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REVIEW ON INTERACTIVE WEB APPLICATION FOR STUDENT AND FACULTY USING DATA MINING

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Abstract: This is the web application developed for maintaining students and faculty's information at institute level. In day to day life we visit many websites like job portals, online forms, etc. We also fill offline forms. So it is not possible to memorize all information like academic details. We not only maintain student's information but also we maintain faculty's information at institute level. In our application all information is maintain by admin. Also we provide the authority to admin to register the new users and update the information of user. This information is classifying in to two categories such as Faculty and Students. We are classifying all faculty information on department level. HOD of particular department can see the records of all lecturers related to his department. Also lecturer can login his account and see his information. Second part of our application is Students information. After login each and every student will see his academic details such as his mark sheets, extra activities. They can see not only their details but also they compare their academic records. Also in this application we provide the SMS and E-mail alerts for students. These alerts are send by admin. Students and Lecturers can also post their queries to the admin.

Keywords: SQL Server, Data mining, automated alerts, Digital information gathering.



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INTRODUCTION

Due to busy life style we can't remember all confidential data like all semester marks, HSC Marks, SSC Marks, Academic information, All education certificate Numbers, Some highly value scan copy, etc. So we can develop highly secure web application.

To develop an application that can remember all important data of the users and can make that data available anywhere with security.

To provide users a secured internet web based application to store all important data and files that they can access from anywhere from any device.

Confidential data include, Faculty/staff employment applications, personnel files, benefits information salary, birth date, and personal contact information, Overall his academic teaching performance with graphical representation. Student's all semester marks with graphical representation SSC & HSC Marks Personal & Academic Details University and employee ID numbers other activities Details [6].

1. LITERATURE REVIEW :

Previous System:

The previous System was a manual system. The need for computerization of the previous system arose because of many difficulties, irregularities and inaccuracy present maintaining students and faculty's information at institute level.

Because the previous system was a manual one it is very difficult to maintain all these vital information in an efficient way. Also one cannot retrieve the information needed in seconds. Previous students and faculty's management system is not much user friendly. The human resource administrator falls short of controlling the students and faculty's activities in analyzing his/her strengths and weakness [4].

2.1 Advantages of previous system:

- Non-technical person can also handle these types of system.
- Just need a little knowledge to operate the system.
- Not any procedure included like login user.

2.2 Disadvantages of previous system:

- Need of extra manual effort.
- It used to take much time to find any students and faculty's information.
- Danger of losing the files in some cases.

Certain required report is not available

- It is much complicated to handle any data.

2.3 Application of previous system:

- Maintain student's information at institute level.
- Maintain faculty information at institute level.

2. EXISTING SYSTEM :

Need for new system:

- The proposed system is internet based system so students and faculties can also participate in this system and track their status.
- The proposed system provides detail general information about the student's academic details such as his mark sheets, extra activities. Not only they see their details but also they compare their academic records.

- Also in this application we provide the SMS and E-mail alerts for students. This is send by admin.
- We are classifying all faculty information on department level. HOD of particular department can see the records of all lecturers related to his department. Also lecturer can login his account and see his information.
- Students and Lecturers also post their queries to the admin.
- It enhances the Management in adding, viewing and updating students and faculties details and generates various reports regarding students and faculties.
- General administration modules can Send SMS Alerts, Send E-mail Alerts Taking security measures[1]

3. WORKFLOW :

There are two types of users who play an important role in this web application:

- Application administrator
 - General Registered Users
- 1) Faculty
 - 2) Students
 - 3) T&P Officer

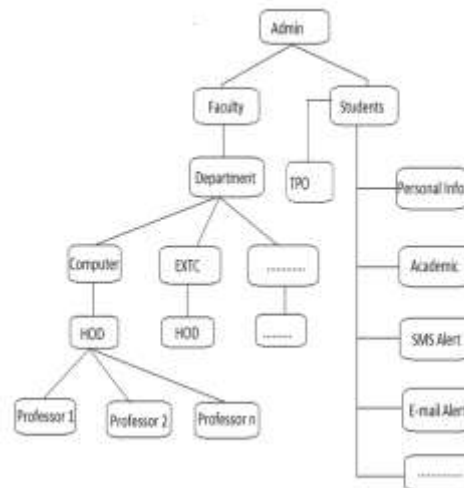
There are four types of modules included in this web application:

1. General administration module
2. Faculty module

3. Student module

4. TPO Module

5. SYSTEM FLOW



These **Modules** are briefly explaining follows:

5.1 General administration module:

- **Registration:** user needs to register to use security system, services by providing personal information such as name, email, contact information, password etc.
- **Login/Logout:** after registration user redirect to log in page by using authentication module.
- **Change Password:** this field allows change your last set password.
- Password recovery
- **Faculty module:**
- Faculty Module can,

- Store personal and academic data on server
- Retrieve data from server
- Give Password Protected Account
- Do Graphical representation.
- Comparison of academic results with his own department staff.
- Change password
- Password recovery

5.2 Student module:

Student Module can,

- Store personal and academic data on server
- Retrieve data from server
- Set Password Protected Account
- Give Graphical representation.
- All semester results mark sheets
- Change password
- Password recovery

5.3 TPO Module:

TPO Module can,

- Retrieve department wise student data from server

- Set Password Protected Account
- Change password
- Do Password recovery [2].

6. WORKING :

Working of this web application includes following steps:

- First admin create account for users then.
- ✓ Users register and login to the application.
- Upload personal & Academic confidential data on the server
- The data file is stored at a secured IIS server
- Authenticated Users can get their important data file anywhere any time
- Unwanted data can removed from the store by user [5].

7. IMPLEMENTATION :

In this web application we use data mining technique:

Data mining, the extraction of hidden predictive information from large databases, It is a powerful new technology with great potential. Data mining is a knowledge discovery process in large and complex data sets, refers to extracting or “mining” knowledge from large amounts of data. Whether Knowledge Discovery or Knowledge Prediction, data mining takes information that was once quite difficult to detect and presents it in an easily understandable format (i.e.: graphical or statistical) [3]

7.1 Privacy preservation in data mining:

The problem with data mining is that with the availability of non-sensitive information, one is able to infer sensitive information that is not to be disclosed. Thus privacy is becoming an increasingly important issue in many data mining applications.

There are two approaches to preserve privacy:

- The first approach protects the privacy of the data by using an extended role based access control approach where sensitive objects identification is used to protect an individual's privacy.
- The second approach uses cryptographic techniques [7].

7.2 Advantages of this web application:

- It is used for secure centralized storing of data.
- User will access his academic details such as his mark sheets, extra activities.
- Very fast and accurate.
- No need of any extra manual effort.
- Just need a little knowledge to operate the system.
- Doesn't require any extra hardware device.

7.3 Limitations with this web application:

- Program won't work when server is down.
- Lack of technical knowledge.

7.4 Solution over limitations:

We use **Network Balancing Server** also called host to control the server loading in a cluster communicate among themselves to provide key benefits including,

Scalability: As the traffic increases additional server can be added to the cluster, with up to the cluster, with up to 32 server possible in any one cluster

High availability: Network Load Balancing provides high availability by automatically detecting the failure of a server and repartitioning client traffic among the remaining server within 10sec, while providing users with continuous service.

Also with the use of web mining,

- We can improve web server system performance.
- Improve site Design.
- Enhance the quality and delivery of the internet information services to the end user.

8. Future work & CONCLUSION:

As a future work, some additional stuff could be implemented and integrated into the application code making it much more reliable and flexible; especially what concerns a pay-roll module, for instance. Apparently, the role of such systems is basic and essential within each company that wants to keep a really good control and record concerning its personnel data, functionality and performance on all levels in its structure. Every organization, in nowadays, has the necessity of managing its staff on a really good level as the staff has definitely the greatest merit of building up a company as such as it is.

The well managed employee means giving the appropriate financial awareness and all kind of benefits as such as they have been deserved. That's why the development of such systems is not

just a programming business - a lot of people are ordinarily involved in such projects and one of the basic requirements is the reliability of the system, especially what concerns the storage of data and all of the operations that will be performed upon it. Also improving problem modeling and search technique, reducing execution time and enhancing graphical user interface. More research is needed to complete our interactive, automatic timetabling system. The method, techniques and concepts developed will be tested on more datasets and application.

We can use this web application for secure centralized storing of data. This web application is Very fast and accurate. No need of any extra manual effort. Just needs a little knowledge to operate the system.

The steps of the data mining process were carried out and explained in detail. The area of application was education, different from the usual data mining studies. The use of the data mining technique in education may provide us with more varied and significant findings, and may lead to the increase in the quality of education. The objective of our work is to provide a study of different privacy preservation techniques.

So this interactive web application for student and faculty using data mining is a best and convenient application for future use also.

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