Personnel Information System
(A Case Study of Federal College of Forestry, Jos)

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Abstract:- This research is aimed on the design of personal information system using federal college of forestry, Jos as a case study .This research work essentially takes an in-depth analysis of the existing system in relation to data storage, processing and management. Hence a system is designed to automate the manual system of processing staff details which include staff nominal roll, querying and promotion details. This project is designed and implemented using: Java as a programming language and NetBeans as IDE for the front end of the application and MySQL (structured Queried language) database for the backend of the application to store the data entered by the user. The research methodology which was employed for this project is Structured System Analysis and Design methodology (SSDM). The deployment and usage of this new system will help in the reduction of clerical overload, provision of timely report for managerial decision and also provide an adequate security to staff records.

Keywords:- Education, Computer System, Personal Information System, , Database Systems, Staff.

I.   INTRODUCTION

A Human Resource Management System refers to the system and processes at the intersection between human resources management and information technology. It merges Human Resource Management system as a discipline and in particular it's basic Human Resource activities and processes with the information technology field[10]. The linkage of its nominal roll and human resource modules through one database is the most important distinction to the individually and propriety developed predecessors, which makes this software application both rigid and flexible.

According to[5], Personnel information system is concerned with how people organize and maintain personal information collections, and methods that can help people in doing so. People may maintain information in a variety of settings, for a variety of reasons, and with a variety of types of information.

Information systems research is generally interdisciplinary concerned with the study of the effects of information systems on the behavior of individuals, groups, and organizations[2]. According to [4] categorized research in personnel information system into two scientific paradigms including behavioral science which is to develop and verify theories that explain or predict human or organizational behavior and design science which extends the boundaries of human and organizational capabilities by creating new and innovative artifacts.

It has been noted that the nature of Personnel Information System makes its study challenging in the extreme[5]. Researchers seek to understand how people manage information using tools of information management. But it is important that the information managed be personnel. According to[7] "An information system may be defined as an organized way to sending, receiving and recording messages". This Personnel Information System helps in storing and retrieving staff information. With personal information system, the details pertaining staff qualifications, staff promotion, staff nominal roll and updates are been stored in this system. With the help of a nice friendly graphical user interface, retrieval of information is possible based on any individual or on collective information grouped by certain categories. These categories could be staff promotion time (Junior and senior staff). The handling of these records with manual system will be things of the past. Therefore, personal information system is very much in need for every organization.

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II. AIM AND OBJECTIVES OF THE STUDY

The aim of the study is to develop a Personnel Information System.

The objective of this research are as follows:
➢ To identify the various problems of manual approach towards handling personal information in the registry department through analysis of the existing system.
➢ To develop the proposed system.
➢ To implement the proposed system.
➢ Test and validate the developed system.

III. METHODOLOGY

The structured system design methodology (SSADM) is used for the study and water fall model will be deployed. In this water model, the phases do not overlap. This model is also referred to as a linear-sequential life cycle model.

➢ Method of Data Collection
Data collection method is needed for the requirements gathering on the proposed system in order to fully understand the end-user requirements, which will be the basis of the system design and implementation. During the cause of this study, we used two (2) methods of data collection which include:
● Interview method: A one and one interaction was carried out, with the assistant registrar of the registry department.
● Observation method: This is a direct means we used to study the way staff records are kept in the registry department using manual method.

IV. CHOICE OF TOOLS

The tools used for this application listed below:
➢ Font-End: This is the development of those element of a standalone system that admin see and interacts with directly. For the development of the application below are the tools used for the front end development.
➢ Programming Language: Java
➢ Integrated Development Equipment (IDE): Net beans
➢ Graphic package: Corel draw
➢ Back-End: This is the area of the application that handles data storage retrieved Microsoft structure Query language (MYSQL), it supports the front end services, having the capability to communicate with the required resource. The back end of the system interacts directly with the front end.

V. SYSTEM MODELING AND DESIGN

System model is a conceptual model that show the representation and describes a system. A system comprises multiple views such as planning, requirement, design, implementation, deployment, structure, behavior, input data and output data. To fully develop the systems, the following UML diagrams were used:
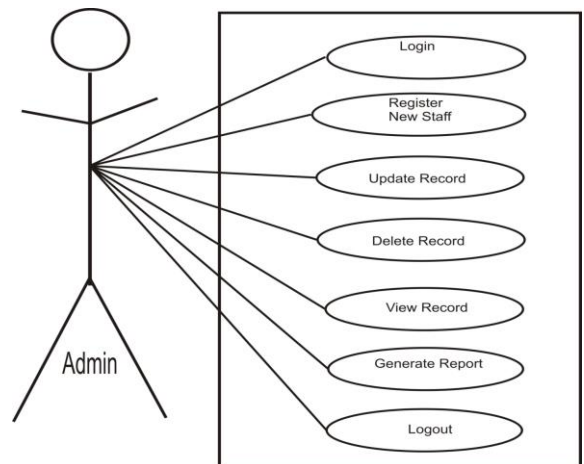
A. UML Diagram

Fig 1:- A Use Case Diagram illustrating the activities performed by the Admin in the Personnel Information System.
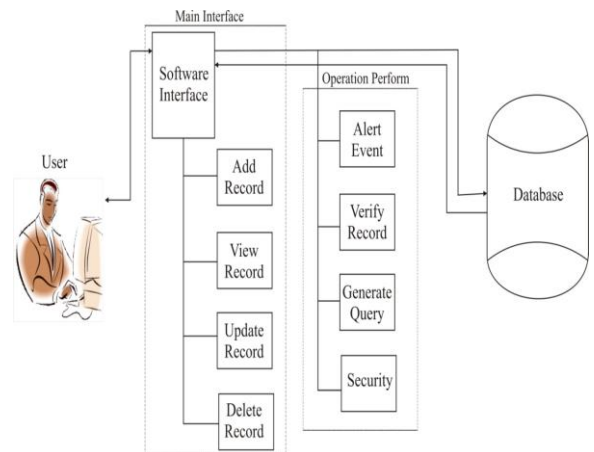
B. Architectural Design

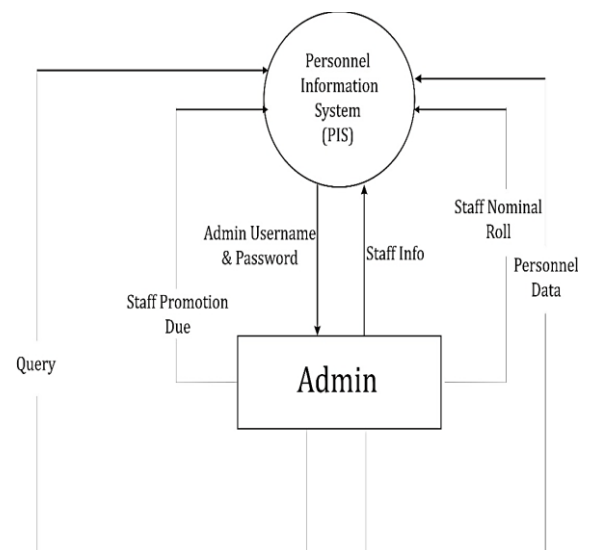Fig 2:- System Architecture of PIS

C. Process Modeling

Fig 3:- Process flow Diagram for the Personnel Information System

D. Database Model

➢ Logical Database

The following are the form of proposed system database design:

- ADMIN: (ID No, username, password)
- Primary key (Admin ID)
- PERSONAL DATA: (SIDNo. and staff data, StaffFileNo)
- Primary key (SIDNo.)
- Foreign key (Staff ID and Staff File No.)
- NORMINAL ROLL: (StaffFileNo, Surname, First Name, Other Names, Date of Birth, NID, SID)
- Primary Key (NID.)
- Foreign Key (StaffFileNo, SID)
- PROMOTION: (Staff ID and Staff File No.)
- Foreign Key (Staff ID and Staff File No.)

VI. ANALYSIS OF THE PROSPOSED SYSTEM

The proposed system will store details of staff in the organization and it will include the following modules:

➢ Promotion module: the proposed system will contain a module which will give a list of staff due for promotion as at when due.
➢ Nominal roll module: this nominal roll module in the proposed system will make sure that all the staff information is shown such as name, qualification, date of birth etc.
➢ c. Personnel module: it is a module in the proposed system that shows the complete staff details and print staff detail as a query.

A. Functional Requirement

The functional requirements of the proposed system include the following:

- The proposed system will provide the Admin Login page in order to avoid unwanted users from accessing the system. It serves as permit of accessing the information and this makes personal information confidential. Thus the user is expected to enter the user id and password to enable access to the system.
- The proposed system will allow the administrator to register new staff providing their necessary bio-details and manage all the activities on the site.
- The proposed system shall enable report generation and query.
- The proposed system will enable the administrator to update and delete staff records.
- The proposed system shall have a simple and user friendly interface design that shall not be hard to get around for the user that will be using the system.

B. Non-Functional Requirement

The non-functional requirements include the following:

- Maintainability: the system will be designed in a way that it will have a clear and easy to understand.

- Performance: the system shall provide a fast performance and response time. Operations such as search, delete, and update will occur in real time fast.
- Flexibility: since it will be used regularly with a new set of initial data can allow updates in the database such as modifying the contents or information.
- Reliability: the database of the system will be
- Usability: the system shall have a user friendly interface design that shall be very simple to the user that will be using the system, in order to enable the free flow of the information in a faster way compared to the previous manual method.
- Security: the proposed system will provide a secure communication channel for data, store the data in a secure location and format and also control user access and session.

VII. RESULTS AND DISCUSSION

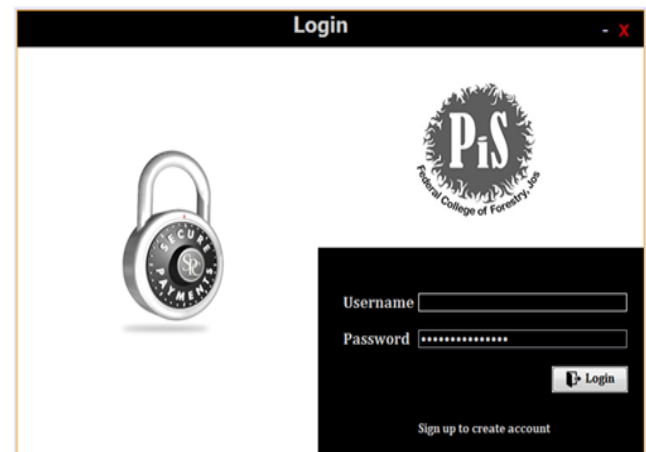The result of the system implementation will be presented below:

Fig 4:- System Admin Login page

This page enables the Admin to provide or input username and password in order to have access to the system.
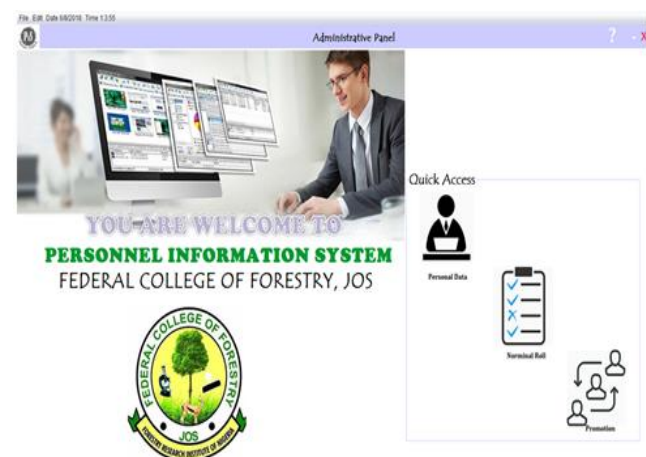

Fig 5:- Administrative Panel

This administrative panel shows the basic pages that can be accessible by the admin. It include the functional nominal roll page, the promotion due page and the personal data page.
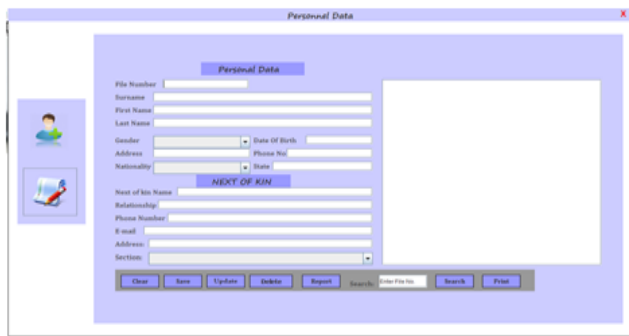

Fig 6:- Add new Personnel record module

This page enables the admin to add new personal data and update staff records in the system, where every personal detail is provided and filled up appropriate.
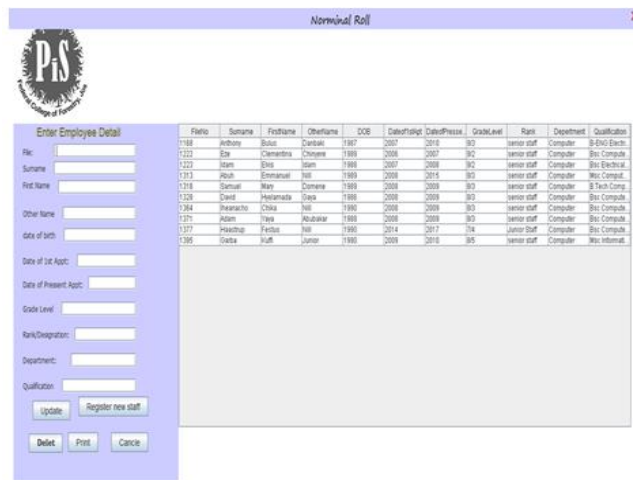

Fig 7:- Nominal roll Module

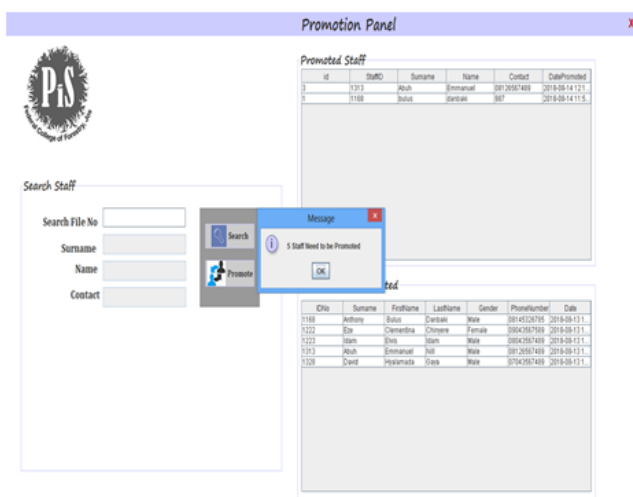Nominal roll module displays the full record about the personnel.

Fig 8:- Promotion Module

This page is where the admin views the list of staff due for promotion.

VIII. CONCLUSION

Keeping in view the demand for information system in an organization is very important to maintain and manage personnel records effectively and efficiently, helping the organization to progress. This system helps in controlling and storing personal information in a secured manner. To further improve the system, future work should focus on building an online personnel management system using php with MySQL.

REFERENCES

[1]. J.J. Bruce, (2004). "Information Behaviour that keeps found thing found". Bruce.

[2]. C. Ciborra, (2002). "The labyrmths of Information": Challenge the wisdom of system. personnel information system.

[3]. D.Regmi, AK (2007). Department of Civil Personnel Record. Personnel Information System, 1-2.

[4]. M. R. Hevner, (2004). "Personnel Information System". Design Science In Information Research System, 28, 75 105-.

[5]. W. Jones, (2015). Building a better world with our information. The future of personal information management, 7(4), 1-203.

[6]. W. S. Jones, (2012). Personal Information Management. The Future of Personnel Management, 3.

[7]. O. Julein, (2014). personnel information system. Information Behaviour Research.

[8]. P. Mann, N. P. (2013, May 5). "Personnel Information System': International Journal of Scientific & Reserach., 4(5), 681.

[9]. B. a. Roylea, (1980). Personnel Information Management. 27(3), 21.

[10]. G. Simsion, (2007). Management data modeling. management data modeling.