i. Password security: All users will have names and passwords that they must always enter correctly before they can have access to the software package.
- ii. Data access security: The system will be able to restrict irrelevant data items that do not fit into particular fields.
- iii. Update security: The system will have the capability of restricting the type of update the individual user can make based on the predefined access privileges.
- iv. Activity security: Certain activities can be restricted by the system administrator.

CHAPTER FOUR

4.0 SYSTEM DEVELOPMENT, IMPLEMENTATION AND EVALUATION

4.1 PROGRAM ALGORITHM OF THE NEW SYSTEM

The algorithm used for this design is a diagrammatic logical flow of processes involved in the new design. The program of this design is shown in Appendix A.

4.2 PROGRAM CODING

The program is coded using Visual Basic integrated in Microsoft Access and structure Query language for easy debugging or updating at any point in time.

The system was designed using a top-down approach which is a cardinal point in this development. The entire system was patterned using a modular programming system where the entire program was divided into some fragmented modules. This method of system development is to enhance clarity of program and easy debugging of the program and to also avoid complication. The program listing for execution of the new system is outlined in Appendix B.

4.3 SYSTEM EVALUATION

The newly developed application is quite efficient to meet all data processing requirements of the registry department to counter the problems that occur in manual data processing. The application has readily addressed the problems of manual incremental step with its financial implications.

The application has also taken care of staff promotions, staff relocations and terminal benefits. The program has proven to protect all levels of data integrity, to avoid the data from any form of alternations and manipulation.

Above all, the automaton has certainly minimized the high rate of error incidence in the overall data processing activities of the personnel records of the registry department. The computer program can; however be used in other polytechnic having the same administrative structures within the country.

4.4 DOCUMENTATION

This refers to the technical reports, which is both soft and hard copies printed on papers. This gives users quick reference guide on how to use the program. This documentation consists of the following.

4.4.1 Modular Program Structure of New System

With a modular program structure, the program can be analyzed with the aid of the program flowchart as it reveals major modules that made up the entire system. These modules include:

- (a) Personnel menu
 - i. Add new staff
 - ii. Edit staff record
 - ii. Delete staff
 - iii. Display

These modules also make up the content of the system's main menu though some are sub-menus. To enter the main menu after booting, double click on the executable file icon. The system would prompt for a valid user name and a password, when the username and password is submitted, the password routine searches for the records in the system. If the name and password

supplied is valid, the system displays “You have login successfully” otherwise “Invalid username/Password” is displayed and when tried up to three times not successfully, the system logout that user.

When a valid username and password is entered main menu is displayed.

Where a user selects “Personnel Record Menu” all fields concerning a staff is displayed, to enter a new record, enter the file number first and other information required, when it is done, click on “Save” to append that record to the list of staff in the database.

To display information on screen, click on report menu from the Main menu, then the list of various reports appears on the screen then click on any particular one. The Line administrators (Deputy Registrar Establishment, Academics, etc) may require some certain information about staff particulars such as, list of all quartered staff of the institution. This module enables the user to generate both soft and hard copies of report which can either be displayed or be printed from the system.

When the management is requesting for a nominal roll by seniority order, this can be generated from the system. From the “Report menu” Select Nominal roll by category. This information is required by the management for some vital decision making. In this module it can also generate list of all staff in the institution regardless of following seniority order.

These two procedures will take the user into the program environment. The program will prompt the user for an input of username and password. When both are satisfied, the system opens up to the main menu where selections of various operations to be done.

OUTPUT FORM

The program has been tested and errors has been reduced and implemented to be effective. The output form of the sampled data is shown in appendix B.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY:

Computerization of Human Resources activities of The Federal Polytechnic Mubi is the automation of activities of the Registry Department of this case study.

This project work began with a detailed system investigations where it so revealed those areas of lapses of the manual system of operation which gave rise to many problems identified during the research work. Consequent to this investigation, the project proposed and designed a new system procedure that now automates operations in the registry department. After the design procedure was completed, the application was tested against raw data and errors were debugged. After correction of the errors, the system was implemented for the final users.

The reports generated from the system can be generated much easier and timely for the management's decisions.

5.2 CONCLUSION

It can rightly be said that with the automation of this Human Resources function in the Registry department of the case study, the operational errors has been reduced to its barest minimum and thus facilitates decision making. This new system also can be used in all other tertiary institutions having similar administrative structures.

To optimize personnel input for a smooth achievement of organizational goals depends on a good rewarding system for services rendered. Therefore, fast decision making by the management would in great measure bring about relative job satisfaction which is also a function for improved academic standard.

The computerization of this function would reduce manual workload thereby producing accurate and reliable information by way of eliminating confusion as regards the interpretation of various clauses in the scheme of service provided by the office of the Head of service of the Federal Republic of Nigeria.

5.3 RECOMMENDATION

I therefore recommend that this project be implemented on a computer of the Establishment unit of the Registry department. Also to ensure a more sustainable smooth operations and improvement of the system, I further suggest the following:

- i. That an experienced Admin officer(s) who is conversant with the manual system and is computer literate be assigned the operations of the computerized system.
- ii. That further training of the admin officers on the automated Human Resources applications.
- iii. I also recommend that other peripheral devices like the printers, VDU, UPS should strictly be used within voltage power limits.
- iv. That the position of computer system especially the external memory devices be kept far away from high magnetic fields and environmental factors like dust, heat, humidity etc.
- v. That backup of data should be made within some intervals or when transactions occur.
- vi. That restriction of access to the computer room and the system be enforced to avoid data manipulations by unauthorized persons. This would guard data integrity.

- vii.** I recommend that there should be some periodic system maintenance both hardware and further development on the software to reflect current requirements of public service.

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```

Exit Sub
End If
With Adodc1.Recordset
txtBAmount.Text = !BasicAmt
txtGLevel.Text = !GLevel
txtStep.Text = !Step
txtAnnBasic.Text = !AnnBasic
txtMonBasic.Text = !MonBasic
txtDayPay.Text = !DayPay

End With
With Adodc1

.RecordSource = "SELECT * FROM RecordInp WHERE FileNo = " +
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"
.Refresh

End With
With Adodc1.Recordset
lblName.Caption = !Firstname & " " & !MidName & " " & !Surname
End With
End Sub

Private Sub cmdExit_Click()
Unload Me
End Sub

Private Sub cmdMedical_Click()
Frame3.Visible = True
Frame5.Visible = False
With Adodc1

.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
.RecordSource = "SELECT * FROM Medical WHERE FileNo = " +
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"
.Refresh

End With

```

```
txtReg3.Text = !RegChild3
txtReg4.Text = !RegChild4
txtMedBill.Text = !MedBill
```

```
End With
With Adodc1
```

```
    .RecordSource = "SELECT * FROM RecordInp WHERE FileNo = "" +
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"
    .Refresh
```

```
End With
With Adodc1.Recordset
    lblName.Caption = !Firstname & " " & !MidName & " " & !Surname
End With
End Sub
```

```
Private Sub cmdPension_Click()
    Frame2.Visible = True
    Frame5.Visible = False
    If txtFileNo.Text = "" Then
        MsgBox "Please Enter the File Number", vbOKOnly, "Information"
        Exit Sub
    End If
    With Adodc1
        .ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
        .RecordSource = "SELECT * FROM RecordInp WHERE FileNo = "" +
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"
        .Refresh
```

```
    End With
    If Adodc1.Recordset.RecordCount < 1 Then
        MsgBox "The staff must be a registered staff", vbOKOnly, "Error"
        Exit Sub
    End If
    With Adodc1.Recordset
        lblName.Caption = !Firstname & " " & !MidName & " " & !Surname
    End With
End Sub
```

```
Private Sub cmdSave1_Click()
    With Adodc1

        .ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
```

```

Exit Sub
End If
With Adodc1.Recordset
    txtBAmount.Text = !BasicAmt
    txtGLevel.Text = !GLevel
    txtStep.Text = !Step
    txtAnnBasic.Text = !AnnBasic
    txtMonBasic.Text = !MonBasic
    txtDayPay.Text = !DayPay

End With
With Adodc1

    .RecordSource = "SELECT * FROM RecordInp WHERE FileNo = " +
Trim(txtFileNo.Text) + "" " 'ORDER BY Regn"
    .Refresh

End With
With Adodc1.Recordset
    lblName.Caption = !Firstname & " " & !MidName & " " & !Surname
End With
End Sub

Private Sub cmdExit_Click()
    Unload Me
End Sub

Private Sub cmdMedical_Click()
    Frame3.Visible = True
    Frame5.Visible = False
    With Adodc1

        .ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
        .RecordSource = "SELECT * FROM Medical WHERE FileNo = " +
Trim(txtFileNo.Text) + "" " 'ORDER BY Regn"
        .Refresh

End With

```

```
.RecordSource = "SELECT * FROM UnionTbl WHERE FileNo = " +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

```
End With
```

```
If Adodc1.Recordset.RecordCount < 1 Then
```

```
With Adodc1.Recordset
```

```
.AddNew
```

```
!FileNo = txtFileNo.Text
```

```
!UnionName = txtUName.Text
```

```
!DuesRate = txtDueR.Text
```

```
!PerBasic = txtPercent.Text
```

```
!PaymentAnn = txtPayAnn.Text
```

```
!PaymentFDO = txtDayOpen.Text
```

```
!DateOpen = txtDateOp.Text
```

```
!DateClose = txtDateClosed.Text
```

```
.Update
```

```
.Requery
```

```
End With
```

```
Else
```

```
With Adodc1.Recordset
```

```
!UnionName = txtUName.Text
```

```
!DuesRate = txtDueR.Text
```

```
!PerBasic = txtPercent.Text
```

```
!PaymentAnn = txtPayAnn.Text
```

```
!PaymentFDO = txtDayOpen.Text
```

```
!DateOpen = txtDateOp.Text
```

```
!DateClose = txtDateClosed.Text
```

```
.Update
```

```
.Requery
```

```
End With
```

```
End If
```

```
Frame1.Visible = False
```

```
Frame5.Visible = True
```

```
End Sub
```

```
Private Sub cmdSave2_Click()
```

```
With Adodc1
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
```

```
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
```

```
.RecordSource = "SELECT * FROM Pensions WHERE FileNo = " +
```

```
Trim(txtFileNo.Text) + "" AND MonthOf = " + Trim(cmbMonth.Text) + "" AND YearOf  
= " + Trim(cmbYear.Text) + "" 'ORDER BY Regn"
```

```
.Refresh
```

```

End With
If Adodc1.Recordset.RecordCount < 1 Then
    With Adodc1.Recordset
        .AddNew
        !FileNo = txtFileNo.Text
        !PenFundAdm = txtPenFunAd.Text
        !PenFundCust = txtpenFunCus.Text
        !MonthlyPenCont = txtMonthlyPen.Text
        !CummulativeAnn = txtCummPenAnn.Text
        !CummulativeTDATE = txtCummPenTaD.Text
        !OpenBal = txtOpenBal.Text
        !PenStaDate = txtPenStaDate.Text
        !PerEmployee = txtPerEmployee.Text
        !PerEmployer = txtPerEmployer.Text
        !MonthOf = cmbMonth.Text
        !YearOf = cmbYear.Text
        .Update
        .Requery

    End With
Else
    With Adodc1.Recordset
        !PenFundAdm = txtPenFunAd.Text
        !PenFundCust = txtpenFunCus.Text
        !MonthlyPenCont = txtMonthlyPen.Text
        !CummulativeAnn = txtCummPenAnn.Text
        !CummulativeTDATE = txtCummPenTaD.Text
        !OpenBal = txtOpenBal.Text
        !PenStaDate = txtPenStaDate.Text
        !PerEmployee = txtPerEmployee.Text
        !PerEmployer = txtPerEmployer.Text
        !MonthOf = cmbMonth.Text
        !YearOf = cmbYear.Text
        .Update
        .Requery

    End With
End If
Frame2.Visible = False
Frame5.Visible = True
End Sub

Private Sub cmdSave3_Click()
    With Adodc1

```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM Medical WHERE FileNo = "" +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

End With

If Adodc1.Recordset.RecordCount < 1 Then

With Adodc1.Recordset

.AddNew

!FileNo = txtFileNo.Text

!NHISRegNo = txtNHIS.Text

!RegChild1 = txtReg1.Text

!RegChild2 = txtReg2.Text

!RegChild3 = txtReg3.Text

!RegChild4 = txtReg4.Text

!MedBill = txtMedBill.Text

.Update

.Requery

End With

Else

With Adodc1.Recordset

!NHISRegNo = txtNHIS.Text

!RegChild1 = txtReg1.Text

!RegChild2 = txtReg2.Text

!RegChild3 = txtReg3.Text

!RegChild4 = txtReg4.Text

!MedBill = txtMedBill.Text

.Update

.Requery

End With

End If

Frame3.Visible = False

Frame5.Visible = True

End Sub

Private Sub cmdSave4_Click()

With Adodc1

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM BasicSal WHERE FileNo = "" +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

```

End With
If Adodc1.Recordset.RecordCount < 1 Then
    With Adodc1.Recordset
        .AddNew
        !FileNo = txtFileNo.Text
        !BasicAmt = txtBAmount.Text
        !GLevel = txtGLevel.Text
        !Step = txtStep.Text
        !AnnBasic = txtAnnBasic.Text
        !MonBasic = txtMonBasic.Text
        !DayPay = txtDayPay.Text
        .Update
        .Requery

        End With
    Else
        With Adodc1.Recordset
            !BasicAmt = txtBAmount.Text
            !GLevel = txtGLevel.Text
            !Step = txtStep.Text
            !AnnBasic = txtAnnBasic.Text
            !MonBasic = txtMonBasic.Text
            !DayPay = txtDayPay.Text
            .Update
            .Requery

            End With
        End If

        Frame4.Visible = False
        Frame5.Visible = True
    End Sub

Private Sub cmdSaveAll_Click()
    With Adodc1

        .ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
        .RecordSource = "SELECT * FROM Allowance WHERE FileNo = '" +
Trim(txtFileNo.Text) + "'" 'ORDER BY Regn"
        .Refresh

        End With
    If Adodc1.Recordset.RecordCount < 1 Then
        With Adodc1.Recordset

```

```
.AddNew
!FileNo = txtFileNo.Text
!AllowanceID = txtAllowanceID.Text
!AllowanceName = txtAllowanceName.Text
!AllowancePer = txtAllowancePer.Text
.Update
.Requery
```

```
End With
```

```
Else
```

```
With Adodc1.Recordset
!AllowanceID = txtAllowanceID.Text
!AllowanceName = txtAllowanceName.Text
!AllowancePer = txtAllowancePer.Text
.Update
.Requery
```

```
End With
```

```
End If
```

```
Frame6.Visible = False
```

```
Frame5.Visible = True
```

```
End Sub
```

```
Private Sub cmdUnion_Click()
```

```
Frame1.Visible = True
```

```
Frame5.Visible = False
```

```
With Adodc1
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM UnionTbl WHERE FileNo = " +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

```
End With
```

```
If Adodc1.Recordset.RecordCount < 1 Then
```

```
Exit Sub
```

```
End If
```

```
With Adodc1.Recordset
txtUName.Text = !UnionName
txtDueR.Text = !DuesRate
txtPercent.Text = !PerBasic
txtPayAnn.Text = !PaymentAnn
txtDayOpen.Text = !PaymentFDO
txtDateOp.Text = !DateOpen
```

```
txtDateClosed.Text = !DateClose
```

```
End With  
With Adodc1
```

```
.RecordSource = "SELECT * FROM RecordInp WHERE FileNo = "" +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

```
End With  
With Adodc1.Recordset  
lblName.Caption = !Firstname & " " & !MidName & " " & !Surname
```

```
End With  
End Sub
```

```
Private Declare Function SendMessage Lib "user32.dll" Alias "SendMessageA" (ByVal  
hwnd As Long, ByVal wParam As Long, ByVal lParam As Long, ByVal lParam As  
Long) As Long  
Dim Up100 As Single
```

```
Private Const WM_PAINT = &HF  
Private Const WM_PRINT = &H317  
Private Const PRF_CLIENT = &H4& ' Draw the window's client area  
Private Const PRF_CHILDREN = &H10& ' Draw all visible child  
Private Const PRF_OWNED = &H20& ' Draw all owned windows
```

```
Private Sub Form_Load()  
Dim k As Integer
```

```
With Adodc1
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM RecordInp" 'WHERE FileNo = "" +  
Trim(txtFileNo.Text) + "" 'ORDER BY Regn"  
.Refresh
```

```
End With
```

```
k = 0
```

```
With Adodc1.Recordset
```

```
Do While .EOF = False
```

```
k = k + 1
```

```
lblsno.Caption = lblsno.Caption & k & vbCrLf & vbCrLf
```

```
lblFileNo.Caption = lblFileNo.Caption & !FileNo & vbCrLf & vbCrLf
```

```
lblName.Caption = lblName.Caption & !Firstname & " " & !MidName & " " &  
!Surname & vbCrLf & vbCrLf
```

```

        lblDept.Caption = lblDept.Caption & !Departm & vbCrLf & vbCrLf
        lblPosition.Caption = lblPosition.Caption & !PPost & vbCrLf & vbCrLf
        .MoveNext
    Loop
End With
End Sub
Private Sub mnudown_Click()
    Up100 = Up100 - 360
    Picture1.Top = Up100
End Sub

Private Sub mnuexit_Click()
    Unload Me
End Sub

Private Sub mnuprint_Click()
    Printer.Orientation = vbPRORPortrait
    PrintPictureBox Picture1, 100, 100
End Sub

Private Sub mnuup_Click()
    Up100 = Up100 + 360
    Picture1.Top = Up100
End Sub

Public Sub PrintPictureBox(Box As PictureBox, Optional X As Single = 0, Optional Y
As Single = 0)

    Dim rv As Long
    Dim ar As Boolean

    On Error GoTo Exit_Sub

    With Box
        'Save ReDraw value
        ar = .AutoRedraw

        'Set persistence
        .AutoRedraw = True

        'Wake up printer
        Printer.Print

        'Draw controls to picture box

        rv = SendMessage(.hwnd, WM_PAINT, .hDC, 0)

```

```
rv = SendMessage(.hwnd, WM_PRINT, .hDC, _  
    PRF_CHILDREN Or PRF_CLIENT Or PRF_OWNED)
```

```
'Refresh image to picture property  
.Picture = .Image
```

```
'Copy picture to Printer  
Printer.PaintPicture .Picture, X, Y  
Printer.EndDoc
```

```
'Restore backcolor (Re-load picture if picture was used)  
Box.Line (0, 0)-(.ScaleWidth, .ScaleHeight), .BackColor, BF
```

```
'Restore ReDraw  
.AutoRedraw = ar  
End With
```

```
Exit_Sub:
```

```
    If Err.Number Then MsgBox Err.Description, vbOKOnly, "Printer Error!"
```

```
End Sub
```

```
Private Declare Function SendMessage Lib "user32.dll" Alias "SendMessageA" (ByVal  
hwnd As Long, ByVal wParam As Long, ByVal lParam As  
Long) As Long  
Dim Up100 As Single  
Dim SlistLeftRight As Single
```

```
Private Const WM_PAINT = &HF  
Private Const WM_PRINT = &H317  
Private Const PRF_CLIENT = &H4& ' Draw the window's client area  
Private Const PRF_CHILDREN = &H10& ' Draw all visible child  
Private Const PRF_OWNED = &H20& ' Draw all owned windows
```

```
Private Sub cmdOk_Click()  
    Dim k As Integer, Number1 As String
```

```
    Picture1.Visible = True  
    Frame1.Visible = False  
    lblMonth.Caption = cmbMonth.Text  
    lblyear.Caption = cmbYear.Text  
    With Adodc1
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
.RecordSource = "SELECT * FROM Pensions WHERE MonthOf = "" +
Trim(cmbMonth.Text) + "" AND YearOf = "" + Trim(cmbYear.Text) + "" ORDER BY
FileNo"
.Refresh
```

End With

k = 0

```
With Adodc1.Recordset
Do While .EOF = False
Number1 = !FileNo
With Adodc2
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
.RecordSource = "SELECT * FROM RecordInp WHERE FileNo = "" +
Number1 + "" 'ORDER BY Regn"
.Refresh
```

End With

```
With Adodc2.Recordset
!lblPINNo.Caption = !lblPINNo.Caption
!lblName.Caption = !lblName.Caption & !Firstname & " " & !MidName & " " &
!Surname & vbCrLf & vbCrLf
End With
With Adodc2
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"
.RecordSource = "SELECT * FROM RecordInp_3 WHERE FileNo = "" +
Number1 + "" 'ORDER BY Regn"
.Refresh
```

End With

```
With Adodc2.Recordset
!lblPINNo.Caption = !lblPINNo.Caption & !PensionPinNo & vbCrLf & vbCrLf
!lblName.Caption = !lblName.Caption & !Firstname & " " & !MidName & " " &
!Surname & vbCrLf & vbCrLf
End With
k = k + 1
!lblSNo.Caption = !lblSNo.Caption & k & vbCrLf & vbCrLf
!lblFileNo.Caption = !lblFileNo.Caption & !FileNo & vbCrLf & vbCrLf
```

```
        lblMontCont.Caption = lblMontCont.Caption & !MonthlyPenCont & vbCrLf &
vbCrLf
        lblConYear.Caption = lblConYear.Caption & !CummulativeAnn & vbCrLf &
vbCrLf
        lblAccuCon.Caption = lblAccuCon.Caption & !CummulativeTDATE & vbCrLf
& vbCrLf
        lblPFA.Caption = lblPFA.Caption & !PenFundAdm & vbCrLf & vbCrLf
        lblPenBank.Caption = lblPenBank.Caption & !PenFundCust & vbCrLf & vbCrLf
```

```
        .MoveNext
    Loop
End With
```

```
End Sub
```

```
Private Sub mnudown_Click()
    Up100 = Up100 - 360
    Picture1.Top = Up100
End Sub
```

```
Private Sub mnuexit_Click()
    Unload Me
End Sub
```

```
Private Sub mnuleft_Click()
    SlistLeftRight = SlistLeftRight - 240
    Picture1.Left = SlistLeftRight
End Sub
```

```
Private Sub mnuprint_Click()
    Printer.Orientation = vbPRORLandscape
    PrintPictureBox Picture1, 50, 50
End Sub
```

```
Private Sub mnuright_Click()
    SlistLeftRight = SlistLeftRight + 240
    Picture1.Left = SlistLeftRight
End Sub
```

```
Private Sub mnuup_Click()
    Up100 = Up100 + 360
    Picture1.Top = Up100
End Sub
```

```
Public Sub PrintPictureBox(Box As PictureBox, Optional X As Single = 0, Optional Y
As Single = 0)
```

```
Dim rv As Long
Dim ar As Boolean
```

```
On Error GoTo Exit_Sub
```

```
With Box
```

```
'Save ReDraw value
ar = .AutoRedraw
```

```
'Set persistence
.AutoRedraw = True
```

```
'Wake up printer
Printer.Print
```

```
'Draw controls to picture box
```

```
rv = SendMessage(.hwnd, WM_PAINT, .hDC, 0)
rv = SendMessage(.hwnd, WM_PRINT, .hDC, _
    PRF_CHILDREN Or PRF_CLIENT Or PRF_OWNED)
```

```
'Refresh image to picture property
.Picture = .Image
```

```
'Copy picture to Printer
Printer.PaintPicture .Picture, X, Y
Printer.EndDoc
```

```
'Restore backcolor (Re-load picture if picture was used)
Box.Line (0, 0)-(.ScaleWidth, .ScaleHeight), .BackColor, BF
```

```
'Restore ReDraw
.AutoRedraw = ar
End With
```

```
Exit_Sub:
```

```
If Err.Number Then MsgBox Err.Description, vbOKOnly, "Printer Error!"
```

```
End Sub
```

```
Private Declare Function SendMessage Lib "user32.dll" Alias "SendMessageA" (ByVal  
hwnd As Long, ByVal wParam As Long, ByVal lParam As Long, ByVal lParam As  
Long) As Long  
Dim Up100 As Single
```

```
Private Const WM_PAINT = &HF  
Private Const WM_PRINT = &H317  
Private Const PRF_CLIENT = &H4& ' Draw the window's client area  
Private Const PRF_CHILDREN = &H10& ' Draw all visible child  
Private Const PRF_OWNED = &H20& ' Draw all owned windows
```

```
Private Sub Form_Load()  
Dim k As Integer, Number1 As String
```

```
With Adodc1
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM RecordInp" 'WHERE FileNo = "' +  
Trim(txtFileNo.Text) + "'" 'ORDER BY Regn"  
.Refresh
```

```
End With
```

```
k = 0
```

```
With Adodc1.Recordset
```

```
Do While .EOF = False  
Number1 = !FileNo  
With Adodc2
```

```
.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data  
Source=C:\StaffRecord_2\StaffRData.mdb;Persist Security Info=false"  
.RecordSource = "SELECT * FROM RecordInp_3 WHERE FileNo = "' +  
Number1 + "'" 'ORDER BY Regn"  
.Refresh
```

```
End With
```

```
With Adodc2.Recordset
```

```
lblDateLPro.Caption = lblDateLPro.Caption & !DateLastProm & vbCrLf &  
vbCrLf
```

```
End With
```

```
k = k + 1
```

```
lblSNo.Caption = lblSNo.Caption & k & vbCrLf & vbCrLf
```

```
lblFileNo.Caption = lblFileNo.Caption & !FileNo & vbCrLf & vbCrLf
```

```
lblName.Caption = lblName.Caption & !Firstname & " " & !MidName & " " &  
!Surname & vbCrLf & vbCrLf
```

```

        lblDatePrPro.Caption = lblDatePrPro.Caption & !DatePreApp & vbCrLf &
vbCrLf
        lblNewRank.Caption = lblNewRank.Caption & !PPost & vbCrLf & vbCrLf
        .MoveNext
    Loop
    End With
End Sub
Private Sub mnudown_Click()
    Up100 = Up100 - 360
    Picture1.Top = Up100
End Sub

Private Sub mnuexit_Click()
    Unload Me
End Sub

Private Sub mnuprint_Click()
    Printer.Orientation = vbPRORPortrait
    PrintPictureBox Picture1, 100, 100
End Sub

Private Sub mnuup_Click()
    Up100 = Up100 + 360
    Picture1.Top = Up100
End Sub

Public Sub PrintPictureBox(Box As PictureBox, Optional X As Single = 0, Optional Y
As Single = 0)

    Dim rv As Long
    Dim ar As Boolean

    On Error GoTo Exit_Sub

    With Box
        'Save ReDraw value
        ar = .AutoRedraw

        'Set persistence
        .AutoRedraw = True

        'Wake up printer
        Printer.Print

        'Draw controls to picture box

```

```
rv = SendMessage(.hwnd, WM_PAINT, .hDC, 0)
rv = SendMessage(.hwnd, WM_PRINT, .hDC, _
    PRF_CHILDREN Or PRF_CLIENT Or PRF_OWNED)
```

```
'Refresh image to picture property
.Picture = .Image
```

```
'Copy picture to Printer
Printer.PaintPicture .Picture, X, Y
Printer.EndDoc
```

```
'Restore backcolor (Re-load picture if picture was used)
Box.Line (0, 0)-(.ScaleWidth, .ScaleHeight), .BackColor, BF
```

```
'Restore ReDraw
.AutoRedraw = ar
End With
```

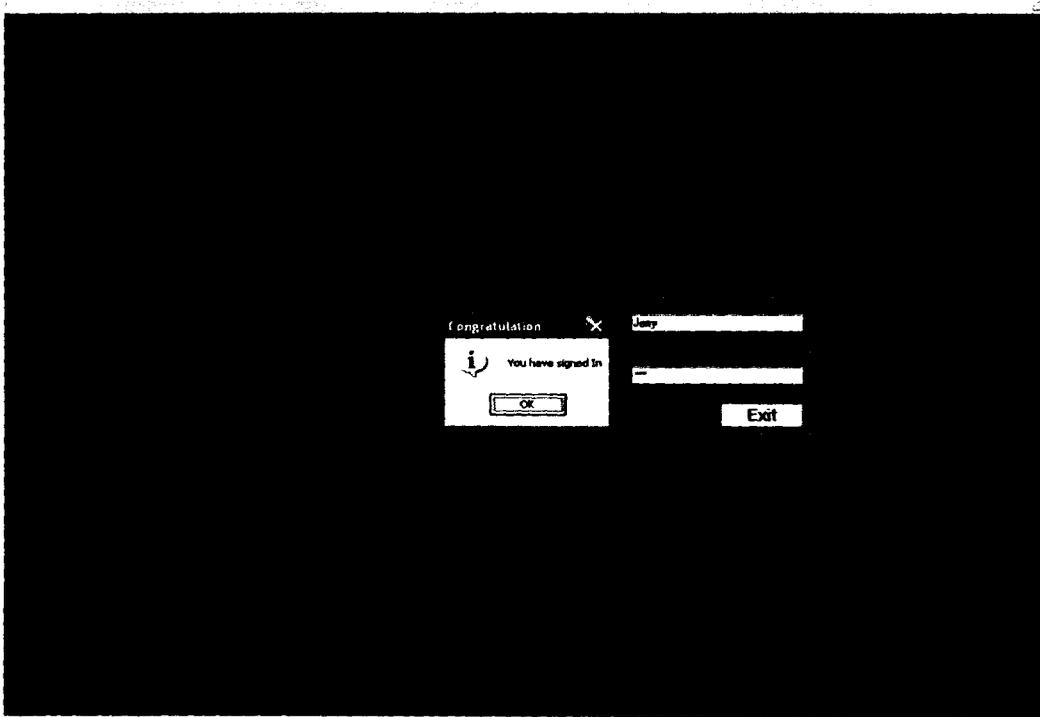
```
Exit_Sub:
```

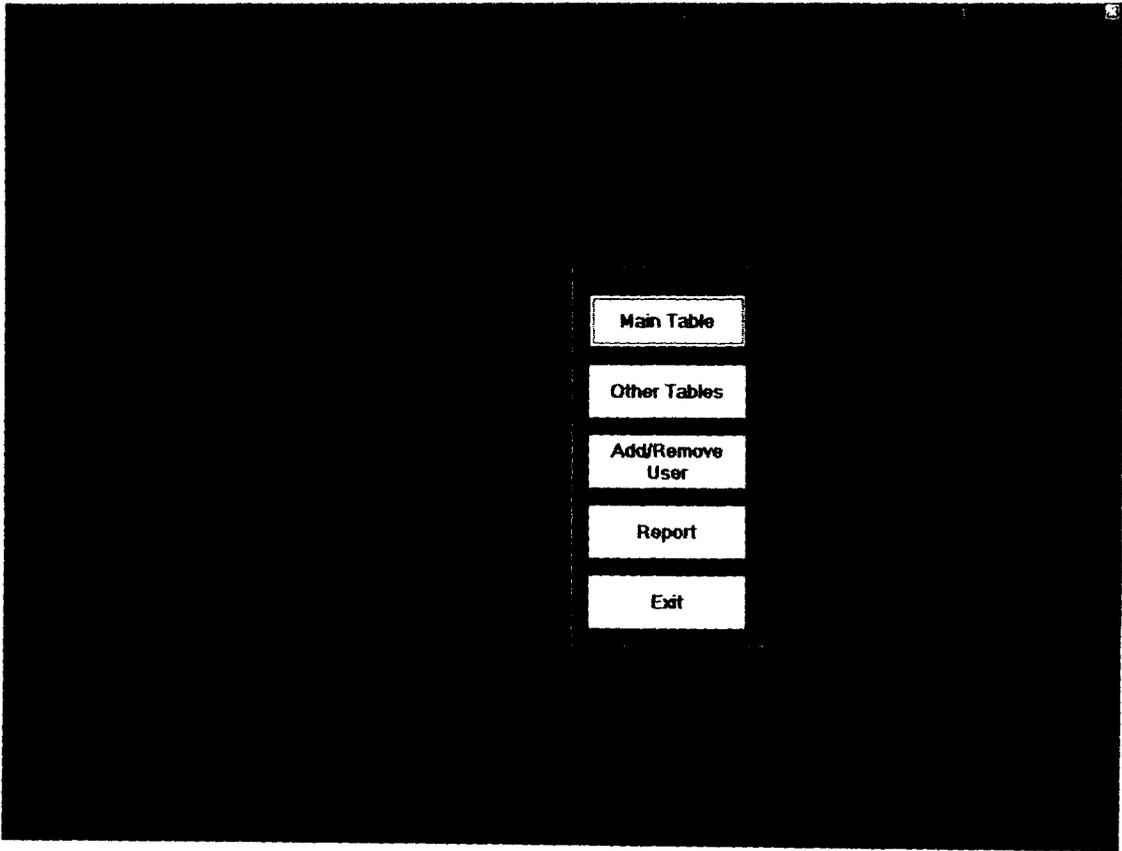
```
    If Err.Number Then MsgBox Err.Description, vbOKOnly, "Printer Error!"
```

```
End Sub
```

APPENDIX B

This is where to login your username and password, when confirmed valid, the system congratulates you for successful login.





Main Table

Save Update Delete Exit Find

First Next Previous Last

File Number :

Surname :

First Name :

Middle :

Medean Name :

Grade Level :

Step :

Present Post :

Cadre :

Annual Incremental Date :

Divisions/Schools :

Department/Centre/Section :

Date of present appointment :

Date which salary is payable :

Bank Name(Salary) :

Account Number :

Sex :

Terms of Appointment :

Quatered Staff :

Quater Type :

Staff Category :

Confirmed Staff? :

Union Member :

Staff Suspended :

Active Staff :

Date of Birth :

Marital Status :

Nationality :

State of Drigin :

Local Govt. Area :

Highest Educational Qualification :

Educational Qualifications with Date

	Qualification	Date
1	XXXXXX	XXX
2	XXXXXX	XXX
3	XXXXXX	XXX
4	XXXXXX	XXX

Post on First Appt in Service :

Date of First Appt. into the Public Service :

Grade Level on First Appt. :

Pension Fund Pin Number :

Bank for Pension Custodian :

PFA :

Residential Address :

Spouse Name :

Next of Kin :

Address of Next of Kin :

Telephone of Next of Kin :

Date of Active Status :

Date of Last Level :

Date of Last Promotion :

Confirmation Date :

Next Leave Date :

Last Increment Date :

Staff's Signature :

Other Tables

File Number :

Name :

Union Table

Pensions Table

Medical Record

Basic Salary

Allowances

Exit

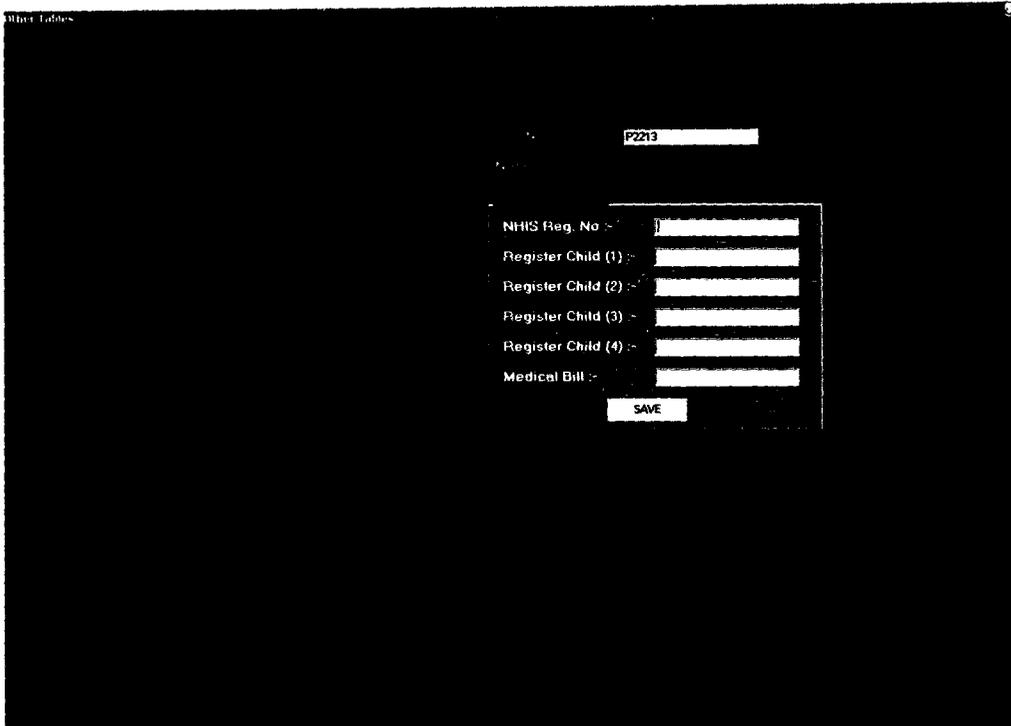
This is where pensions records are entered having received some information from the employee.

Other Tables

P2213

Pension Fund Administration :-	<input type="text"/>
Pension Fund Custodian(Bank) :-	<input type="text"/>
Monthly Pension Contribution :-	<input type="text"/>
Cummulative Pension (Annual) :-	<input type="text"/>
Cummulative Pensions todate :-	<input type="text"/>
Opening Balance :-	<input type="text"/>
Pension Stating Date :-	<input type="text"/>
Percentage Of Pension Contribution(Employee) :-	<input type="text"/>
Employers Contribution (%) :-	<input type="text"/>
Month of :-	<input type="text" value="9/2008"/>
Year :-	<input type="text" value="2008"/>

SAVE



Report Menu, at this point the user can select which of the listed report he wants to generate from the system as shown below.

