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**EMPLOYEES' INFORMATION  
MANAGEMENT APPLICATION**

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TURKU UNIVERSITY OF APPLIED SCIENCES ABSTRACT  
OF THESIS

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<p>This work involves the development of an Employees' Information Management Application for Cameroon Development Corporation (CDC). CDC is an agro-industrial corporation with vast plantations and factories in the south west of Cameroon. With its huge labor force its human resources department formerly had a flat file system for handling employee information. This wasn't quite good as it couldn't meet up with the ever changing needs of the corporation.</p> <p>The aim of this project is to build a system whereby CDC can safely keep and manage employee information. It is to act a source of knowledge for strategic decision making by CDC management and other external agencies connected to the corporation.</p> <p>The author had previously worked for CDC at its information system department. Besides having an experience at the company, Information gathering has involved face to face discussion and interview with users and observation of working documents. The system is built on Microsoft Access and Visual Basic. Implementation is on a network server with users being able to access it from local personal computers.</p> <p>Presently this application is at its implementation stage with users inputting and editing existing information for employees.</p>	
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## **1 INTRODUCTION**

Due to the expansion of corporations (some even across continents), there has been a dramatic increase in the amount of information they need to handle. They are faced with an increasing number of challenges as to know the exact financial status or situation of their companies, as well as the actual situation of the labour force (or human resources). Take for example a large company of about 10,000 workers, belonging to different departments. This information, which is vital for the management of corporations, amongst others mostly, concerns marketing, accounting, finance, sales, production, human resources, stock management etc.

For large companies with huge labour force, there is the need to have an employee database or employee information systems, which handles all the information for workers and issues connected to them. Such systems amongst other things should be able to help management determine if the corporation is over-staffed or under-staffed, forecast retirement rate or employment needs, identify skills amongst employees and to effectively share information to government agencies or other authorities that need such information.

Normally the handling of workers' information, which is a sensitive issue, is the responsibility of the Human Resources department. Hence a database to manage such information will be of great use to the human resources department which has the right to access, update or modify data concerning employees.

The development was made for Cameroon Development Corporation (CDC), which is an agro-industrial corporation with extensive plantations and factories in the south west province of Cameroon. This project is an information database to replace a traditional system used by the human resources department of CDC. Chapter two goes through the practices and

formalities of building a database application. Chapter three of this study will cover an overview of the case company to give an idea of its administrative structure, its information needs, and how the principles studied in chapter two are applied in the case company, while Chapter four outlines the development process itself from implementing database objects to loading demonstration data. The last chapter will look into the problems faced during this process, how the problems were handled and any shortcomings.

## 2 Theoretical Background

### 2.1 Relational databases

A data model is an integrated collection of concepts for describing data, relationships between data, and constraints on the data used by an organization (Conolly & Begg 2004, 22). A data model essentially attempts to represent the data requirements of an organization or the part of the organization, which is to be modeled. According to (Conolly & Begg 2004, 22), it can be thought of as comprising of three components:

1. *Structural part*, consisting of a set of rules that define how the database is to be constructed
2. *Manipulative part*, defining the types of operations allowed on the data
3. *A set of integrity rules*, which ensures that the data is accurate.

The relational model as exemplified by Dr E.F Codd, is based on the mathematical concept of a **relation**, which is physically represented as a **table**.

#### **Integrity**

Due to business rules outlined in the conceptual design of a database, there is need for constraints in the logical design of a database. An integrity constraint is a constraint that promotes the accuracy of the data in the database (Oppel 2004, 42). There are two types of integrity rules to be respected in relational tables; these are **Entity integrity** and **referential integrity**.

## Entity-Relationship modeling

Once the requirements gathering part of the database system development project is complete then it is time for the next database design phase, which is **Entity-Relationship modeling** (ER modeling). Entity relationship modeling is the process of visually representing entities, attributes, and relationships, producing a diagram called an entity relationship diagram (ERD) (Oppel 2004, 180).

ER modeling is a top down approach to database design (Connolly & Begg 2004, 147). We begin by identifying the important data called entities, and relationships between the data that must be represented in the model. Peter Chen developed the original ERD format in 1976. Since then, vendors, computer scientists, and academics have developed many variations, all of them conceptually the same. This study shall use the object-oriented diagrammatic representation called UML (Universal modeling language) to represent ER models.

### Entities

An entity is a person, place, thing, event, or concept about which data is collected. In other words, entities are the real world things in which we have sufficient interest to capture and store data about them in a database (Oppel 2004, 29).

An entity can have a physical existence (real) or a conceptual existence (abstract).

Table 2.1.Examples of entities with physical and conceptual existence

Physical existence	Conceptual existence
Member	Role
Video	Rental
Branch	Registration



Diagrammatically an entity is represented as a rectangle labeled with the name of the entity, which is normally a singular noun. In UML the first letter of each word in the entity name is in upper case.

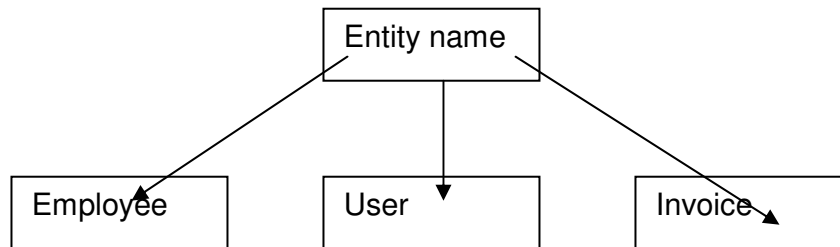


Figure 1 Representation of 3 entities

## Relationships

Relationships are the associations among the entities. Because databases are all about storing related data, the relationships become the glue that holds the database together (Oppel 2004, 28). Relationships are shown on the conceptual design diagram as lines connecting one or more entities (Figure 3). Each end of a relationship line shows the maximum cardinality of the relationship, which is the maximum number of instances of one entity that can be associated with the entity on the opposite end of the line. Each uniquely identifiable association is called a relationship occurrence and is given a name that identifies its function.

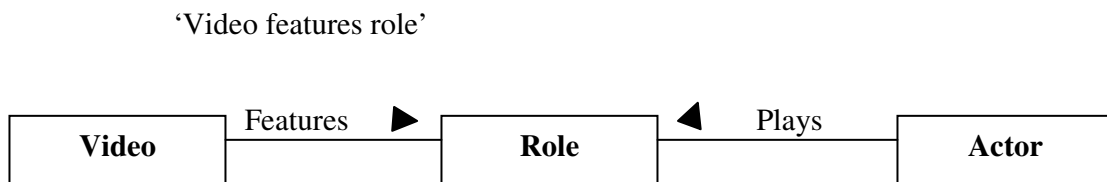


Figure 2 Diagrammatic representations of relationships.

## **Universal modeling language (UML) diagrams**

The universal modeling language (UML) acts as software blue print diagram that eases communication between technical experts like analysts, designers, programmers and the not so technically oriented business counterparts. Here I look at a number of diagrams applicable to this system. The **use case diagram** Use case diagrams describe what a system does from the standpoint of an external observer. The emphasis is on what a system does rather than how. Having identified the various use cases it is then easier to inject **test cases** in to the uses cases so that the client can directly test the system from the use case point of view.

## **2.2 Fact finding techniques**

Fact-finding is crucial during the early stages of the information system project. This is the requirements-gathering phase during which the project team must gather and document a high-level, yet precise, description of what the project is to accomplish. The focus must be on what rather than how; the “how” is developed during the subsequent design phases. It is important for the requirements to include as much as can be known about the existing and expected business processes, business rules, and entities. I now look at a number of techniques commonly used for gathering information for a database project.

Examining documents helps the designers to gain some insight into how the need for a database arose. Documents may help to provide information on the part of the business associated with the problem. Observing forms, reports, and files associated with the current system is a good way to gain some understanding of the system quickly.

Observing the business operations and people who will be using the database application is another popular method in requirements gathering. You can either participate in, or watch a person perform, activities to learn about the system. The advantages are; assuming you watch in an unobtrusive manner, you get to see people following normal processes in everyday use. Also you may observe events that people would not dare to mention in response to questionnaires or interview questions. The disadvantages are that:

Travel to various business locations can add to project expense. Unless enormous periods of time are dedicated to observation, you may never see the exceptions that subvert existing business processes.

### **3 Development project definition**

#### **3.1 About CDC and the human resource department**

##### **3.1.1 Overview of CDC**

The Cameroon Development Corporation (CDC), is a giant agro-industrial corporation that grows, processes and markets tropical export crops like banana, palm oil, rubber and tea (Cameroon Development Corporation 2009, [referred to 25.01.2010]). It operates in Cameroon in the Central African sub-region. Its operations management is directed by a General Manager and governed by a Board of Directors also headed by a Chairman. Currently, their plantations cover a total of approximately 38,000 hectares of land and constitute a workforce of over 10,000 employees (CDC 2010, 25.01.2010), making it the second highest employer after the state of Cameroon.

The corporation has vast plantations grouped into units called estates which are grouped according to the crops being grown. For example all the palm estates are grouped into a group oil palms management headed by a Group Manager. An Estate Manager, answerable to the Group Manager, heads an estate. The General Manager supervises the Group Manager.

The estates and groups benefit from service departments, which are not directly concerned with production. Their role is to aid the estates and groups in the production process. Such services departments include medical services, transport services, electrical services, IT services, human resources etc. This is summarized in Figure 3 shown below.

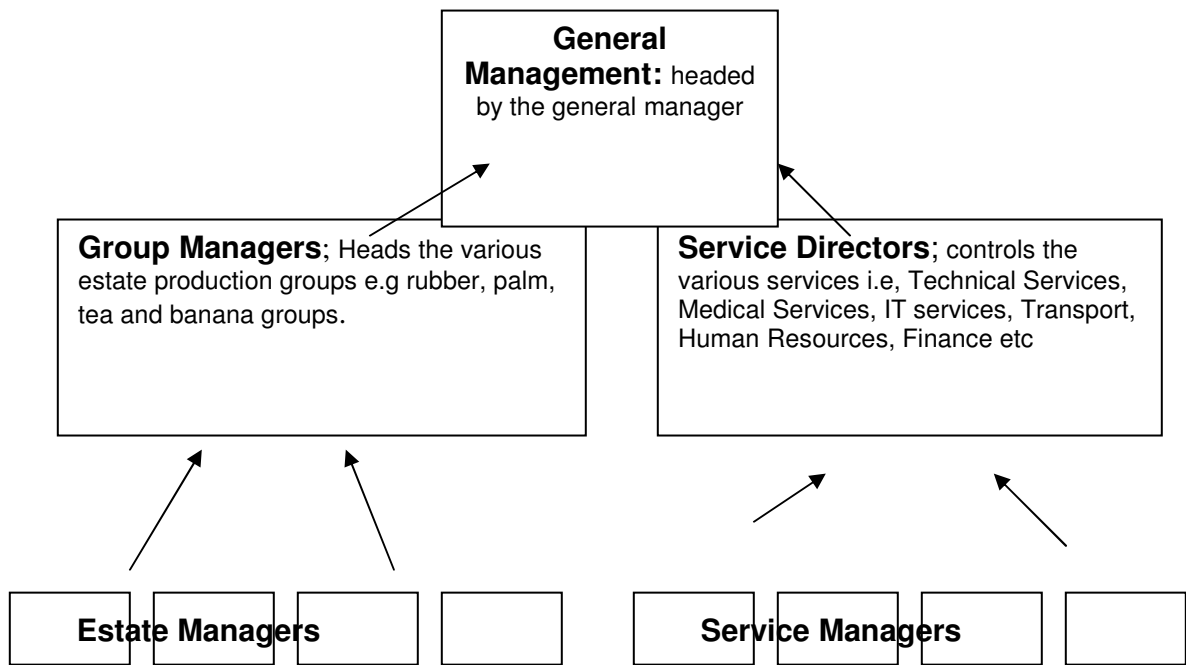


Figure 3 Organizational Structure of CDC

The company's plantations, generally called estates, and production factories span across two provinces in Cameroon; the southwest and littoral provinces. At each location of an estate or factory there is an office headed by an estate manager or factory manager respectively. The estates and factories are managed as autonomous units.

### 3.1.2 Overview of the Human Resources Department

The human resources department is one of the services departments of the corporation. It is headed by the director of human resources, who is assisted for specialized task by four managers based at the head office of the corporation; Manager of human resource development services, legal and social services officer, training manager and Social insurance officer. At the estate and service department levels there are Human resource officers who serve at that level, but are answerable to the director of human resources. The department has a host of administrative officers, lawyers and clerks to handle their specific roles. Figure 3 shows the organization structure of the human resources department.

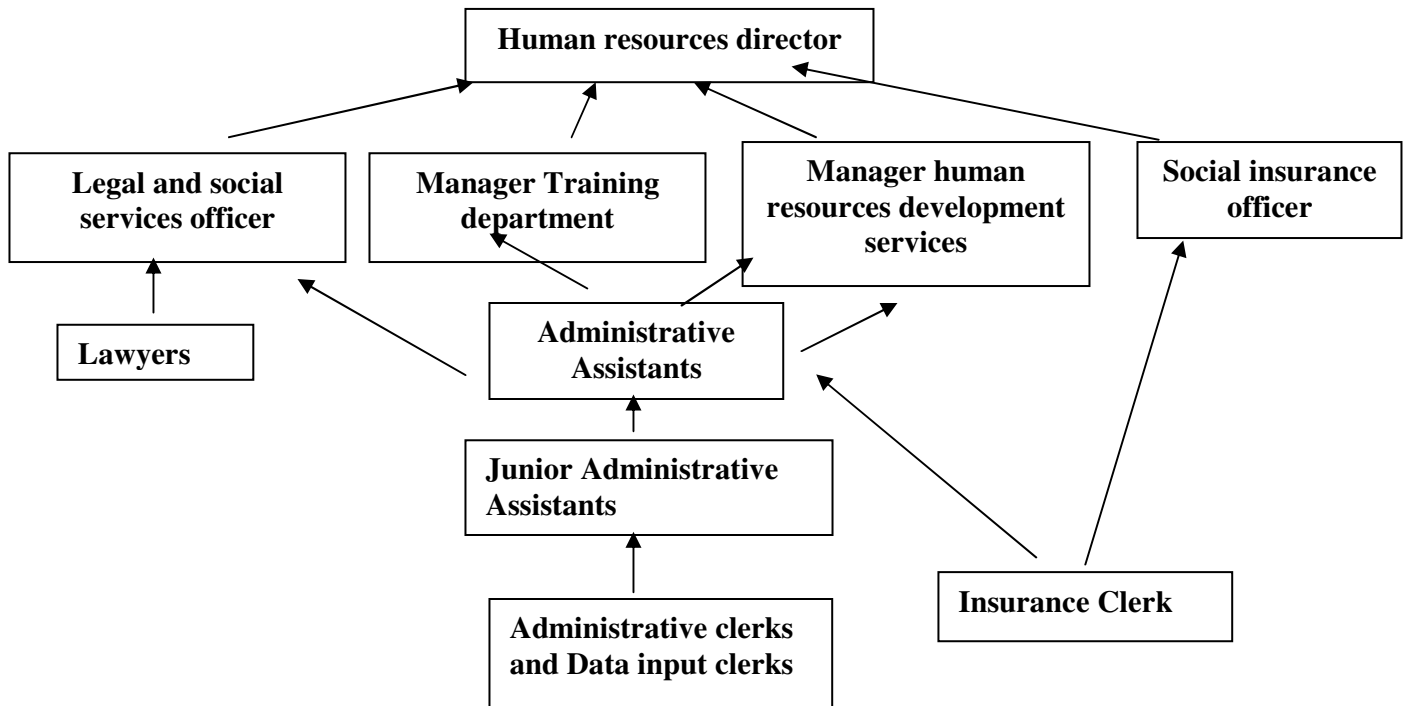


Figure 4 organizational structure of the Human resources department.

### 3.1.3 The Role of the human resources department

The human resources department is responsible of for the following functions in the corporation (Cameroon Development Corporation's website, referred May 2009, available at <http://cdc-cameroon.com>).

- Employment of new staff and advertisement of vacant positions within the corporation.

- Management of employee information.
- Monitor and manage employee's progress from the time of engagement to time of retirement or other form of termination. These include amongst others, change of status, transfers or change of duties or functions.
- Management of employee grievances or other external grievances.
- Strategic management of Labour force, for example yearly forecast for the number of employees due retirement or approaching retirement age in a given year, hence giving an estimate of the amount of Labour needed for replacement.
- In charge of correspondence with external agencies like the taxation department, the minister of labor and employment, insurance companies etc.

### **3.2 The need for an employee management system**

Previously the human resources department relied on flat files created in spreadsheets and Microsoft Word to store and manage employee information. Also due to the size of the CDC, these files were often very large and the secretary or clerk had difficulties retrieving them for reference purposes or updating them. Intervention to some of these problems mostly involved rearrangement and consolidation of information in spreadsheet files for easy reference and updating purposes. In such a file, the unique identity for an employee is a six digit matriculation number, with the first two digits specifying the year of employment and the last four, a serial number which gives an indication of the number of employment for the year. But these files were not secure since they were on local workstation computers, any one could access them.

Another source of information for the department was the payroll system. But this was structured only for salary purposes and integrated with the accounting system. Though the information for workers salary was up to date, information like workers dependants, qualifications, transfer history, promotions and disciplinary actions could not be found from the payroll system. Such information was most of the time available in flat files, in the form of spreadsheets or Microsoft word file – in the case of memos to employees- kept at the secretariat of the human resources department. Such files were randomly kept without

proper organization. Sometimes files with hundreds of pages were saved by a staff name, or by subject matter. It was difficult and time consuming to retrieve information from such files since they contain hundreds of pages of unorganized information. When they found it difficult to update or retrieve information, they resorted to creating new files again. Most of the time users needed the intervention of the information systems department to update or refer from these flat files.

Intervention by the information system department staff most of the time involved cleaning up these files, rearranging information into an orderly manner to simply reference. Spreadsheets were rearranged into columns, with column heading specifying the information contained by that column. Word files containing correspondence exchanges between a staff and the corporation were arranged in terms of date, subject of correspondence and content of correspondence, originating department and destination of correspondence. Continuous intervention by the information system department thus highlighted the necessity for a fast, reliable and secure employee information management system.

### **3.3 The requirements for a new system**

In order to appreciate the requirements for an employee information system for CDC it is necessary to give an insight into the operational structure of the corporation. The Cameroon development corporation constitutes several service departments and plantation estate groups, which operate as autonomous units. Financial and performance reports are produced per unit and consolidated at the head office of the corporation to produce a single report for the entire corporation.

Although the various units are autonomous, the human resources department has the huge task to administer and handle information for all the workers of the corporation, irrespective of the units to which they belong. Thus in order for this department to be reliable and up to date source of information concerning workers, which emanates from various units of the corporation, it needs a reliable, fast, readily accessible system from



which they can refer and update employee information (See appendix 4 for the “Lookup employee form” and “Add new employee form”). To facilitate this task, a new procedure had to be implemented within the corporation; that a change of workers status, which could be promotion, dismissal, reclassification, marital status, employment, transfer, termination etc had to emanate from the human resources to the employee or the employee’s unit. And in the case where the change is originated from another unit then the human resources had to be notified formally in writing and only after that is the change considered valid. Such a regulation will guarantee uniformity and synchronization of the employee information system.

Thus the employee information system which is expected to be the sole source of reference for workers’ information can be used for retirement and employment forecast, and awarding statutory increments to overdue employees. The system should also act a source of information for government agencies like tax department, ministry of women’s affairs, ministry of employment and labor and external agencies like the Common Wealth Development Corporation.

## 4 Developing the employee management system

Besides hard copies of files stored in shelves and file cabinets, the human resources department had traditionally been keeping employee information and other correspondences concerning employees in flat files on spread sheets and word files. Screen shot of such file is show in figure 5. This was not enough as it did not meet most of their needs. Retrieving information was time consuming because there was no specific other of naming flat files. Also some of these files were very long and new files had to be created for continuity purposes.

In sorting out the entities I have considered that since employee is the main entity, what are those items of employee that need to be managed or those items that human resource is interested in? The next question is what are those entities, which can be considered as an attribute to the employee and those, which are independent enough to be considered as entities themselves?

During my work with the information Systems Department of CDC, part of our daily job was troubleshooting and helping users at the human resources department. My interaction with users in solving their problems, interviewing them, rearranging flat files containing employee information, gave me an idea of the big picture of the requirements for a system needed to store employee information for use by the human resources department.

It should be noted that this project is a joint project between me and another student. My assignment specifically though was to build a system which can be used by the human resource for inputting new workers' data, editing information as the need may arise, printing analytical reports commonly used by the management of CDC and other external agencies,

forecasting retirement and expected new recruitment numbers at the end of a period and monitoring automatic salary increments for workers who may be dew (there is a policy for automatic increment after every three years of service) See appendix 5 for a list of analytical reports. Additionally there was a need common need searching for an employee's identification number for a given employee name, especially for elderly employees who can't retain their identification number (See Figure 13 in appendix 1).

Initially this project involved creating tables in Microsoft Access, then importing data from flat files into blank tables for future editing and processing. Since the company has a local area network at its' head office, Oracle with it distributed processing ability and SQL integration would have been a suitable utility, but CDC hasn't got a license for it. So my next best option was Microsoft Access and Visual Basic 6.0 for which CDC has a license for multiple installations.

	A	B	C	D	E
1	Matriculation number	Name of Worker	Date of Birth	Place of Birth	Caisse nationale de prevoyance C
2	000002	NKEH CHENYI	4/6/1973	VICTORIA	
3	000003	ALICE AJUA KOFFI	2/23/1971	VICTORIA	
4	000004	MARTIN EBAL FORCHAK	5/20/1975	ATABONG WIRE	
5	000005	NGEKA DIVINE	6/15/1974	BUEA	
6	000006	ABDOULAH	5/30/1968	FORT FOUREAU	
7	000007	ENANG VALENTINE NKEDE	8/5/1966	TIKO - FAKO	
8	000008	ATANGA FRANCIS MBANCHING	5/25/1973	BOTA - LIMBE	

Figure 6 Screen capture of workers master file.

	A	B	C
1	Matriculation Number	Numero de caisse nationale	Centre de prévoyance
2	000018	410-1000284-8	BUEA
3	000019	410-1004085-5	BUEA
4	000133	872117-7	BUEA
5	000137	410-1000768-0	BUEA
6	000204	729135-4	BUEA
7	000206	794289-9	BUEA
8	000208	384231-7	BUEA
9	000214	410-1001182-3	BUEA
10	000391	383221-9	BUEA
11	000392	410-1004083-0	BUEA

Figure 5 Screen capture of social insurance file.

Table I based on the flat files I came up with an ER model shown on table 1. As shown on Table II, for the purpose of this report, in this ER diagram for the employee information system I have changed some of the entity names originally used within CDC in order to clarify their meaning.

Entities and description	
<b>LANGUAGE</b>	Language proficiency and literacy of worker
<b>EMPDIPLOMA</b>	Education history and qualifications
<b>EMPLOYEEHOUSE</b>	Accommodation information of employee
<b>EMPLOYEE</b>	The worker
<b>EMPATTENDANCE</b>	Absences taken by an employee
<b>CAREER</b>	Employee work history before and during engagement with the corporation
<b>RECLASSIFICATION</b>	Reclassification or promotion (change of status) of an employee.
<b>DEPENDANT</b>	Employee's dependants i.e. Number of children and wife(s).
<b>TRANSFERS</b>	The history Employee's transfer to other departments of units within the corporation or lease out to some government agencies
<b>SANCTION</b>	Disciplinary actions (punishment) taken against the employee by his or her superiors.
<b>UNIT</b>	Department or Section where an employee works

Table II. Entity names used for the purpose of this report and their original names used within CDC.

<b>Original Name of entity as used in CDC</b>	<b>New name</b>	<b>Description</b>
PROFLANG	LANGUAGE	Language of communication with the employee
EMPLOYEE CHILD	DEPENDANT	A Dependiant of an employee e.g. child, adopted child, spouse etc.
MATRICULE	EMPLOYEEENUM	Unique identification number of an employee

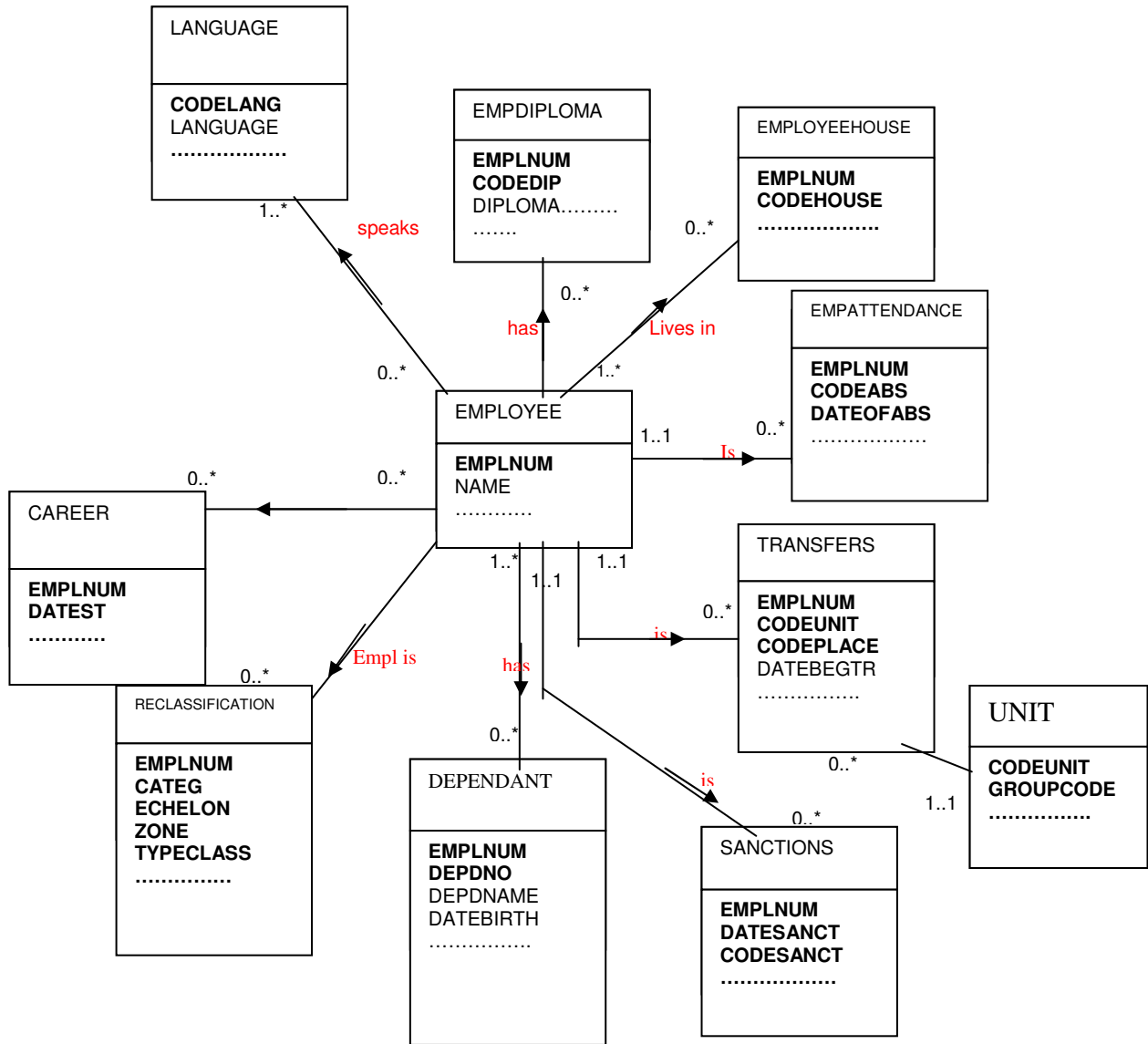


Figure 7 shows the entities and their relationships as a diagram. Details of all columns are shown in appendix 2.

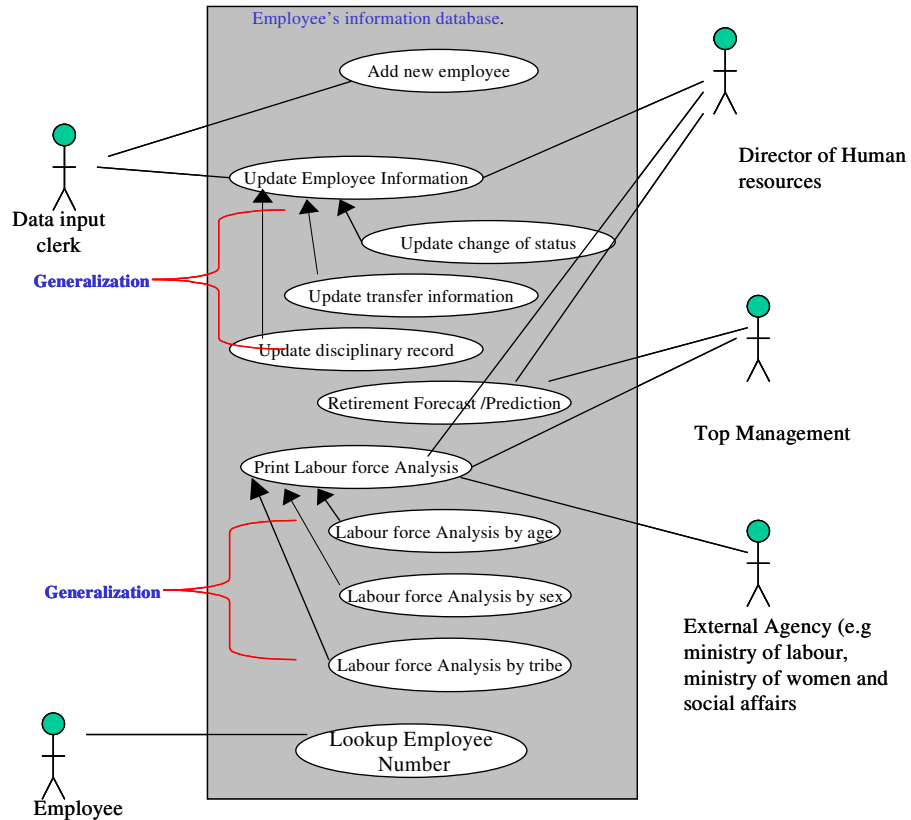


Figure 8-Use case diagram of employee information system.

The use case diagram depicts all the actors in the employee management system and how they interact with the system. The data input clerk under the supervision of the Director of human resources inputs new employee information and updates the database accordingly (See appendix 5 and 4 for the “Add new employee form”). The Director of Human Resources produces monthly and yearly reports for use within the corporation and for external agents. For example the human resources department yearly prints the retirement forecast report (See Figure 17 appendix 1) which is used for estimating retirement percentage and new recruitment needed.

The top management and other external bodies need analysis of the labor force situation. The ministry of social and women affairs needs bi-annually the female labor force analysis report. Other private agencies like the human right agencies also need the labor force analysis by region, tribe and religious affiliation.



## 5 Summary

The employee information management application which entails the building of a system to help the human resources of CDC to effectively manage employee information originally kept in electronic flat files and hard copy files in folders had a mixture of smooth progress and setbacks. To begin with the advantages I had working on this application is that I had previously worked at the information systems department of CDC, which involved interacting with users at the human resources department. Thus I had an idea of the day to day needs of the department. Working with users at human resource mostly involved looking at their flats files and asking them what they wanted to do with the content of the flat files and how this information was helpful for their work.

All this information made it easier to understand the conceptual design of the system. Looking at the hard copy of the files like the individual employee form give an idea how to design the individual employee information report. Data from files was readily available for use in testing some objects of the application. The working tool Microsoft access and visual basic for which the corporation have a license is installable on a stand alone PC so that I don't need connection to a server to use the tool.

The employee management application has helped the human resources to avoid some of the drawbacks of the flat files system like consistency and security of employee information. Strategic reports like the employee retirement forecast will help management to plan for new employment well ahead of time. Most of the reports in the employee information system are built on queries (See appendix 3 for a list of queries and related reports) hence they generate faster than ordinary reports built on tables.

Some of the difficulties encountered during the exercise involved working from a distance it is impossible to meet up with the changing needs of the human resources department. This was mainly a communication problem between me and the users of the system. Email exchanges didn't make certain aspects of the system clear enough to me. For example they changed the procedure of allocation of matriculation numbers (employee numbers) to new employees and I couldn't understand this until I visited there last summer. Another shortcoming which has been reported is that the application has crashed at certain times when many users have accessed it simultaneously. Presently users are involved in editing existing data and adding new workers data into the application. In future I would prefer implementing this system in Oracle which is more tolerant to multiple user access and more suitable for a network environment.

## **APPENDIX 1 DESCRIPTION OF THE EMPLOYEE MANAGEMENT SYSTEM**

As depicted in the Use Case diagram (section 3.2.3) of the of the employee management application, besides building a system for update and reference purposes, my assignment is the creation of analytical reports needed for strategic use by the human resources management, and other external agencies like the Ministry of Labour and Employment, the Ministry of Social and Women's affairs and the top management of CDC. For example, to forecast retirement numbers from the labour force, in order to arrange replacements. Other reports include; analyzing the Labour per estate or service by age, by gender or distribution across various tribal groups or provinces. Since the department had flat files (spreadsheets) into which employee information had been consolidated, I imported these files to get real life data for the application. Figure 9 shows the relationship between tables as implemented in Microsoft Access.

The Employee Management Application built in Microsoft Access and Visual Basic 6 is for use at the human resources department of the CDC and for printing analytical reports needed by the management of CDC. With a set of user friendly menus, the application can be systematically divided into 4 phases which are; login, input, verification and output.

Upon the clicking of the application shortcut icon on the desktop the application runs up to the level of the login menu, which requires a username and password. The login menu is shown in Figure 10.

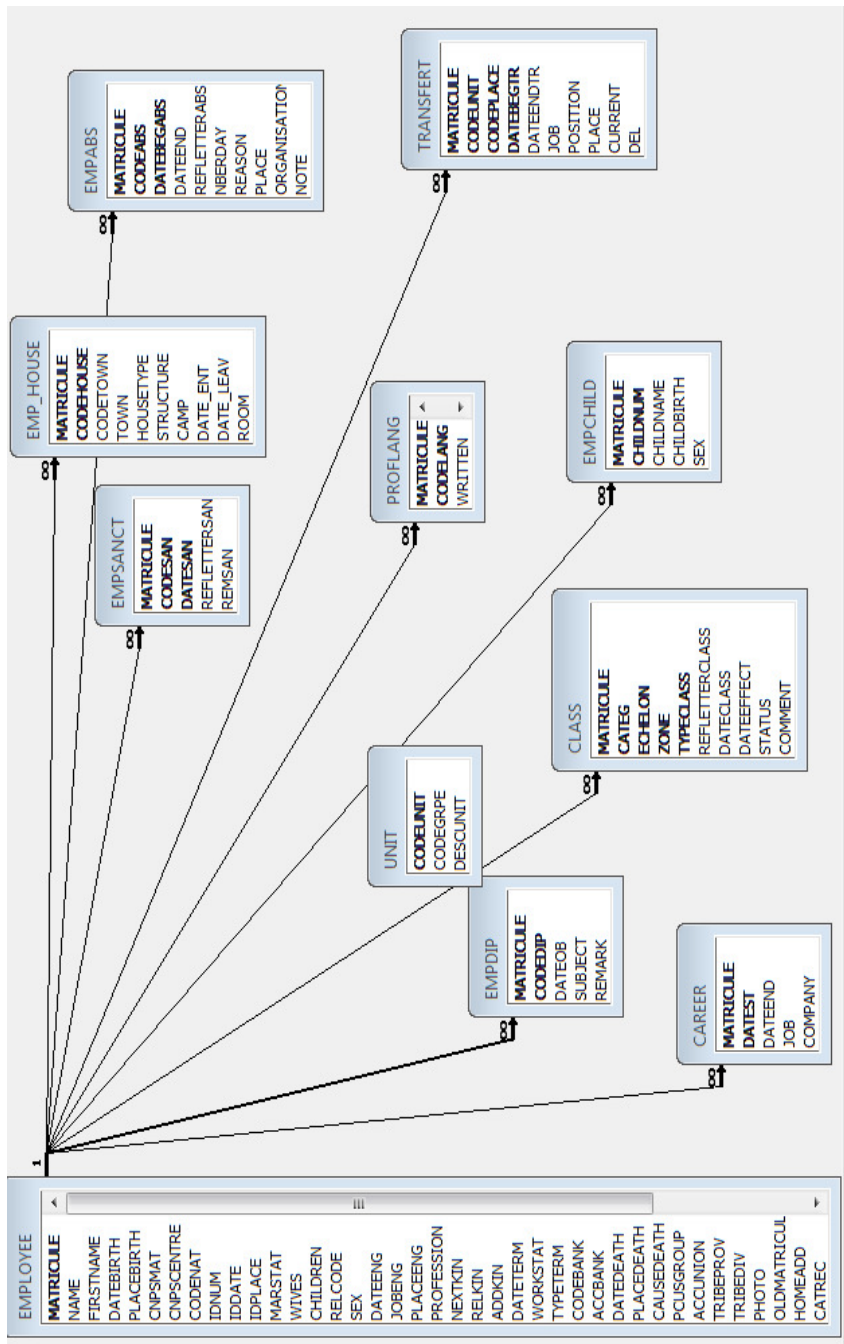
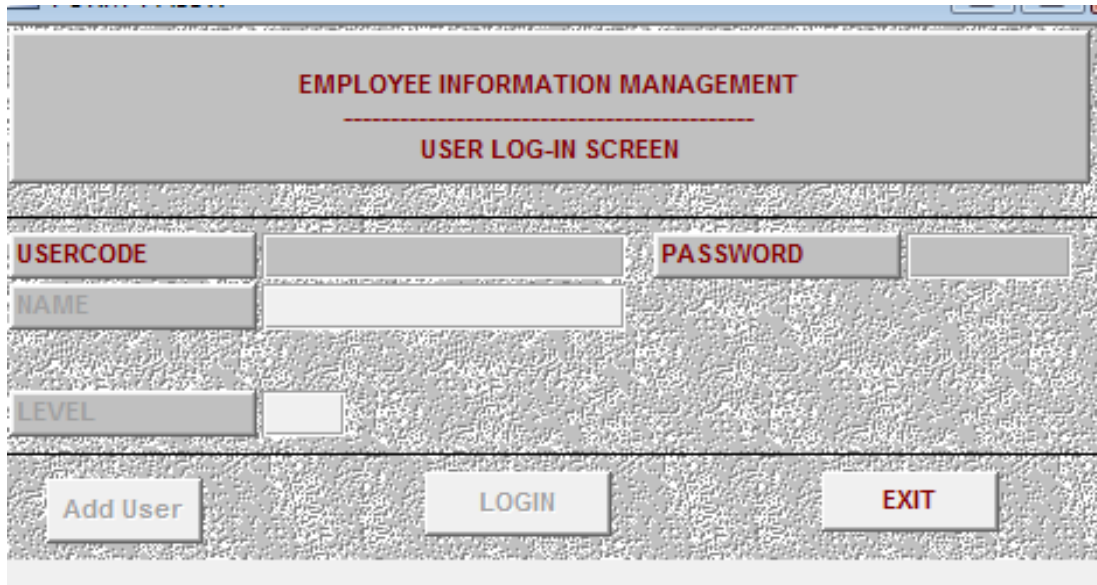


Figure 9 Relationships between tables as implemented in Access.



The screenshot shows a window titled "EMPLOYEE INFORMATION MANAGEMENT" with a subtitle "USER LOG-IN SCREEN". The interface includes four input fields: "USERCODE", "PASSWORD", "NAME", and "LEVEL". The "LEVEL" field is a dropdown menu. At the bottom, there are three buttons: "Add User", "LOGIN", and "EXIT".

Figure 10 Login screen

According to their functions there are 3 levels of user who log in to the employee information management application. There levels A, B and C. Level A rights are for systems administrators and technicians who maintain and trouble shoot the application. They have the right to add new user accounts to the system. When a level A right user signs in the ADD USER button is activated. Level B rights are for secretaries and data input clerks of the human resources department who are responsible for day to day data input and updating the system. Finally, level C rights are for supervisors and managers of the corporation who once in a while need to verify or refer some information from the application. After authentication of the user name and password the user's full name is displayed in the name text field and the

login button is activated. The user can login to the main menu of employee management system by clicking the login button. Screen shot of the main menu is shown in Figure 11.

If a wrong password or user name is given, or the user does not exist in the system, a pop window advises the user to re-enter an authentic username and password or contact the information system department.

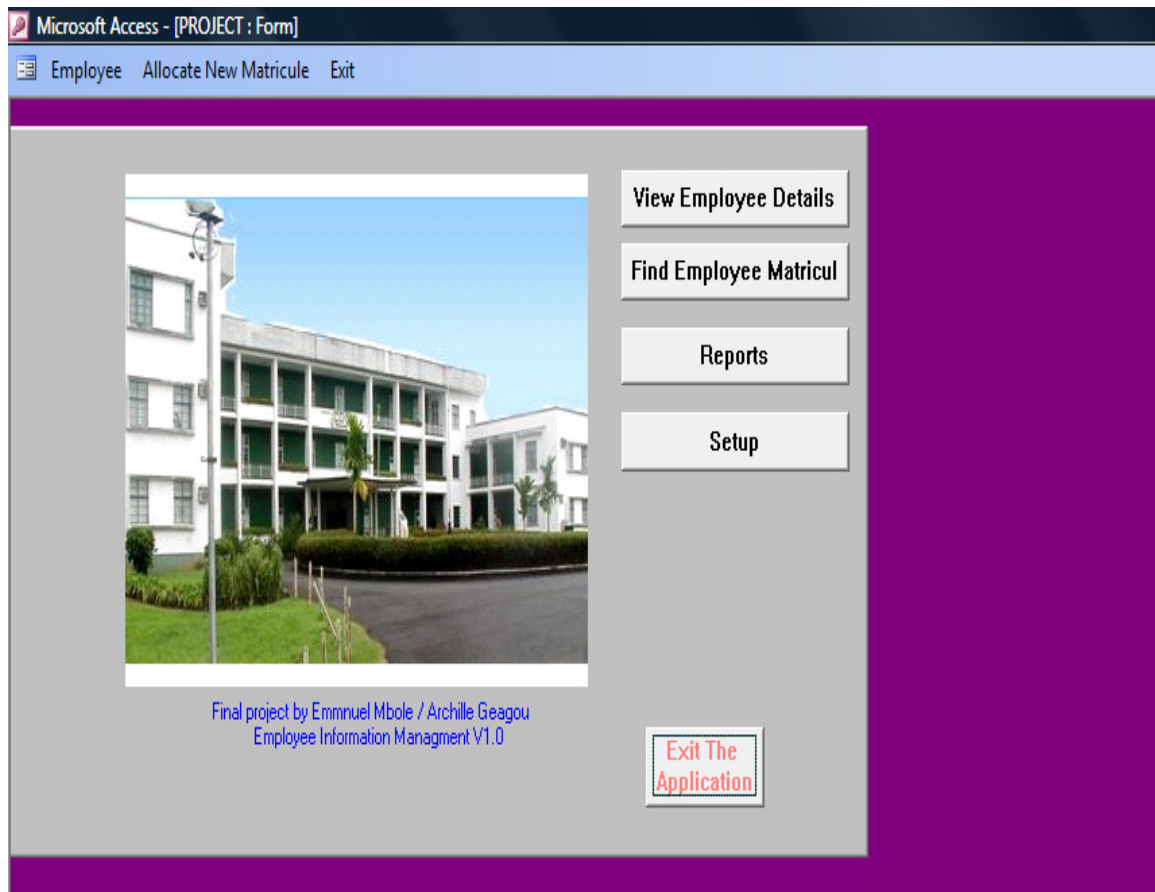


Figure 11

The main menu has 5 options which the user can choose depending on the operation to be performed. They are; View employee details, Find employee matricule (employee number), Setup and Reports. Clicking the View employee details button opens the main employee lookup form where by simply typing the employee number and striking the Enter button on the keyboard displays the details of the particular employee. At the bottom right of the employee form is a print button used for printing a hard copy or electronic copy the employee details. View of employee lookup screen is shown below. To exit the View employee details screen is by clicking the red stop button at the bottom of the screen.

The screenshot shows a software window titled "Edit Employee" with a close button (X) in the top right corner. The form contains the following fields and controls:

- Employee Matricule:** 000716 (dropdown menu)
- Matricul:** 000716 (text box)
- Name:** TOH MICHEAL (text box)
- First Name:** (text box)
- Batch Code:** (text box)
- Date Birth:** 3/15/1966 (text box)
- Palce of Birth:** NYEN - MBENGWI (text box)
- Validate:** (radio button)
- Nationality:** CAMEROON (dropdown menu)
- Province:** NORTH WEST (dropdown menu)
- Division:** Momo (dropdown menu)
- Home Address:** (text box)
- ID N\*:** SW/2/1419/9E (text box)
- ID Date:** 03-Jul-96 (text box)
- ID Place:** LIMBE (text box)
- Mar. Status:** SINGLE (dropdown menu)
- Sex:** Male (dropdown menu)
- Wives:** 0 (text box)
- Children:** 2 (text box)
- Next Of Kin:** NCHANIC NDON (text box)
- Adresse Next Of Kin:** C/o TOH MICHEAL - B (text box)
- Relationship:** SON (text box)
- Languaqe Proficiency:** (text box)
- Literate:**  (checkbox)
- Working Status:** W/O (dropdown menu)
- Date Eng.:** 5/1/2000 (text box)
- Place Eng.:** BENOE PALMS ESTATE (text box)
- Present Job:** (text box)
- Cat. at Eng.:** 02 (dropdown menu)
- Ech at Eng.:** C (dropdown menu)
- Actual Category/Ech:** 2F (text box)
- Profession:** WELDING (text box)
- Last Leave/training:** (text box)
- Last Sanction:** (text box)
- Last Promotion:** (text box)
- Academic Profile:** (text box)
- House:** (text box)
- CNPS:** (text box)
- Career:** (text box)
- Bank:** (dropdown menu)
- Account Number:** (text box)
- Ok?..:** (radio button)
- Navigation buttons:** Home, Back, Forward, End, Refresh, Del, STOP (red), Termination, Print employee Form

Figure 12

The Find employee matricule option is useful to search for the number of an employee when part of their name or full name is known. By typing the name of part of the name a set of names appear from which one can pinpoint the particular employee in question and hence employee's number. The Find employee matricule screen is shown below. Exiting this screen is by clicking the close button at the top right edge.

MATRIC	VNAME	VCAT	DESCUNIT	CODEUN
000063	LITIE SYLVESTER EKO	2 F	Mungo	321
000232	AYUK EKOKOBE SIMON	1 B	Sonne	231
000410	EKO PETER NAWO	02 C	Debundscha	331
000530	NGEMA BESUMBU EKOMO	2 C	Tombel	212
000721	KEKON BABAH MANASEH	2 F	Benoe	323
000837	GODWIN EKOI KANJU	2 E	Illoani	311

Figure 13

The Reports option on the main menu takes the user the screen for the various analytical reports that can be printed for the human resources department, external agencies and the management of CDC. The screen for various analytical reports is shown in figure 14. The most important option List employees leads to a sub menu shown in figure 15, which lists the various criteria by which employees can be classified. These criteria includes by group, estate, gender, age and category or rank. The option that lists employee by gender is useful for the ministry of employment and ministry of women affairs. Another very



useful option is Employee status which leads to the next screen from where one can print the retirement forecast report used by management to prepare for retiring workers and planning for new recruitments to replace retired workers.

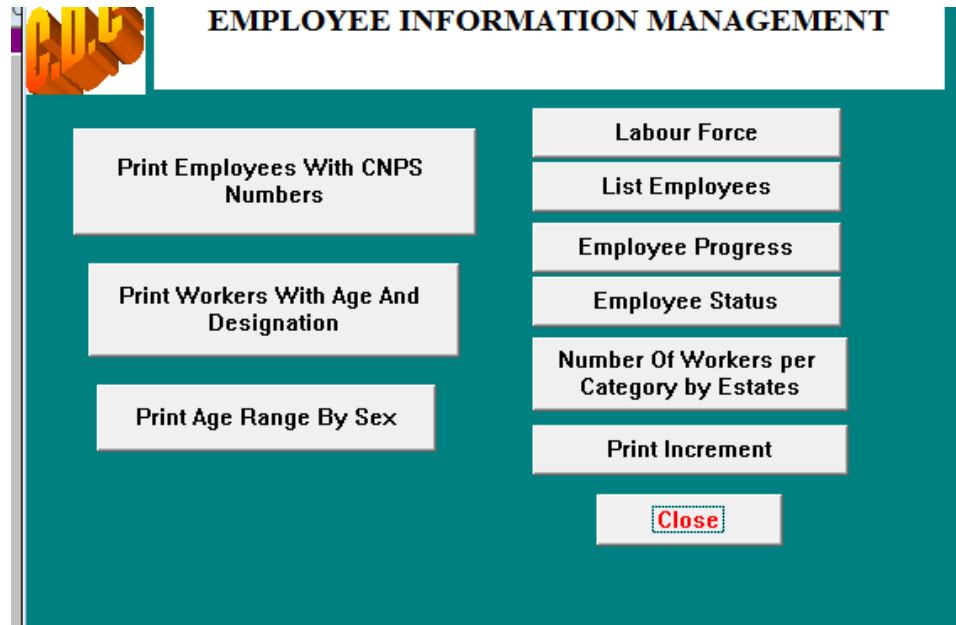


Figure 14 Screen shot of reports main menu

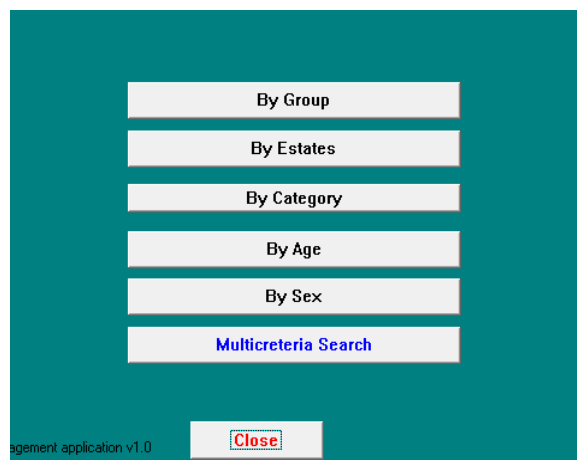


Figure 15 Screen shot of list employees criteria menu

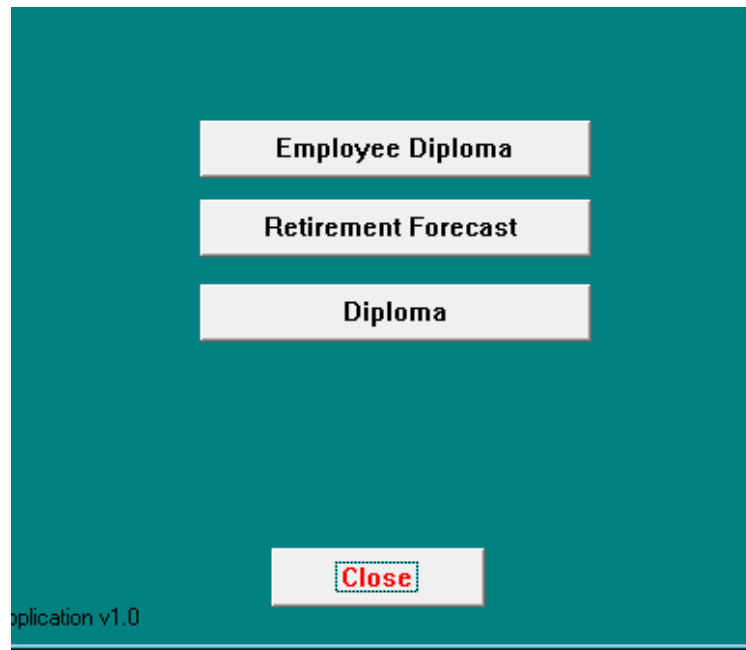


Figure 16 Screen shot of the employee status menu.

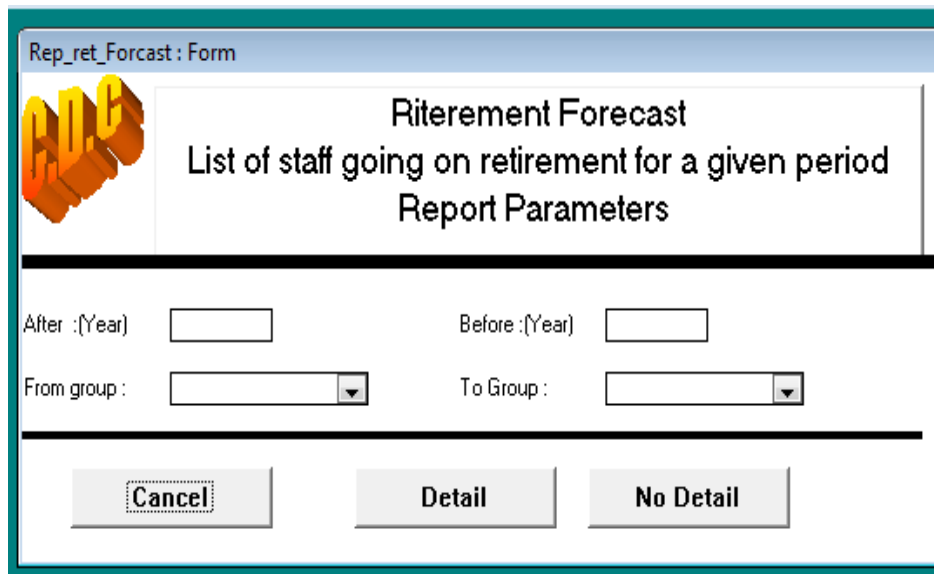


Figure 9 Screen shot of the retirement forecast parameters input screen.

The next option on the main menu is the setup option. Clicking at the button leads to the screen where one can add new employees' data into the application, edit or view existing data in the application. Screen shot of the Add new employee form is shown below. This is one of the most used screens in this application .The setup submenu screen shot is shown below.



Figure 18 Screen shot of the Setup sub menu.

### Add New Employee

Matricul:  Name:  First Name:  Batch Code:

Date Birth:  Place of Birth:

Nationality:  Province:  Division:

Home Address:  ID N°:  ID Date:  ID Place:

Mar. Status:  Sex:  Wives:  Children:

Next Of Kin:  Adresse Next Of Kin:  Relationship:

Language Proficiency:  Literate:

---

Working Status:  Date Eng.:  Place Eng.:

Present Job:  Cat. at Eng.:  Ech at Eng.:

Profession:  Last Leave/training:  Last Sanction:  Last Promotion:

---

Academic Profile:  House:  CNPS:  Career:

Bank:  Account Number:  Ok?..:

Figure 12 Screen shot of the Add new employee screen.

The last option on the employee management main menu is the Exit application that terminates the session and closes the entire application.



Figure 19 Exit application button.

## List of references

Cameroon Development Corporation (CDC) website. Referred on 12.02.2009-05-04.  
Available at <http://cdc-cameroon.com>

Connolly, T. & Begg, C. 2004. Database Solutions. 2nd ed.  
Glasgow: Harlow Pearson.

Oppel, Andrew J. 2004. Databases Demystified. 2<sup>nd</sup> edition  
McGraw-Hill Companies

## APPENDIX 2 DOCUMENTATION : LIST OF TABLES

### Table: CAREER

#### Properties

DateCreated:	1/16/2007 11:58:15 AM	LastUpdated:	5/16/2009 9:44:44 AM
OrderBy:	CAREER.MATRICULE	OrderByOn:	True
RecordCount:	347	Updatable:	True

#### Columns

Name	Type	Size
MATRICULE	Text	6
DATEST	Date/Time	8
DATEEND	Date/Time	8
JOB	Text	50
COMPANY	Text	50

### Table: CLASS

#### Properties

DateCreated:	1/16/2007 11:59:56 AM	Filter:	((CLASS.MATRICULE="971022" )
LastUpdated:	5/16/2009 9:44:46 AM	OrderBy:	CLASS.MATRICULE
OrderByOn:	True	RecordCount:	32282
Updatable:	True		

#### Columns

Name	Type	Size
MATRICULE	Text	6
CATEG	Text	2
ECHOLON	Text	3
ZONE	Text	1
TYPECLASS	Text	2
REFLETTERCLASS	Text	15
DATECLASS	Date/Time	8
DATEEFFECT	Date/Time	8
STATUS	Text	1
COMMENT	Text	30

**Table: EMP\_HOUSE****Properties**

DateCreated: 1/16/2007 11:58:18 AM LastUpdated: 5/16/2009 9:45:02 AM  
 RecordCount: 38 Updatable: True

**Columns**

Name	Type	Size
MATRICULE	Text	6
CODEHOUSE	Text	6
CODETOWN	Text	2
TOWN	Text	50
HOUSETYPE	Text	50
STRUCTURE	Text	50
CAMP	Text	50
DATE_ENT	Date/Time	8
DATE_LEAV	Date/Time	8
ROOM	Integer	2

**Table: EMPABS****Properties**

DateCreated: 1/16/2007 11:58:21 AM LastUpdated: 3/2/2009 1:13:23 PM  
 OrderByOn: True RecordCount: 3666  
 Updatable: True ValidationRule: [DATEBEGABS]<=[DATEEND]

**Columns**

Name	Type	Size
MATRICULE	Text	6
CODEABS	Text	2
DATEBEGABS	Date/Time	8
DATEEND	Date/Time	8
REFLETTERABS	Text	15
NBERDAY	Text	3
REASON	Text	30
PLACE	Text	30
ORGANISATION	Text	30
NOTE	Memo	-

**Table: EMPCHILD****Properties**

DateCreated: 1/16/2007 11:58:21 AM LastUpdated: 5/16/2009 9:45:05 AM  
 RecordCount: 0 Updatable: True

**Columns**

Name	Type	Size
------	------	------

MATRICULE	Text	6
CHILDNUM	Text	2
CHILDNAME	Text	30
CHILDBIRTH	Date/Time	8
SEX	Text	1

## Table: EMPLOYEE

### Properties

DateCreated:	10/18/2007 11:33:07 AM	LastUpdated:	9/9/2009 9:23:48 AM
OrderByOn:	True	RecordCount:	15976
Updatable:	True		

### Columns

Name	Type	Size
MATRICULE	Text	6
NAME	Text	30
FIRSTNAME	Text	30
DATEBIRTH	Date/Time	8
PLACEBIRTH	Text	30
CNPSMAT	Text	13
CNPSCENTRE	Text	3
CODENAT	Text	2
IDNUM	Text	15
IDDATE	Date/Time	8
IDPLACE	Text	50
MARSTAT	Text	2
WIVES	Integer	2
CHILDREN	Integer	2
RELCODE	Text	2
SEX	Text	2
DATEENG	Date/Time	8
JOBENG	Text	30
PLACEENG	Text	30
PROFESSION	Text	30
NEXTKIN	Text	30
RELKIN	Text	30
ADDKIN	Text	30
DATETERM	Date/Time	8
WORKSTAT	Text	2
TYPETERM	Text	2
CODEBANK	Text	5
ACCBANK	Text	50
DATEDEATH	Date/Time	8
PLACEDEATH	Text	30
CAUSEDEATH	Text	30
PCUSGROUP	Text	30
ACCUNION	Text	4
TRIBPROV	Text	2
TRIBEDIV	Text	2
PHOTO	OLE Object	-
OLDMATRICULE	Text	6
HOMEADD	Text	50
CATREC	Text	2
ECHREC	Text	3



DATAOK	Yes/No	1
BATCH	Text	8
LITERATE	Yes/No	1
ACTUALCAT	Text	2
ACTUALECH	Text	3
UNIT	Text	3
VALIDATE	Yes/No	1
PERMANENT	Yes/No	1
DATECLOSE	Date/Time	8

## Table: PROFLANG

### Properties

DateCreated:	1/16/2007 11:58:25 AM	Filter:	((PROFLANG.MATRICULE="970947"))
LastUpdated:	5/16/2009 9:45:19 AM	OrderByOn:	True
RecordCount:	4289	Updatable:	True

### Columns

Name	Type	Size
MATRICULE	Text	6
CODELANG	Text	2
WRITTEN	Yes/No	1
SPOKEN	Yes/No	1

## Table: TRANSFERT

### Properties

DateCreated:	1/16/2007 11:58:26 AM	Filter:	((TRANSFERT.MATRICULE="971022"))
LastUpdated:	5/16/2009 9:45:23 AM	OrderBy:	TRANSFERT.MATRICULE
OrderByOn:	True	RecordCount:	22547
Updatable:	True		

### Columns

Name	Type	Size
MATRICULE	Text	6
CODEUNIT	Text	3
CODEPLACE	Text	3
DATEBEGTR	Date/Time	8
DATEENDTR	Date/Time	8
JOB	Text	30
POSITION	Text	30
PLACE	Text	30
CURRENT	Yes/No	1
DEL	Yes/No	1

**Table: UNIT****Properties**

DateCreated:	1/16/2007 11:58:27 AM	LastUpdated:	5/16/2009 9:45:23 AM
OrderByOn:	True	RecordCount:	90
Updatable:	True		

**Columns**

Name	Type	Size
CODEUNIT	Text	3
CODEGRPE	Text	3
DESCUNIT	Text	30

Query: ACTUALCATEG

**Properties**

DateCreated:	1/16/2007 11:58:27 AM	FailOnError:	False
LastUpdated:	3/17/2009 11:58:27 AM	MaxRecords:	0
ODBCTimeout:	60	RecordLocks:	Edited Record
RecordsAffected:	0	ReturnsRecords:	True
Type:	48	Updatable:	True
UseTransaction:	True		

## APPENDIX 3 DOCUMENTATION : LIST OF QUERIES

### Query: **cherche\_Staff**

#### Properties

DateCreated:	1/16/2007 11:58:27 AM	LastUpdated:	8/16/2009 11:58:27 AM
MaxRecords:	0	ODBCTimeout:	60
OrderByOn:	True	RecordLocks:	No Locks
RecordsAffected:	0	RecordsetType:	Dynaset
ReturnsRecords:	True	Type:	0
Updatable:	True		

#### Columns

Name	Type	Size
MATRICULE	Text	6
Expr1001	Text	30
DATEBIRTH	Date/Time	8
Expr1	Long Integer	4
Expr2	Binary	0
Expr5	Text	0
Expr6	Text	0
NAME	Text	30
Expr7	Long Integer	4
Expr8	Long Integer	4
Expr11	Text	0

### Query: **EmployeeperGRoup**

#### Properties

DateCreated:	1/16/2007 11:58:27 AM	LastUpdated:	2/22/2007 16:59:27 AM
MaxRecords:	0	ODBCTimeout:	60
OrderByOn:	False	RecordLocks:	No Locks
RecordsAffected:	0	RecordsetType:	Dynaset
ReturnsRecords:	True	Type:	0
Updatable:	True		

#### Columns

Name	Type	Size
CODEUNIT	Text	3
CODEGRPE	Text	3
DESCGRPE	Text	30

**Query: employeepersetaste****Properties**

DateCreated:	1/16/2007 11:58:27 AM	LastUpdated:	1/16/2007 11:58:27 AM
MaxRecords:	0	ODBCTimeout:	60
RecordLocks:	No Locks	RecordsAffected:	0
ReturnsRecords:	True	Type:	0
Updatable:	True		

**Columns**

Name	Type	Size	
DESCGRPE	Text		30
DESCUNIT	Text		30
CountOfMATRICULE	Long Integer		4

## Query: employeeretirement

### Properties

DateCreated:	1/16/2007 11:58:27 AM	LastUpdated:	1/16/2007 11:58:27 AM
MaxRecords:	0	ODBCTimeout:	60
RecordLocks:	No Locks	RecordsAffected:	0
ReturnsRecords:	True	Type:	0
Updatable:	True		

### Columns

Name	Type	Size
DESCGRPE	Text	30
DESCUNIT	Text	30
CATEG	Text	2
SEX	Text	2
CountOfMATRICULE	Long Integer	4

## Query: Q-MASTER-EMPLOYEE-MANPOWER

### Properties

DateCreated:	8/30/2007 9:48:58 AM	LastUpdated:	8/30/2007 9:48:59 AM
MaxRecords:	0	ODBCTimeout:	60
OrderByOn:	True	RecordLocks:	No Locks
RecordsAffected:	0	RecordsetType:	Dynaset
ReturnsRecords:	True	Type:	0
Updatable:	True		

### Columns

Name	Type	Size
MATRICULE	Text	6
NAME	Text	30
FIRSTNAME	Text	30
VNAME	Text	0
DATEBIRTH	Date/Time	8
DATEENG	Date/Time	8
VCAT	Text	0
CODEUNIT	Text	3
CODEPLACE	Text	3
MaxOfDATEBEGTR	Date/Time	8
JOB	Text	30
CODEGRPE	Text	3
CNPSMAT	Text	13
CNPSCENTRE	Text	3
MARSTAT	Text	2
SEX	Text	2
JOBENG	Text	30
WORKSTAT	Text	2
DESCUNIT	Text	30
DESCGRPE	Text	30
Grade	Text	0
VALIDATE	Yes/No	1

TRIBEPROV	Text	2
TRIBEDIV	Text	2
DESCPROV	Text	15
Vage	Long Integer	4
VSeniority	Long Integer	4
CODENAT	Text	2
NATDESC	Text	20

## Query: Q-master-EMPLOYEE-SEARCH

### Properties

DateCreated:	9/23/2007 12:19:47 PM	LastUpdated:	9/23/2007 12:19:47 PM
MaxRecords:	0	ODBCTimeout:	60
OrderBy:	DATEEFFECT	OrderByOn:	True
RecordLocks:	No Locks	RecordsAffected:	0
RecordsetType:	Dynaset	ReturnsRecords:	True
Type:	0	Updatable:	True

### Columns

Name	Type	Size
MATRICULE	Text	6
NAME	Text	30
FIRSTNAME	Text	30
VNAME	Text	0
DATEBIRTH	Date/Time	8
DATEENG	Date/Time	8
VCAT	Text	0
CODEUNIT	Text	3
CODEPLACE	Text	3
MaxOfDATEBEGTR	Date/Time	8
JOB	Text	30
CODEGRPE	Text	3
CNPSMAT	Text	13
CNPSCENTRE	Text	3
MARSTAT	Text	2
SEX	Text	2
JOBENG	Text	30
WORKSTAT	Text	2
DESCUNIT	Text	30
DESCGRPE	Text	30
Grade	Text	0
VALIDATE	Yes/No	1
TRIBEPROV	Text	2
TRIBEDIV	Text	2
DESCPROV	Text	15
DATEEFFECT	Date/Time	8

## Query: Q-SUMMARYPER ESTATES

### Properties

DateCreated:	1/16/2007 11:58:31 AM	LastUpdated:	1/16/2007 11:58:31 AM
MaxRecords:	0	ODBCTimeout:	60
OrderByOn:	False	RecordLocks:	No Locks

RecordsAffected: 0  
 ReturnsRecords: True  
 Updatable: True

RecordsetType: Dynaset  
 Type: 0

**Columns**

Name	Type	Size
CODEGRPE	Text	3
CODEUNIT	Text	3
Total	Long Integer	4

**Query: Q-SUMMARY-PERGROUP**

**Properties**

DateCreated: 1/16/2007 11:58:31 AM  
 MaxRecords: 0  
 OrderByOn: False  
 RecordsAffected: 0  
 ReturnsRecords: True  
 Updatable: True

LastUpdated: 1/16/2007 11:58:31 AM  
 ODBCTimeout: 60  
 RecordLocks: No Locks  
 RecordsetType: Dynaset  
 Type: 0

**Columns**

Name	Type	Size
CODEGRPE	Text	3
Total	Long Integer	4

## APPENDIX 4 DOCUMENTATION : LIST OF FORMS

### Form: cherche\_Staff

#### Properties

AllowAdditions:	True	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	True
AutoSize:	True	BorderStyle:	Sizable
Caption:	cherche_Staff	CloseButton:	True
Container:	Forms	ControlBox:	True
Count:	4	CurrentView:	0
Cycle:	All Records	DataEntry:	False
DatasheetBackColor:	16777215	DatasheetBorderStyle:	1
DatasheetCellsEffect:	Flat	DatasheetColumnHeaderUnde 1	
DatasheetFontHeight:	10	DatasheetFontItalic:	False
DatasheetFontName:	Arial	DatasheetFontUnderline:	False
DatasheetFontWeight:	Normal	DatasheetForeColor:	0
DatasheetGridlinesBehavior:	12632256	Both	DatasheetGridlinesColor:
DateCreated:	1/16/2007 11:58:35 AM	DefaultEditing:	2
DefaultView:	Continuous Forms	DividingLines:	True
FastLaserPrinting:	True	FetchDefaults:	True
FilterOn:	False	FrozenColumns:	1
GridX:	10	GridY:	10
HasModule:	True	HelpContextId:	0
HorizontalDatasheetGridlineS		1	Hwnd: 395880
InsideHeight:	1575	InsideWidth:	6195
KeyPreview:	False	LastUpdated:	8/10/2007 12:44:10 PM
LayoutForPrint:	False	LogicalPageWidth:	9360
MaxButton:	True	MinButton:	True
MinMaxButtons:	Both Enabled	Modal:	False
Moveable:	True	NavigationButtons:	True
OrderByOn:	True	Orientation:	Left-to-Right
Owner:	admin	Painting:	True
PaintPalette:	Long binary data	PaletteSource:	(Custom)
Picture:	C:\PROGRAM FILES\MICROSOFT OFFICE\OFFICE\Bitmaps\Style s\stone.bmp	PictureAlignment:	5
PictureData:	Long binary data	PicturePalette:	Long binary data
PictureSizeMode:	Clip	PictureTiling:	True
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSelectors:	True	RecordsetType:	Dynaset
RowHeight:	Default	ScrollBars:	Both
ShortcutMenu:	True	ShowGrid:	True
SubdatasheetExpanded:	False	SubdatasheetHeight:	0
TimerInterval:	0	UserName:	admin



VerticalDatasheetGridlineStyl	1	ViewsAllowed:	Both
Visible:	False	WhatsThisButton:	False
Width:	5913	WindowHeight:	2430
WindowLeft:	1335	WindowTop:	960
WindowWidth:	6750		

## Form: CHILDREN

### Properties

AllowAdditions:	True	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	False
AutoResize:	True	BorderStyle:	Sizable
CloseButton:	True	Container:	Forms
ControlBox:	True	Count:	8
CurrentView:	0	Cycle:	All Records
DataEntry:	False	DatasheetBackColor:	16777215
DatasheetBorderLineStyle:	1	DatasheetCellsEffect:	Flat
DatasheetColumnHeaderUnde	8	DatasheetFontHeight:	
DatasheetFontItalic:	False	DatasheetFontName:	MS Sans Serif
DatasheetFontUnderline:	False	DatasheetFontWeight:	Normal
DatasheetForeColor:	0	DatasheetGridlinesBehavior:	Default
DatasheetGridlinesColor:	8421504	DateCreated:	1/16/2007 11:58:35 AM
DefaultEditing:	2	DefaultView:	Datasheet
DividingLines:	True	FastLaserPrinting:	True
FetchDefaults:	True	FilterOn:	False
FrozenColumns:	1	GridX:	5
GridY:	5	HasModule:	False
HelpContextId:	0	HorizontalDatasheetGridlineS	1
Hwnd:	461416	InsideHeight:	4935
InsideWidth:	8280	KeyPreview:	False
LastUpdated:	8/10/2007 12:44:10 PM	LayoutForPrint:	False
LogicalPageWidth:	9360	MaxButton:	True
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	False	Moveable:	True
NavigationButtons:	True	OrderByOn:	False
Orientation:	Left-to-Right	Owner:	admin
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSelectors:	False	RecordsetType:	Dynaset
RecordSource:	EMPCHILD	RowHeight:	Default
ScrollBars:	Both	ShortcutMenu:	True
ShowGrid:	True	SubdatasheetExpanded:	False
SubdatasheetHeight:	0	TimerInterval:	0
UserName:	admin	VerticalDatasheetGridlineStyl	1
ViewsAllowed:	Datasheet	Visible:	False
WhatsThisButton:	False	Width:	4088
WindowHeight:	5790	WindowLeft:	795
WindowTop:	330	WindowWidth:	8835

## Form: employeeAdd

### Properties

AllowAdditions:	True	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	True
AutoResize:	True	BorderStyle:	Sizable
Caption:	Add Employee	CloseButton:	True
Container:	Forms	ControlBox:	True
Count:	86	CurrentView:	0
Cycle:	All Records	DataEntry:	False
DatasheetBackColor:	16777215	DatasheetBorderStyle:	1
DatasheetCellsEffect:	Flat	DatasheetColumnHeaderUnderline:	1
DatasheetFontHeight:	8	DatasheetFontItalic:	False
DatasheetFontName:	MS Sans Serif	DatasheetFontUnderline:	False
DatasheetFontWeight:	Normal	DatasheetForeColor:	0
DatasheetGridlinesBehavior:	8421504	Default:	DatasheetGridlinesColor:
DateCreated:	1/16/2007 11:58:36 AM	DefaultEditing:	2
DefaultView:	Single Form	DividingLines:	True
FastLaserPrinting:	True	FetchDefaults:	True
FilterOn:	False	FrozenColumns:	1
GridX:	5	GridY:	5
HasModule:	True	HelpContextId:	0
HorizontalDatasheetGridlines:	1	Hwnd:	592488
InsideHeight:	4650	InsideWidth:	8970
KeyPreview:	False	LastUpdated:	8/10/2007 12:44:10 PM
LayoutForPrint:	False	LogicalPageWidth:	9360
MaxButton:	False	MenuBar:	Menu_Update
MinButton:	False	MinMaxButtons:	None
Modal:	False	Moveable:	True
NavigationButtons:	False	OnActivate:	[Event Procedure]
OnDeactivate:	[Event Procedure]	OrderBy:	EMPLOYEE.NAME
OrderByOn:	False	Orientation:	Left-to-Right
Owner:	admin	Painting:	True
PaletteSource:	(Default)	Picture:	(none)
PictureAlignment:	Top Left	PictureSizeMode:	Clip
PictureTiling:	False	PictureType:	0
PopUp:	False	PrtDevMode:	Long binary data
PrtDevNames:	Long binary data	PrtMip:	Long binary data
RecordLocks:	No Locks	RecordSelectors:	False
RecordsetType:	Dynaset	RecordSource:	EMPLOYEE
RowHeight:	Default	ScrollBars:	Both
ShortcutMenu:	True	ShowGrid:	True
SubdatasheetExpanded:	False	SubdatasheetHeight:	0
TimerInterval:	0	UserName:	admin
VerticalDatasheetGridlineStyle:	1	ViewsAllowed:	Both
Visible:	False	WhatsThisButton:	False
Width:	11241	WindowHeight:	5505
WindowLeft:	0	WindowTop:	0
WindowWidth:	9525		

## Form: employeeLook

### Properties

AllowAdditions:	False	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	True
AutoResize:	True	BorderStyle:	Sizable
Caption:	Edit Employee	CloseButton:	True
Container:	Forms	ControlBox:	True
Count:	91	CurrentView:	0
Cycle:	All Records	DataEntry:	False
DatasheetBackColor:	16777215	DatasheetBorderStyle:	1
DatasheetCellsEffect:	Flat	DatasheetColumnHeaderUnde	1
DatasheetFontHeight:	8	DatasheetFontItalic:	False
DatasheetFontName:	MS Sans Serif	DatasheetFontUnderline:	False
DatasheetFontWeight:	Normal	DatasheetForeColor:	0
DatasheetGridlinesBehavior:	8421504	Default	DatasheetGridlinesColor:
DateCreated:	1/16/2007 11:58:36 AM	DefaultEditing:	4
DefaultView:	Single Form	DividingLines:	True
FastLaserPrinting:	True	FetchDefaults:	True
Filter:	[MATRICULE] = Forms![EMPLOYEElook]![Mat_	FilterOn:	False
	Mod]		
FrozenColumns:	1	GridX:	5
GridY:	5	HasModule:	True
HelpContextId:	0	HorizontalDdatasheetGridlineS	1
Hwnd:	658024	InsideHeight:	6150
InsideWidth:	11445	KeyPreview:	False
LastUpdated:	8/10/2007 12:44:10 PM	LayoutForPrint:	False
LogicalPageWidth:	9360	MaxButton:	False
MenuBar:	Menu_Update	MinButton:	False
MinMaxButtons:	None	Modal:	False
Moveable:	True	NavigationButtons:	False
OnActivate:	[Event Procedure]	OnDeactivate:	[Event Procedure]
OrderBy:	EMPLOYEE.UNIT DESC	OrderByOn:	True
Orientation:	Left-to-Right	Owner:	admin
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSelectors:	False	RecordsetType:	Dynaset
RecordSource:	EMPLOYEE	RowHeight:	Default
ScrollBars:	Both	ShortcutMenu:	True
ShowGrid:	True	SubdatasheetExpanded:	False
SubdatasheetHeight:	0	TimerInterval:	0
UserName:	admin	VerticalDdatasheetGridlineStyl	1
ViewsAllowed:	Both	Visible:	False
WhatsThisButton:	False	Width:	11451
WindowHeight:	7005	WindowLeft:	3630
WindowTop:	210	WindowWidth:	12000

**Form: Last\_promotion****Properties**

AllowAdditions:	True	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	False
AutoResize:	True	BorderStyle:	Thin
Caption:	Last Promotion	CloseButton:	True
Container:	Forms	ControlBox:	True
Count:	25	CurrentView:	0
Cycle:	All Records	DataEntry:	False
DatasheetBackColor:	16777215	DatasheetBorderStyle:	1
DatasheetCellsEffect:	Flat	DatasheetColumnHeaderUnde:	1
DatasheetFontHeight:	8	DatasheetFontItalic:	False
DatasheetFontName:	MS Sans Serif	DatasheetFontUnderline:	False
DatasheetFontWeight:	Normal	DatasheetForeColor:	0
DatasheetGridlinesBehavior:	8421504	Default	DatasheetGridlinesColor:
DateCreated:	1/16/2007 11:58:38 AM	DefaultEditing:	2
DefaultView:	Single Form	DividingLines:	True
FastLaserPrinting:	True	FetchDefaults:	True
Filter:	[MATRICULE] = Forms![EMPLOYEEmod1]![MAT RICULE]	FilterOn:	False
FrozenColumns:	1	GridX:	5
GridY:	5	HasModule:	True
HelpContextId:	0	HorizontalDdatasheetGridlines:	1
Hwnd:	789096	InsideHeight:	3360
InsideWidth:	5865	KeyPreview:	False
LastUpdated:	8/10/2008 12:44:10 PM	LayoutForPrint:	False
LogicalPageWidth:	9360	MaxButton:	True
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	True	Moveable:	True
NavigationButtons:	True	OrderByOn:	False
Orientation:	Left-to-Right	Owner:	admin
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSelectors:	False	RecordsetType:	Dynaset
RecordSource:	CLASS	RowHeight:	Default
ScrollBars:	Neither	ShortcutMenu:	True
ShowGrid:	True	SubdatasheetExpanded:	False
SubdatasheetHeight:	0	TimerInterval:	0
UserName:	admin	VerticalDdatasheetGridlineStyl:	1
ViewsAllowed:	Both	Visible:	False
WhatsThisButton:	False	Width:	5865
WindowHeight:	4215	WindowLeft:	1185
WindowTop:	480	WindowWidth:	6420

**Form: STARTUP****Properties**

AllowAdditions:	True	AllowDatasheetView:	True
AllowDeletions:	True	AllowDesignChanges:	False
AllowEditing:	True	AllowEdits:	True
AllowFilters:	True	AllowFormView:	True
AllowPivotChartView:	True	AllowPivotTableView:	True
AllowUpdating:	No	AutoCenter:	True
AutoResize:	True	BorderStyle:	None
CloseButton:	True	Container:	Forms
ControlBox:	True	Count:	5
CurrentView:	0	Cycle:	All Records
DataEntry:	False	DatasheetBackColor:	16777215
DatasheetBorderStyle:	1	DatasheetCellsEffect:	Flat
DatasheetColumnHeaderUnde	8	DatasheetCellsEffect:	1
DatasheetColumnHeaderUnde	8	DatasheetFontHeight:	
DatasheetFontItalic:	False	DatasheetFontName:	MS Sans Serif
DatasheetFontUnderline:	False	DatasheetFontWeight:	Normal
DatasheetForeColor:	0	DatasheetGridlinesBehavior:	Default
DatasheetGridlinesColor:	8421504	DateCreated:	1/16/2007 11:58:51 AM
DefaultEditing:	2	DefaultView:	Single Form
DividingLines:	True	FastLaserPrinting:	True
FetchDefaults:	True	FilterOn:	False
FrozenColumns:	1	GridX:	10
GridY:	12	HasModule:	True
HelpContextId:	104	HelpFile:	Solution.hlp
HorizontalDdatasheetGridlineS		Hwnd:	1051240
InsideHeight:	5865	InsideWidth:	9360
KeyPreview:	False	LastUpdated:	8/10/2009 12:44:10 PM
LayoutForPrint:	False	LogicalPageWidth:	9360
MaxButton:	True	MenuBar:	CDCMENUBAR
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	False	Moveable:	True
NavigationButtons:	False	OnActivate:	[Event Procedure]
OnDeactivate:	[Event Procedure]	OrderByOn:	False
Orientation:	Left-to-Right	Owner:	admin
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSelectors:	False	RecordsetType:	Dynaset
RowHeight:	Default	ScrollBars:	Neither
ShortcutMenu:	True	ShowGrid:	True
SubdatasheetExpanded:	False	SubdatasheetHeight:	0
TimerInterval:	0	UserName:	admin
VerticalDdatasheetGridlineStyl		ViewsAllowed:	Form
Visible:	False	WhatsThisButton:	False
Width:	9360	WindowHeight:	6720
WindowLeft:	2430	WindowTop:	225
WindowWidth:	9915		

## APPENDIX 5 DOCUMENTATION : LIST OF REPORTS

### Report: CDC-MANPOWER

#### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	Caption:	CDC-MANPOWER
CloseButton:	True	Container:	Reports
ControlBox:	True	Count:	47
DateCreated:	8/30/2007 9:49:09 AM	DateGrouping:	Use System Settings
FastLaserPrinting:	True	FilterOn:	False
GridX:	24	GridY:	24
GrpKeepTogether:	Per Column	HasModule:	False
HelpContextId:	0	Hwnd:	1182312
LastUpdated:	8/10/2009 12:44:10 PM	LayoutForPrint:	True
LogicalPageWidth:	9360	MaxButton:	True
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	False	Moveable:	True
OrderBy:	[Q-MASTER-EMPLOYEE- MANPOWER].NATDESC	OrderByOn:	True
Orientation:	Left-to-Right	Owner:	admin
PageFooter:	Default	PageHeader:	Default
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Center
PicturePages:	All Pages	PictureSizeMode:	Clip
PictureTiling:	False	PictureType:	0
PopUp:	False	PrtDevMode:	Long binary data
PrtDevNames:	Long binary data	PrtMip:	Long binary data
RecordLocks:	No Locks	RecordSource:	Q-MASTER-EMPLOYEE- MANPOWER
UserName:	admin	Visible:	True
Width:	9360	WindowHeight:	10230
WindowLeft:	-150	WindowTop:	-450
WindowWidth:	20730		

### Report: Employee\_Age

#### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	CloseButton:	True
Container:	Reports	ControlBox:	True
Count:	29	DateCreated:	1/16/2007 11:58:57 AM
DateGrouping:	Use System Settings	FastLaserPrinting:	True
FilterOn:	False	GridX:	20
GridY:	24	GrpKeepTogether:	Per Page
HasModule:	False	HelpContextId:	0
Hwnd:	1247848	LastUpdated:	8/10/2009 12:44:10 PM
LayoutForPrint:	True	LogicalPageWidth:	12960
MaxButton:	True	MinButton:	True

MinMaxButtons:	Both Enabled	Modal:	False
Moveable:	True	OrderBy:	EMPLOYEE.MATRICULE DESC
OrderByOn:	False	Orientation:	Left-to-Right
Owner:	admin	PageFooter:	Default
PageHeader:	Default	Painting:	True
PaletteSource:	(Default)	Picture:	(none)
PictureAlignment:	Top Left	PicturePages:	All Pages
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSource:	Rep_Age	UserName:	admin
Visible:	True	Width:	11808
WindowHeight:	10230	WindowLeft:	-150
WindowTop:	-450	WindowWidth:	20730

## Report: Employee\_CAtego

### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	CloseButton:	True
Container:	Reports	ControlBox:	True
Count:	34	DateCreated:	1/16/2007 11:58:57 AM
DateGrouping:	Use System Settings	FastLaserPrinting:	True
FilterOn:	False	GridX:	20
GridY:	24	GrpKeepTogether:	Per Page
HasModule:	False	HelpContextId:	0
Hwnd:	1313384	LastUpdated:	8/10/2009 12:44:11 PM
LayoutForPrint:	True	LogicalPageWidth:	14534
MaxButton:	True	MinButton:	True
MinMaxButtons:	Both Enabled	Modal:	False
Moveable:	True	OrderByOn:	True
Orientation:	Left-to-Right	Owner:	admin
PageFooter:	Default	PageHeader:	Default
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PicturePages:	All Pages	PictureSizeMode:	Clip
PictureTiling:	False	PictureType:	0
PopUp:	False	PrtDevMode:	Long binary data
PrtDevNames:	Long binary data	PrtMip:	Long binary data
RecordLocks:	No Locks	RecordSource:	qrepbyCategory
UserName:	admin	Visible:	True
Width:	17177	WindowHeight:	10230
WindowLeft:	-150	WindowTop:	-450
WindowWidth:	20730		

## Report: LIST EMPLOYEES PER ESTATES

### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	Caption:	LIST EMPLOYEES PER ESTATES
CloseButton:	True	Container:	Reports
ControlBox:	True	Count:	28
DateCreated:	1/16/2007 11:58:57 AM	DateGrouping:	Use System Settings
FastLaserPrinting:	True	FilterOn:	False
GridX:	10	GridY:	10

GrpKeepTogether:	Per Column	HasModule:	False
HelpContextId:	0	Hwnd:	1378920
LastUpdated:	8/10/2007 12:44:10 PM	LayoutForPrint:	True
LogicalPageWidth:	9406	MaxButton:	True
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	False	Moveable:	True
OrderByOn:	False	Orientation:	Left-to-Right
Owner:	admin	PageFooter:	Default
PageHeader:	Default	Painting:	True
PaletteSource:	(Default)	Picture:	(none)
PictureAlignment:	Center	PicturePages:	All Pages
PictureSizeMode:	Clip	PictureTiling:	False
PictureType:	0	PopUp:	False
PrtDevMode:	Long binary data	PrtDevNames:	Long binary data
PrtMip:	Long binary data	RecordLocks:	No Locks
RecordSource:	Q-MASTER-EMPLOYEE-PER ESTATES	UserName:	admin
Visible:	True	Width:	9406
WindowHeight:	10230	WindowLeft:	-150
WindowTop:	-450	WindowWidth:	20730

## Report: Print List of Staffs

### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	Caption:	Print List of Staffs
CloseButton:	True	Container:	Reports
ControlBox:	True	Count:	43
DateCreated:	1/16/2007 11:59:00 AM	DateGrouping:	Use System Settings
FastLaserPrinting:	True	FilterOn:	False
GridX:	24	GridY:	24
GrpKeepTogether:	Per Column	HasModule:	True
HelpContextId:	0	Hwnd:	1509992
LastUpdated:	8/10/2009 12:44:10 PM	LayoutForPrint:	True
LogicalPageWidth:	9360	MaxButton:	True
MinButton:	True	MinMaxButtons:	Both Enabled
Modal:	False	Moveable:	True
OnOpen:	[Event Procedure]	OrderByOn:	False
Orientation:	Left-to-Right	Owner:	admin
PageFooter:	Default	PageHeader:	Default
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Center
PicturePages:	All Pages	PictureSizeMode:	Clip
PictureTiling:	False	PictureType:	0
PopUp:	False	PrtDevMode:	Long binary data
PrtDevNames:	Long binary data	PrtMip:	Long binary data
RecordLocks:	No Locks	RecordSource:	QprintlistStaff
UserName:	admin	Visible:	True
Width:	9273	WindowHeight:	10230
WindowLeft:	-150	WindowTop:	-450
WindowWidth:	20730	GroupFooter:	True



## Report: retirement

### Properties

AutoCenter:	False	AutoResize:	True
BorderStyle:	Dashes	CloseButton:	True
Container:	Reports	ControlBox:	True
Count:	29	DateCreated:	1/16/2007 11:59:06 AM
DateGrouping:	Use System Settings	FastLaserPrinting:	True
FilterOn:	False	GridX:	10
GridY:	10	GrpKeepTogether:	Per Page
HasModule:	False	HelpContextId:	0
Hwnd:	1706600	LastUpdated:	8/10/2009 12:44:10 PM
LayoutForPrint:	True	LogicalPageWidth:	14004
MaxButton:	True	MinButton:	True
MinMaxButtons:	Both Enabled	Modal:	False
Moveable:	True	OrderByOn:	False
Orientation:	Left-to-Right	Owner:	admin
PageFooter:	Default	PageHeader:	Default
Painting:	True	PaletteSource:	(Default)
Picture:	(none)	PictureAlignment:	Top Left
PicturePages:	All Pages	PictureSizeMode:	Clip
PictureTiling:	False	PictureType:	0
PopUp:	False	PrtDevMode:	Long binary data
PrtDevNames:	Long binary data	PrtMip:	Long binary data
RecordLocks:	No Locks	RecordSource:	employeeretirement
UserName:	admin	Visible:	True
Width:	8919	WindowHeight:	10230
WindowLeft:	-150	WindowTop:	-450
WindowWidth:	20730		

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