LIBRARY ON CLOUD

[1]Sonali Sharma, [2]Shourya Singh, [3]Mayanka Kachroo, [4]Avinash Kumar Sharma
[1]Student, [2]Student, [3]Student, [4]Assistant Professor
Department of Computer Science and Engineering,
ABES Institute of Technology, Ghaziabad, Uttar Pradesh

Abstract: Library on cloud is a proposed project which focuses in developing a system online to maintain the various tasks of the library on done in daily basis. It has many additional key features that till date are not available in traditional library management systems. It provides a facility of student's and teacher's login. It also has the facility for the librarian to login into the system through which he can analyse and maintain the whole system. It also provides the facility where students after login in their particular accounts can review their list of books reserved and issued and its date of issue and return. The librarian after logging into his account can manage the students profile status, book issue and return status of students and the status of books present in the library.

Overall the development of this project will give a path to provide ease to the students, teachers as well as the staff members of library to maintain the library in the best way possible and also reduce the human efforts.

I. INTRODUCTION

Library on Cloud is an online system which refers to traditional library systems which are either small or medium in their size. The librarian uses it to manage and monitor the library as a whole using an electronic system where the librarian can have an overall review and can analyze various transactions occurring at different levels in the library which comprises of issue of books, return of books, addition of new books, addition of new students etc.

Additional functionality which involves facility like management of books and student modules are also included in this proposed system which would enable to keep track of the students using the library and also detailed and complete description about the books that are present in the library. The proposed automated library system will reduce loss of book records as well as member record thus reducing paper work which usually happens when a traditional non-automated library system is in use.

In addition, comment module is also included which will act as an interactive medium which would facilitate communication between teachers, students and librarian. Librarian's position is that of an admin, and thus the admin is able to manage the list of students registered in the library, list of books present in the library, issue of books and return of the issued books.

All these modules present in the proposed system enable the librarian to manage the library with more ease, convenience and in a more efficient manner in comparison to the traditional library system which are not automated.

TOOLS / PLATFORM, HARDWARE AND SOFTWARE REQUIREMENT SPECIFICATION

Table.I HARDWARE

Processor	Pentium 2.4GHz or above
Memory	256 MB RAM or above
Cache Memory	128 KB or above
Hard Disk	3 GB or above[at least 3 MB free space required]
Pen Drive	5 GB
Printer	Laser Printer

Table.II SOFTWARE

Operating System	Windows XP(Professional)/Windows 7/8/10
Front-End Tool	Java/JSP, HTML, CSS, JavaScript, PHP
Back-End	My Sql
Server	Tomcat 7

II.   LITERATURE REVIEW

Library on cloud is a way to make the system automated helping the librarian to carry out and manage the activities of library. The chances of losing the record reduces hence directing us to a time saving process. The high chances of file damages used to exist in the conventional library system. No matter whether the number of students or the faculty increases, it resulted in affecting the storage space for the same. To access the same, there was no possibility of internet connections in the remote area. The user login feature was being used by the user to login to the system. By using the **AES algorithm**, the verification of users' data were made. Registration process is required to be completed by every new user. Once the user is verified, can access the system. The system would perform the process of authenticating the user hence letting the user enable to access the system on his level. The logging out functionality of the system would also have been accessible.
Following were the functions of the traditional system:

- The system should verify the information that has been made available by the user.
- The system should discard the information in case the provided information by the user is not correct.

Another feature was to **register a new book**. In this feature, new books were added to the libraries which were not present in the stock of the library before. Following were the functions of this feature:

- The system should verify the provided information.
- The system should enter the number of copies into the table.
- The system should not allow multiple books having the same book id.

Another important feature was to **search a book**. In this feature, a new book can be searched depending upon the students preference based on the book id, name of the book and by the name of the author of that book. Given below are the functionalities of this particular feature:

- The system should search the database based on selected search type.
- The system should find the book depending upon the keywords that has been entered by the user in order to search a book.
- The system should show all the books that have been filtered with respect to the entered keywords in the format of a grid view.

Let's talk about another feature in which the **books** were **issued and returned**. In this, we would view the reports of the books which were being issued. Following is the list of the functional requirements of the same:

- The system should enter the information of the book which was being issued in the database.
- The system should update the number of books.
- The system should check the book whether it is available or not in the database before the book was being issued.
- The system should enter the date of issuing and returning of the book.

III.   PROPOSED WORK

Given below is the list of proposed work in our system:

1. To develop the database of library of the college and to keep it updated.

2. Issuing of books online rather than offline.
3. A column for introducing new books for the reference of students.
4. A login page where the librarian, student or the faculty can login.
5. A student can select and reserve multiple books at a time.

IV.   RESULT ANALYSIS

Following are the advantages of using cloud computing in our system:

a) There is location independence as long as there is access to the Internet and web features.
b) Faceted navigation, Recommendations (related materials), and Persistent links: these type of cloud computing facilities are available in Salesforce, improvement is needed.
c) Web-enabled architecture for managing the web resources both for bibliographic and authority of data are accessed.
d) Reference management is possible in library management system.
e) It enhances and improves the flexibility and fulfils the demand of the market as the system of cloud computing can be easily deployed which in turn increases the ability to supply it quickly as per demand.
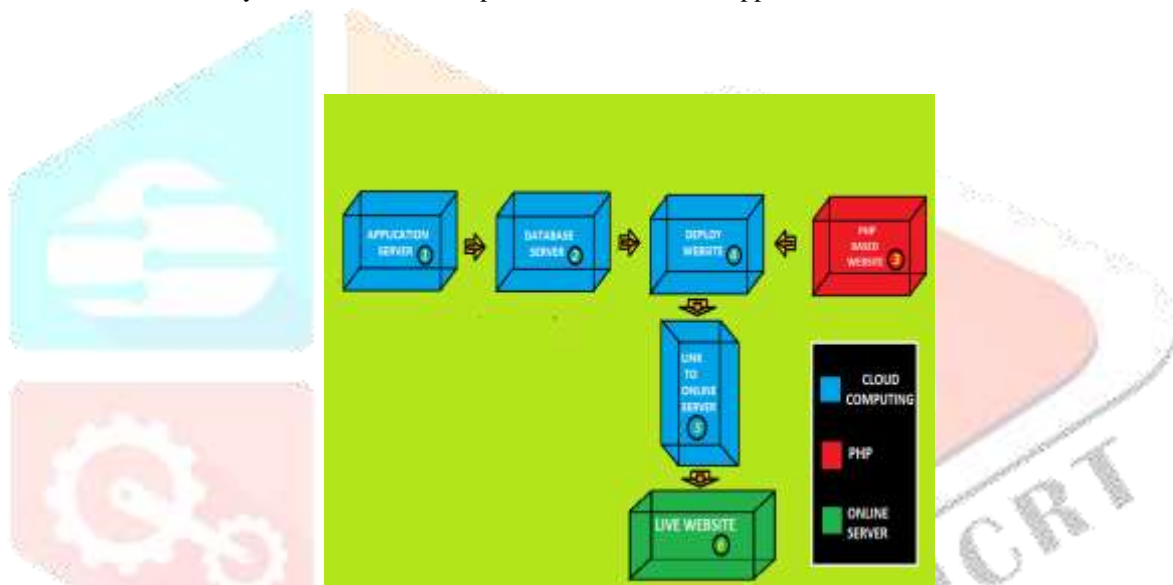f) It increases the security at lower cost as compared to the traditional application due to data centralization.

Fig.1 Implementation of the system

V.   CONCLUSION

The system developed is working in automatic as well in manual mode with continuous updates by the librarian to the faculty and the students. The library system is absolute and effective. The area of application can be widen to other colleges' library all over the country. There could be more improvements, modifications and adjustments in the system as per the requirements and objectives of the user.

VI.   REFERENCES

1. www.google.com
2. www.wikipedia.com
3. www.w3schools.com
4. Adanu, Theodosia S. A (2007), "PLANNING ANDIMPLEMENTATION OF THE UNIVERSITY OF GHANA LIBRARY AUTOMATION PROJECT", *African Journal of Library, Archives & Information Science*, Vol. 16, No. 2.
5. INTERNATIONAL JOURNAL OF APPLIED ENGINEERING RESEARCH, DINDIGUL Volume 1, No1, 2010.
6. DESIGN OF AN AUTOMATED LIBRARY MANAGEMENT SYSTEM FOR STATE UNIVERSITIES IN NIGERIA. Asian journal of Information Technology 10 (8-12): 335-340, 2011. ISSN: 1682-3915. Medwell Journals, 2011

7. *Full Length Research Paper on* "DEVELOPMENT OF CLOUD COMPUTING IN LIBRARY MANAGEMENT" by DAS Amit Kumar andSukumar Mandal, Department of Library and Information of Science, Golapbag, The University of Burdwan, W.B., India.

8. "A COMPREHENSIVE STUDY ON CLOUD COMPUTING" bySurucheeV.Nandgaonkar, Prof. A.B. Rout published byInternational journal of Computer Science and Mobile Computing in April 2014.