

PLAGIARISM DETECTION CHECKER–A HR TOOL FOR STUDENT MONITORING SYSTEM

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Abstract

These days the work of a Faculty/ Teacher is increasing in terms of monitoring the performance of a Student. The Student Monitoring system gives a solution to reduce the working time and effort of lecturers. At schools/ colleges lecturers may face many problems like monitoring the each and every student performance with accurate results and they are not aware which student should be counseled more from number of students. It takes much time to give a consolidated report for all students. To tackle this problem, we have proposed a solution in which **Plagiarism Detection Checker – A HR Tool for Student Monitoring System** is used to overcome these problems. It takes care of the student performance with his reports through the apps. These apps are used to check the plagiarism online and identify the copied students and lecturer can identify the student easily and can counsel him/her. This app also comprises of the any grievances of the student can be easily reported through online and the necessary actions can be taken by management. This solution will increase the lecturer and as well as student experience and reduce the time to solve everyone's performance and by using modules we can send a message to the mobile of the parents with student report automatically through this app.

Keywords: SMS–Student Management System, HRM –Human Resource Management, MIS, Plagiarism Checker.

Introduction

This Chapter gives the brief description about the introduction of the project on the basis of the topics such as General Introduction of HR, project planning, scope, objectives and Limitations of the project. Human Resource Management was originally known as personnel or people management. In the past, its role was quite limited. Within any company or organization, HRM is a formal way of managing people. It is a fundamental part of any organization and its management. This project on “Student Monitoring System” is useful for easy user interface. The system utilizes the powerful database management, data retrieval and data manipulation. This project provides more ease for managing the data than manually maintaining in the documents. The project is useful for saving valuable time and reduces the huge paper work. It will help educational Institutions like schools and colleges will keep track of their student records like personal details, contact details, marks details, Plagiarism checking etc.

The Internet is rapidly becoming a part of the everyday lives of a majority of people in the world. People perform various activities on the Internet and one of them is storing their data in data-base where they are interested in. In these data base's they can post the queries and they can retrieve the required data. Obviously there is a need of Student Information System software for management of student's data.

Literature Review

This Part of chapter deals with the survey of the proposed projects and make a Literature review so that we can implement further projects based on that review.

Plagiarism is defined as the wrongful appropriation or stealing of some other people ideas and make it as own. Stealing or copying of data now a day is becoming very common. Plagiarism detection of copied data originated in 1970's and common methods of Natural language processing (NLP) for detection of copied data introduced in three different techniques namely Grammar-based method, Semantic-based method and Grammar semantic hybrid method [1].

In paper [2] author proposed the Longest Common Consecutive Word algorithm, it considers the whole paragraph as a single unit and tracks the words positions. Then by-word comparison is carried out and common words are obtained, this gives the plagiarized version and similarity between documents.

Steve et al. proposed an automatic system to detect plagiarism. This system uses neural network techniques to create a feature based plagiarism detector and to measure the relevance of each feature in that available assessment. This paper solely focus on two different aspects namely copy-paste type and paraphrasing plagiarism types only. The results were compared with commercially available online software “Article checker” [3].

Nathaniel et al. defines plagiarism as a serious problem that infringes copyrighted documents/materials. They proposed a novel plagiarism-detection method called as Sim PAD. The purpose of this method is to establish the similarities between two documents by comparing sentence by sentence. Experiments say that Sim PAD detects plagiarized documents more accurate that out performs existing plagiarism-detection approaches[4].

Conceptual Framework

This Part of chapter deals with the Conceptual Framework of the project and describes the process of the project. As it is the case in most systems, the design of information management systems (IMS) requires a strategy to fit in the environment for which the IMS is intended and the operational concepts applied in this study were defined. In the present chapter, the concepts ‘system’ and ‘information systems’ are explained in detail. The models that attempt to explain the design of an IMS are also reviewed. This chapter ends by defining a conceptual framework for IMS and interpreting it in the context of this thesis.

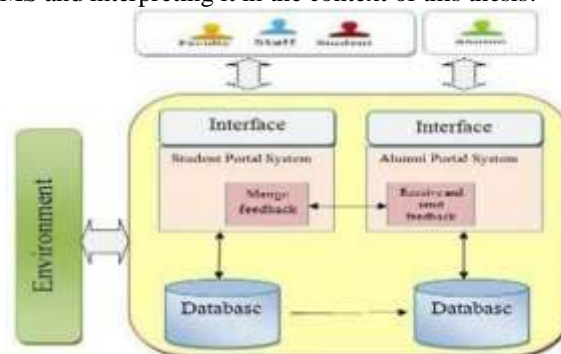


Fig: Conceptual Framework of Proposed System

Student Information management system is a comprehensive system for information management of the students. The daily updates of the college management such as Admission, Registration to finance, faculty and business development can be uploaded with the database. The module reduces the human error that could disturb the database, and ensures accuracy of information, which can be accessed anywhere and any point of time.

What is Student Management System Software?

The Student Management System software is a large application, which is also acknowledged by many names; Student Information System (SIS), Student Management System, and School Administration Software being a few alternatives titles. Majority of existing applications focus collectively for masses, avoiding custom development, but only a hand full of programs are known to provide additional patronages according to administration’s requirements. These Systems supply essential information about a candidate or a worker with precise accuracy withholding not even a trivial material.

Fig: Student Management Software



An organization that holds accountability, importance and maintenance of data accumulated as key to assemble information, often shows success. With more than a dozen Student Management Systems accessible in market, from Google Classroom to Edu Sys, a preferable system is one which empowers administration to effectively hold data by opening the application to countless features and modules. Such software is usually designed for preschool/day care, colleges, universities, schools, and independent teaching centres; to monitor students, staff and fundamental employees' activities.

Data Analysis and Interpretation

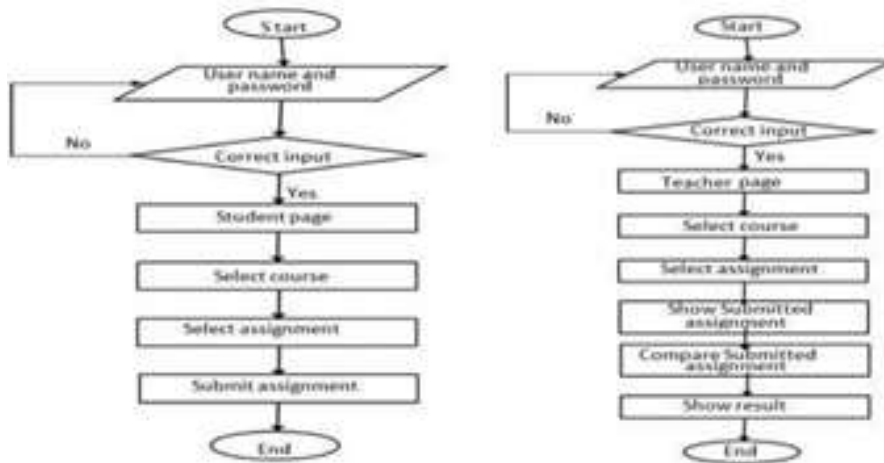
This chapter deals about the Data Analysis and Interpretation of the project with the design and implementation. Information Systems (IS) are currently considered to be significant and indispensable resources for organizations so that they can continue to exist in today's "technology-focused environment". It has been noticed that many colleges, in their students information systems, use excessively paper records methods, which are traditional means of managing student data and they have several negative aspects and problems. These drawbacks are: "First, It takes a very long time to transfer the information to the student.

Accordingly, we think that the traditional system is not efficient enough and does not satisfy the beneficiaries (students) needs and requirements; it cannot also provide information in due time because it lacks the quality of ' integration and cooperation' between the involved bodies. This is why this paper stresses the need for an ' integrative flexible ' approach that is able to meet the needs and requirements of students' records and registration in a way that can improve the current student's portal system.



Fig Student Managing Areas

Flow charts of Student and Teacher Operations



The predictive model will be validated on testing data. Few test datasets will be considered to validate it.

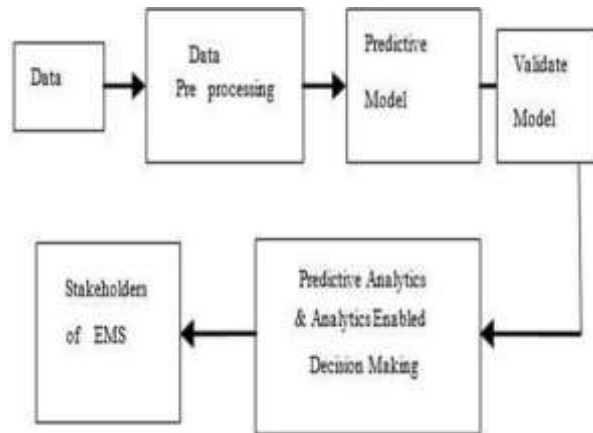
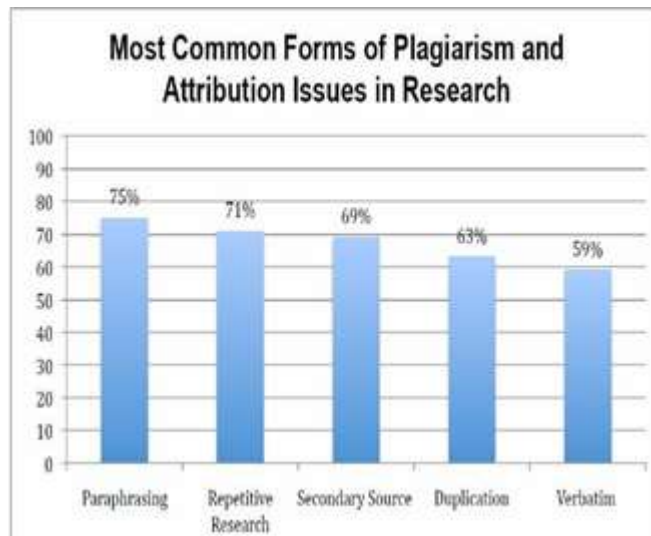


Fig Steps for predictive analytics in Educational Management Analysis

In this proposed system, we are going to develop a system to detect the plagiarism in the academic assignment which will help to stop copying the assignment of other student and will improve the quality of education and also will help to improve personal skills of student and student can also check the grammar from the assignment. In this system plagiarism detector measures the similar text that matches and detects plagiarism. As well syntactically checking will be also done with respect to assignment. For detecting the plagiarism we will use data mining algorithm and natural language processing.



System Implementation

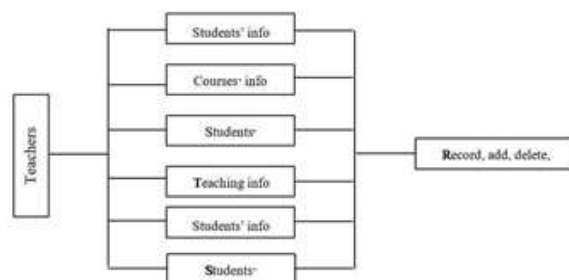
The realization of the login form. The functions of this form are: users' login, including the selection of users' permissions. According to different selected permissions displays the different functions in the main window. The functions of this form are: displays the entire functional menu of the system. The principal and director of grade can conduct the function of basic information setting, class information setting, students' basic information management, and student performance management. The director of the grade can only manage the information student information management, class information management and performance information management of this grade. Student login can only view the personal information and performance. The realization of teachers' information setting. The functions of the form: for principal and head teachers to add, delete and modify information of teachers. The realization of the students' basic information maintenance.

Users' roles of the system are two major kinds: system administrators and ordinary users. The system administrator can manage users. Ordinary users can be divided into students, teachers and other users.

Administrator: manage users, group permission distribution, information query, etc. Teachers: students' information management, curriculum information management, score management, teaching information management, information query, score statistics, etc.

Students: scores query, etc.

Teachers' basic information management function module flowchart



Participant	SMS Score	Participant	SMSScore
1	60	12	80
2	80	13	70
3	100	14	80
4	80	15	80
5	60	16	90
6	100	17	100
7	100	18	80

8	100	19	100
9	100	20	90
10	75	21	80
11	70	22	90

Table: SMS Score by the participants

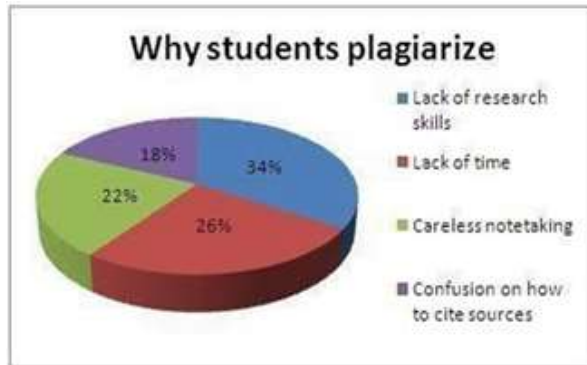


Fig: Pie Chart for Plagiarism Reasons

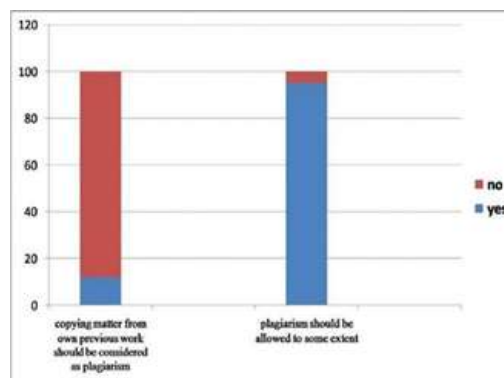


Fig: Pie Chart for Plagiarism Allowance Range

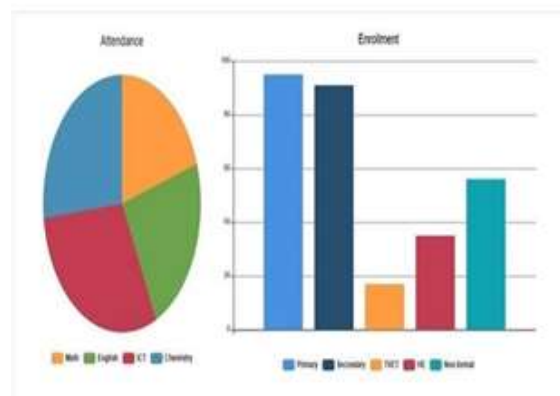


Fig: Pie Chart for Attendance Management

Design and Implementation of Student Management System Analysis and Design Among them, the computing method is based on the data density. By calculating the distance of a group of data, cluster analysis can effectively divide these data into several more dense clusters, and the sum of the distances of the data in each cluster to the cluster center is the smallest. The design of the system adopts a structured design method and divides the system requirements into different sub function modules according to their respective functions. This design method is not only clear in layers and clear in structure, but also convenient for querying errors during design and debugging, and the preparation of programs is conveniently read[20]. Adopting this design method will bring convenience to future maintenance work, and it is easier to realize the system's added functions and improved.

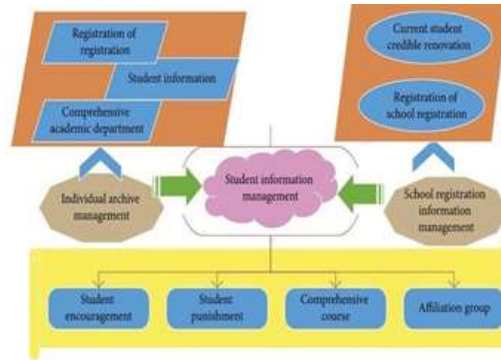


Fig: System structure block diagram



Snapshot 1.1 Login Page

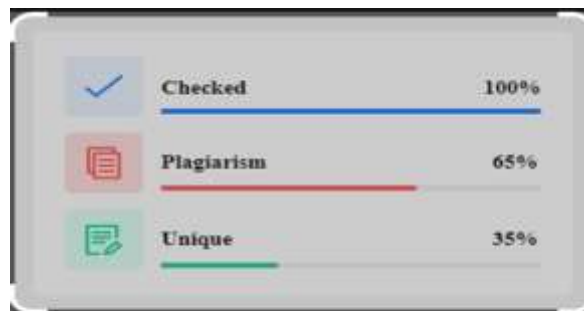
Final Outcomes



Snapshot 1.7 Assignment Submission and Course View Page



Snapshot 1.8 Assignment Submission with Plagiarism Checker and Course Report



Snapshot 1.9 Assignment Submission with Plagiarism Checker

The detection of tough plagiarism and cases in which the original text has been reworded and paraphrased requires a facility that is able to explicate the finest variations in words and sentences that are semantically similar. While plagiarism detection at the level of concepts and ideas is far beyond the limits of today's technologies, it is already possible to overcome certain types of semantic-preserving text alternations.

Conclusion

Student Information Management System can be used by education institutes to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems are solved using this project. This development basically reached the expected results of design. This system aimed to upgrade Moodle. The presented system allows the teachers to detect the plagiarism among student's submitted assignments. This functionality has been successfully embedded into Moodle, and it is now ready to use by university teachers. Users in different permissions log in this system according to users' name and password, and undertake the different functional operating, which is mainly used for middle school students' daily management. This system based on the specified student files, realized the management of teachers' information, students' information, course information, and student performance management, as well as the corresponding operation of add, delete, modify, check, statistics, and so on. Student information management system lead to a better organization structure since the information management of the students is well structured and also lead to better as well as efficient utilization of resources. The functions of the system not only improved the efficiency of school management, but also saved administrative costs, and achieved the transformation between simple document management and office automation. However, the function of this system can be further improved, some functions can be added, such as, add users' opinions and comments on

documentation, which makes the documentation management more humanized, comprehensive and reasonable.

Future Scope

- ✓ Social networking can also be added where students can interact with each other.
- ✓ Online class functionality can be added.
- ✓ Can evolve as an online institution.
- ✓ Functionality of chat and messages can be added.
- ✓ Online exam functionality can be added.
- ✓ Online resume builder functionality can also be added.

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