

STUDENT LEAVE MANAGEMENT SYSTEM

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ABSTRACT

The most common problem faced by students these days is related to Attendance. They get short of attendance due to several factors beyond their control as in the case of an emergency, where they might not be able to send their leave application. There are times when due to lack of coordination with the concerned authorities, they miss the attendance of several important in-campus and off-campus activities such as events, workshops, seminars etc. In some cases, they do not even get the information about the upcoming events which would be beneficial to them. The proposed system automates the existing system. It decreases the paper work and makes the record maintenance process easy by replacing all the traditional methods by computerized techniques. We understand that this project cannot be accomplished with divided thinking. Hence, our technique involves getting into groups and coming up with ideas, known as brainstorming, and this a tried and true method. This technique has many variations. Keeping these problems in our mind and brainstorming over all the possible solutions, we generated an idea of creating an application which would solve all above stated problems. Through a vast discussion, we came up with the proposal. The idea breaks away from traditional thought and creates a different perspective. Our application mainly focuses on the fair distribution of attendance among students. It provides all the related details of working days, holidays, events & workshops taking place in the college. This project is aimed at developing an online leave management system that is of importance to either an organization. The Leave Management System (LMS) is an Intranet based application that can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like email notifications, automatic approval of leave, report generators etc in this system. Leave Management application will reduce paper work and maintain records in a more efficient way.

Keyword: Attendance, leave application, brainstorming, leave management system, intranet based application, automatic approval of leave, report generators.

1. INTRODUCTION: -

The most popular forms of coding in these days is the generation of applications or apps, that can easily run on our mobile phones on any environment like android, windows or IOS. Now a days, the technology is improving drastically. It is being used in every sphere of life. None of the field is left untouched by the growing influence of these mobile applications. The hardware and software capabilities of phones have been improving fastly. We are able to think that the current mobile phones are as strong as computers and even they are able to compete with computers. Features of our application are as follows: -

- Our application mainly focuses on the fair distribution of attendance among students. It provides all the related details of working days, holidays, events & workshops taking place in the college.

- It provides overall as well as weekly attendance of student. Parents, faculties and students can get easily updated about their attendance status.
- Students can easily upload their leave applications online just on one click. The application will directly go to the concerned faculty and respective coordinators of student. This will eliminate the redundant paper work.
- The application will also take the approval of parents of students to check the originality of leave application. This will reduce the frauds in application. Thus, a proper and fair distribution of attendance will be given to each and every student. A student thus will not be able to do unethical and wrong things.
- A proper section for attachments will be provided which will allow students to attach their medical and other documents.
- Application is quite helpful for maintaining records of students and helps in keeping an eye on the status of the records.

In the existing system, leaves are maintained using the attendance register for staff. The staff needs to submit their leaves manually to their respective authorities. This increases the paperwork & maintaining the records becomes tedious. Maintaining notices in the records also increases the paperwork.

The main objective of the proposed system is to reduce the paperwork and help in easier record maintenance by having a particular centralized Database System, where Leaves and Notices are maintained. The proposed system modernizes and automates the existing system. It decreases the paperwork and enables easier record maintenance. It also reduces chances of Data loss. This module intelligently adapts to HR policy of the management & allows easy leave handling for better scheduling of workload.

OBJECTIVE: -

- To automate the existing leave management in educational institutes.
- To decrease the paperwork and enable the process with efficient, reliable record maintenance by using centralized database, thereby reducing chances of data loss.

IDENTIFICATION OF NEED: -

Leave Management System is very convenient to implement, easy to understand and also easy on implementation. The need of designing such Software is to provide the Administration a better way for scheduling & balancing work load by maintaining leave details of the staff and students. It reduces the human efforts of checking the papers for leave request manually and maintaining it in folders and files.

2.2 FEASIBILITY STUDY: -

Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of the existing system or proposed venture. In its simplest term, the two criteria to judge feasibility are cost required and value to be attained. As such, a well-designed feasibility study should provide historical background of the project. Generally, feasibility studies precede technical development and project implementation. The assessment of feasibility study is based on the following factors:

- 1) Technical Feasibility
- 2) Operational Feasibility

2.21 TECHNICAL FEASIBILITY: -

Generally, feasibility studies precede technical development and project implementation. The assessment is based on a system requirement in terms of Input, Processes, Output, Fields, Programs, and Procedure. This can be quantified in terms of volumes of data, trends, frequency of updating, etc., in order to estimate whether the new system will perform adequately or not.

Technological feasibility is carried out to determine the capability, in terms of software, hardware, personnel and expertise, to handle the completion of the project.

2.22 OPERATIONAL FEASIBILITY: -

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

The operational feasibility of the system can be checked as it solves the problems and reduces the complications occurring in the paper-pencil test.

CONCLUSION OF FEASIBILITY STUDY: -

- 1) **Technical Feasibility:**
The system can be implemented using computer software & hardware.
- 2) **Operational Feasibility:**
The system efficiently operates & reduces manual computation and time of processing, reducing cost of paperwork and human errors.

2. THEORY: -

This application is basically the destination from where the faculties can withdraw any required information of any student from the batch. Detailed features of this app will contain or allow following things: -

PROFILE: -

Faculty: Every faculty will have a profile with public information available on it. And the information would be - name, class they are in charge of, cabin no.

Student: Every student will have a profile in which the public information section would contain- name, class, and enrollment no., semester. The private section would have the personal attendance chart.

USERS: -

Faculty: Faculty would be allowed to see all the information including the private information of all the students of their batch and also they can change the information regarding their profile anytime.

Students: Students can only access to the public information section of any other student or faculty and will obviously have full access to their own profile.

LEAVE APPLICATION SYSTEM: -

Whenever required any student can upload their leave application on their timeline which would then generate a notification to the faculty about the leave. Approval or rejection of leave is then decided by the faculty in charge. This will help to reduce the paper work and loss of student's attendance when they are not able to send the leave applications on time.

ATTENDANCE MANAGEMENT AND ACCESSIBILITY: -

Attendance of every student will be uploaded on their timeline on daily basis and the complications of the attendance will also get uploaded every month. Only faculties, Students and their parents can access their attendance check. This is also the solution to the bunk issues which are raising continuously.

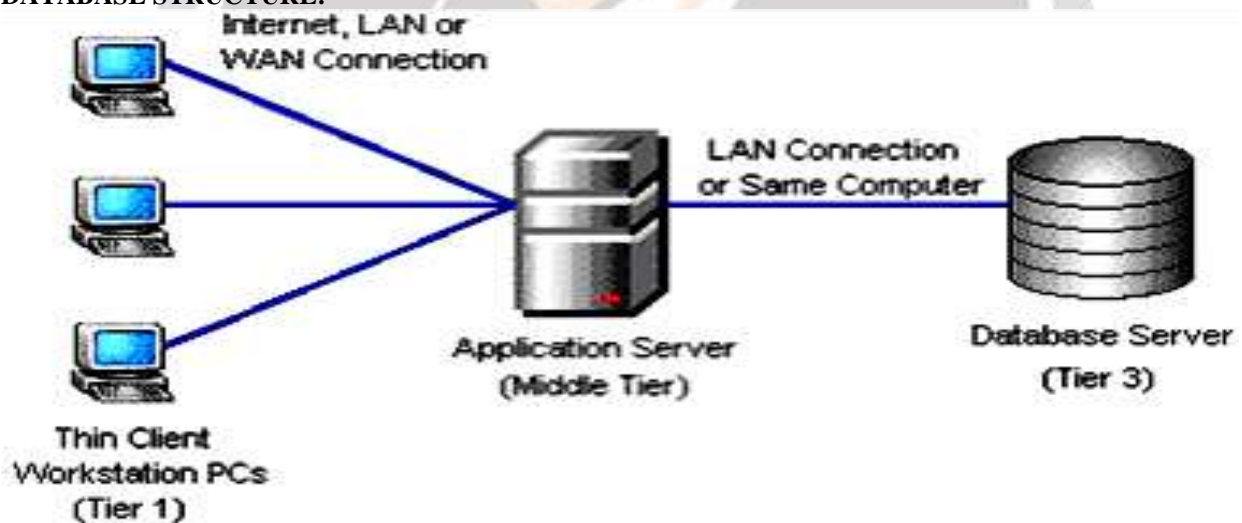
EXISTING SYSTEM: -

In existing system, the records are manually maintained by the administrative user. The attendance is carried out in the form of hand written registers. It is a difficult job to maintain the record for the user. The human effort is more. This system requires correct feed on input into the respective field. Suppose wrong inputs are entered, the application could get misunderstood and rejected. So the user finds it difficult to use. The existing system is not user friendly because the retrieval of data is time consuming and data is not maintained efficiently. These systems need to be handle by a specialist for maintaining and updating the system which can again be very costly. It requires more calculations to generate the report so it is generated at the end of the session. All calculations to generate report is done manually so there is some greater chance of errors. The faculty has to suffer a lot through the calculation and if there is a loss of some report then it may cause lots of issues. In the existing Leave Record Management System, every College/ Department follows manual procedure in which faculty enters information in a record book. At the end of each month/session, Administration Department calculates leave/s of every member which is a time taking process and there are chances of losing data or errors in the records.

PROPOSED SYSTEM: -

In proposed system chances of data losing is not possible because data is maintained in the form of database and digitalization of student's information. Every day attendance, leaves and notices information is updated in to database using a user friendly GUI. This application is an online application which makes more flexible to access information. In case, if there is some holiday, then the data is being updated automatically under well-defined graphical user interface and thus this software also makes the work load less for the department and management class as well as make easy access to the information for the authorized persons. The proposed system automates the existing system. It decreases the paper work and easier record maintenance by having a Database for leaves maintenance. The Leave Management System reduces the over work and time duration. It provides a easy, maintained and systematic environment for the higher panel(HOD/Faculty) for the approval of leave. This is a systematic approach that follow a sequence for the leave approval, this will result low overhead of work.

DATABASE STRUCTURE: -



MODULES: -

This module is a single leave management system that is critical for HR tasks and keeps the record of vital information regarding working hours and leaves. It intelligently adapts to HR policy of the management and allows students and staff to manage leaves and replacements (if required). In this module, Head of Department (HOD) will have permissions to look after data of every faculty member of their department. HOD can approve leave through this application and can view leave information of every individual. This application can be used in a college to reduce processing work load. This project's main idea is to develop an online centralized application connected to database which will maintain faculty leaves, notices information and their replacements (if needed). Leave management application will reduce paperwork and maintain record in a more efficient & systematic way. This module will also help to calculate the number of leaves taken monthly/annually and help to gather data with respect to number of hours' worked.

Number of Modules: -

After careful analysis the system has been identified to have the following modules: -

- Registration
- Apply Leave
- Admin
- Student
- HOD
- Class in charge
- Year Coordinator
- Leave Status

REGISTRATION: -

This module is used to new user/student can add their details in the form. students can register their personal details in the system. This module is used to students can view their attendance details and leave status by their own username and password.

APPLY LEAVE: -

In this module students can apply their leave application through the online. User should with their own username and password. A comparison is done for a user name and for a password if the correct user id and password are supplied then, main menu of online leave form will be displayed to the user.

ADMIN MODULE: -

The initial step which is handled by the admin module is to create a unique user account for each student and faculty member in the organization. This module handles the administrative functions of the system and is used by the head of the department. Head of the department will enter the leave eligibility of each faculty and student, for each type of leave, at the beginning of each leave year. Leave record of a particular student and faculty members in a week or month.

STUDENT MODULE: -

Student is allowed to log in /log out in their account for the leave apply by a unique id provided by admin department. In the starting month of the semester student can apply for the leave basis on the criteria of leave that is short leave, long leave. After the first month of the new semester an attendance criterion is maintained it means student having more than 75% attendance can apply for long leave. In case of emergency student have to show some petition for the leave. Leave is then transferred to HOD for the verification. If the leave is verified by the HOD then it is approved. Student can see their leave record in a month or in semester.

HOD: -

This module is having the power of leave verification of the students or staff. HOD is able to see the leave record of students and staff.HOD's can verify the leave on the basis of the leave availability of the student and in case of student attendance is the basic criteria. HOD is having authority of approval or disapproval of leave and remark on that. Among the entire modules HOD module is given more permission. He can view information of his particular departments faculty information and take action based on the reports. He can view information like students leaves, attendance and notifications including reports from Year Coordinator. He can print reports on daily or monthly basis.

CLASS IN CHARGE: -

This module is having the primary authority for the approval of the leaves applied by the students. The Class in charge will be the first one to see the leaves and will have the authority for either accepting it and forwarding it to the next module for approval or reject it directly there itself if the attendance of the students goes below 75%.

YEAR COORDINATOR: -

This module is having the secondary authority for the approval of the leaves applied by the students. The leaves once approved by the class in charge will be transferred to the year coordinator for further approval and remarks by verifying the same. If the year coordinator finds any fault he/she can reject it at the same itself there itself. Getting approval from the year coordinator will make the leave to pass on the next module for further verification.

VIEW STATUS: -

This module is used to students can view their leave is approval or not. Students send the leave form to the head of the department through online. It will show the balance leave and attendance percentage of the semester. The report generation will alert the students are eligible for semester exam or not.

ADVANTAGES: -

These are the following advantages of our application: -

The proposed system is eliminating almost complete usage of pen and paper. Today, we are left with less number of trees in world. Trees are being cut to make papers. So, why do we waste our precious paper in writing applications? Thus, our application is helpful in saving trees, a step for green environment.

In India, most of the schools and colleges are not using this technology. They are still stuck up in old fashion of writing applications on paper. Authenticity of such approvals is also questionable. They may be fake. Thus our application is a revolutionary step towards the secure and more transparent way of submitting your documents which are genuine, certified and accurate.

The proposal can be a milestone in the path of digital world. This is better concept, untouched from major area of this country, can contribute largely in the boundless world of digital. This is very minor and unnoticed topic, but is crucial for almost every student in their day to day life.

The proposal is also having an option of declining your leave consent. Thus, it's completely abolishing additional efforts of calling up to authority or sending any message from external sources. The application nearly takes few minutes and with its ready content, one can easily fill up all the required and essential details. The application, thus, is really saving time of all whether it is student, faculties.

Apart from all these benefits of the proposal, it is providing some additional features also:

A unique id given to students which will take them to the student record of attendance, attending workshop etc. They can track their entire attendance log regularly. The proposal is going to give all information regarding details, scheduling, topics etc of events or workshops organizing in campus. Even faculties will be able to figure out correct information about these events.

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CONCLUSIONS: -

As seen above, the common problem faced by students these days is related to **Attendance**. Due to lack of coordination or inefficient system, handling of leave records becomes very difficult. With the help of the proposed system concerned faculties will have proper information about student. It also helps those students who regularly attend the classes but due manual system., they get marked as absent On the other hand most of the students who are not attending classes usually get attendance because of the drawbacks of the existing system. Thus, Students will not be able to cheat and this application helps to take action against those students who usually are missing lectures. Faculties will also have relaxation from the proposal as all hustling and bustling of maintaining records gets almost eliminated.

Overall, the efficiency of the proposal is incomparable and its effectiveness will bring an ease to the life of studying students, parents and teachers. Further upgradation of the Leave Management System for various types of organisations with multiple hierarchies can help in reducing paperwork, help achieve error free tabulation and calculation of leaves.

LIMITATION: -

- The leave status cannot be cleared until and unless the HOD approves/rejects the application.
- The system fails if the server fails, but the data will remain stored in the database.

Thus Leave Management System is very useful for college to maintain the leave records of the students and employees. The system not only maintains the leave details of the students, it also maintains the leave applications of the staff. The higher authorities may accept or reject the leave applications requested by the staff. Thus, this system automates the excess amount of job done by college to maintain the leaves.

This system offers a reliable and easy to access. It can be used as a base for creating and enhancing applications for viewing reports, tracking attendance for colleges. Students and their parents will also view attendance and curriculum details using this application. It provides high security and a system that reduces the work and resources required in traditional process. The proposed system provides the new way of computing and displaying records with responsive and attractive user-interface.

REFERENCES: -

- [1] S.K. Jain. Joshi, and B.K. Sharma, "Attendance Management System", Masters Project Report, Rajasthan Technical University, Kota
- [2] M.K.P Basheer and C.V. Raghu, "Fingerprint Attendance System for classroom needs", in Proc. India Conference(INDICON),2012 Annual IEEE, pp. 433-438,7-9 December 2012.
- [2] Gargi Soni*, Kshitiz Nagar, Mansi Fumakiya, Namita Raghuvanshi, Kamal Kadam, "STUDY PAPER ON STUDENT LEAVE MANAGEMENT APPLICATION" in 2016, IJESRT.
- [3]. Web Based Student Information Management Systems'. S. R Bharamagoudar1, Geeta.B.2, S.G.Totad3.(International Journal of Advanced Research in Computer and Communication Engineering Vol. 2, Issue 6, June 2013)
- [4] Cloud-Based College Management Information System for Autonomous Institute Rajesh Shah, Makhan Kumbhkar Christian Eminent College Indore, MP, India. (Volume 5, Issue 5, May 2015 ISSN: 2277 128X International Journal of Advanced Research in Computer Science and Software Engineering)
- [5] Framework for Faculty Management System. Unnati A. Patell(International Journal of Application or Innovation in Engineering & Management (IJAEM)Volume 2, Issue 12, December 2013)
- [6] Cloud-Based College Management Information System for Universities Mary Jane Magno-Tan, Allan V. Crisostomo, Bill Villaflor, and James C. Faller. (International Journal of Information and Education Technology, Vol. 4, No. 6, December 2014)

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