

Scored Based Online Hostel Management System for Student

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Abstract— As the name says the project is used to manage hostel based options like providing students with required accommodation options based on their academic score for the past year. The project will allow the Students to create and login in to their account. After Logging in they will be provided with a list of Available Room Categories and Cost (per bed) for which they can apply and also set a category wise room preference. A special Admin/Warden account would enable him/her to check for the received requests for room allotments, later Admin can allot a room to the student based on the pupil's Academic records. Online Hostel Management System is software developed for managing various activities in the hostel. For the past few years the number of educational institutions is increasing rapidly. Thereby the number of hostels is also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually. Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more website oriented. We can improve the efficiency of the system, thus overcome the drawbacks of the existing system.

Key words: Online Hostel Management, Web Application, Database Management

I. INTRODUCTION

The fundamental theories of economics assert that the success of an organization is a function of how well it harnesses and optimizes the available resources (factors of production) towards achieving its organizational objectives. By resources, we mean the physical resources and conceptual resources. The physical resources are land, labor/ machine, capital and entrepreneurship while the conceptual resource is information. No matter the volume of funds that might have gone into an investment, if there is no effective coordination of efforts/ resources, the whole investment will end up as a colossal waste and the vision behind the efforts will not be achieved. Thus management is a major factor that determines the index of success achievable by an organization in its quest towards realizing its corporate objectives. Research has also further revealed that it is the quality of initiative applied in management that matter. However, most of these hostel facilities especially in institutions in developing countries are managed with conventional manual methods and this has been impacting negatively on the effective resource utilization and overall efficiency of these academic institutions. The manual method of managing and administering hostels in institutions is obviously not effective as it is attributed to the following challenges:

- Difficulties in record management: data redundancy, difficulty in data update; difficulty in data recovery; difficulties in generating information about those students who had left the hostel, vulnerability to manipulations/human error.
- Difficulty in tracking the history of a facility: a room or chalet or building; registration for hostel allocation is done manually, thus over time, handling of the paper files becomes cumbersome and untidy as the population of student increases.

The hostel facility management software is user-friendly application package specifically designed to automate, coordinate and look after all the processes of managing hostel facility. It is useful especially in large educational institutions with college hostels, school hostels, and organizations like military, large corporations and establishments with working employees' hostels.

II. EXISTING SYSTEM

In existing system, we have the paper work for hostel information. Hostel employees store the student's information manually by writing in the large notebook or muster. So if that Notebook has been lost then all information gets vanish and that leads to serious problem. Also there is no backup system for secondary storage. In current scenario all the details related to people living in hostels are managed by humans manually and by the help of pen and paper. Everything is so complex because it is not easy to handle all the information of the various people living in a hostel by the help of registers. If the owner needs any type of information regarding any person who is currently living in his hostel, then he has to check and open various registers and then also it is not completely sure that he can get the information in the meantime. And if the required information is regarding the person who left the hostel then it is completely a very complex task because the registers containing the information of the person who left the hostel can be sold. Or if their quantity increases they can be destroyed. So to reduce this complexity and manage the hostel without any complexity we have to use this project. By using this project, we can easily manage all the data without any extra manual effort. This project is automatic. We have to register the person who is coming to stay in our hostel and rest of the work is done by the system itself. We can add new entry easily in a pre-structured way. We can maintain the room number and floor number easily without any problem and can maintain the information regarding the fees and the date at which the student registered and when he leaves the hostel. He can also manage its own details so this will also reduce the burden from the mind of the manager of the owner that is he can also free from the responsibility of maintaining and updating the information regarding the person who is living there. In all

the aspects this project is totally beneficial for the owner of the hostel as well as the persons who are staying there.

III. PROPOSED SYSTEM

In our proposed system, we are making web application so hostel employee can use digital device to store information and also keep backup by copying all information in another repository. The whole project is based on internet. Anyone can access this project if he has working internet connection. This project is hosted online and by typing the address of this website anyone can access the website. In this project the admin of the hostel can able to login in the website and can enter the details of the person who is willing to stay in the hostel. When he logged in then he has to click on enter data and then all the data of the person like name, email, contact number and all other required data will be filled from the form which will he get from the person who is came to stay in the hostel. After entering all the information, the data is send to database server from client machine over the internet. If the admin left any field blank or enter any wrong entry like e-mail in different format, then an error message will be prompt by the browser. And if all the data is in correct format then the data will be saved on the database server.

A. System Module:

There are four modules in system –

Student Module: All the basic information is filled like student name, student class, Room no etc.

- 1) Mess Module: Include the information of mess bills paid by students.
- 2) Staff module: Includes the information of rectors in hostel.
- 3) SMS Module: This module informs the parents whether the student is present or not.

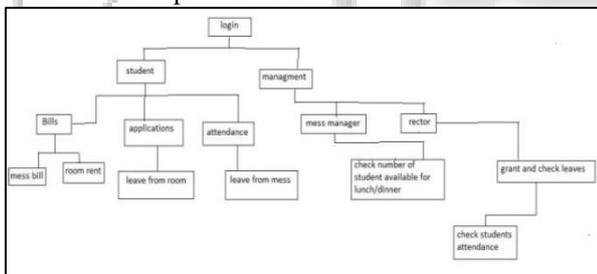


Fig. 1: System Architecture

B. Algorithm:

1) PCA (Principle Component Analysis): -

PCA algorithm is used to recognize the faces in the image. It is mathematically defined as an orthogonal linear transformation that performs the data to a new co-ordinate system. It involves the procedure that transforms no. of possibly correlated variables called Principle Components. It involves the calculation of the Eigen value decomposition of a data covariance matrix or singular value decomposition of data matrix, after mean centering the data for each attribute. The result of PCA are in terms of components scores and loading. PCA is theoretically and the optimal linear scheme for compressing a set of high dimensional vectors into set of lower dimensional vectors and then reconstructing the original sets.

2) PCA algorithm follows: -

- 1) A data matrix ($m \times n$) for each image is created which is then converted into an $m \times n \times 1$ matrix having rows equal to the product of no. of rows and columns of the original matrix.
- 2) A mean matrix is created for all the different image matrices. The mean matrix is calculated by adding all the columns of data matrix divided by the total no. of columns.
- 3) The mean subtracted data matrix is obtained by Subtracting the mean image from all the image matrices.

IV. CONCLUSION

Thus we have developed PHP-MySQL source code which would help in developing the Online Hostel Management System. It will reduce the effort made by the hostel manager and hostel owner while maintaining the hostel. It will remove the pen and paper concept which is being used by us from earlier times. The developed system provides solution to manual hostel management problems and also provides information such as hostel information, hostel room information, and hostel accounts information. It is online software/website so anyone can access it from anywhere without any complexity with the help of a working internet connection. This project is mainly comprised of development of attendance management. Attendance management is very useful in saving valuable time of students and generating report in required time. The time complexity of our identification system was $O(n+N)$ which is far better than $O(n^2N)$ of existing identification system.

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