"Online Hostel Automation"

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Abstract: The online hostel automation system is web based software. This document is intended to minimize human works and make hostel allocation is an easier job for students and hostel authorities by providing online application for hostel, automatically select the students from the waiting list and mess calculation, complaint registration, notice board etc. Students will get approval notification in their mails. Hostellers can view notice board, hostel fee and mess menu by logging into online system. It helps to notify parents regarding their wards and their presence in hostel and their curricular will be notified to their parents using this model just in one touch and it also makes online payment and over viewing of balance fee amount easier than before. The attendance of students or the hostellers will be recorded using bio-metric so that no duplications or complications will be created and it also makes easy to maintain and record about mess investments, expenditures and details about whole hostel and hence everything will be transparent to the founder or the owner.

KEYWORDS: *hostel automation,user,warden,admin*

I. INTRODUCTION

There has been an astronomical increase in the number of educational institutions established especially in the last four decades all over the world. This development has brought education to the doorstep of people. Consequently it has increased knowledge and helped produce a population of enlightened citizens who can easily abide by the rules of civilized society and contribute meaningfully to the process of democratic governance. Most of the newly established educational institutions however, are using the old conventional techniques for managing their assets especially hostel facilities. This old techniques with its inherent limitations have impacted negatively on the overall organisational efficiency of this educational systems.

The codes for the automated system were developed using Visual Basic and Microsoft Access was used to develop the underlying database. The developed system overcomes the drawbacks of traditional methods of hostel management; it is more user-friendly, graphical-user-interface oriented,

reliable, efficient and secured with access control mechanisms. The fundamental theories of economics assert that the success of an organisation is a function of how well it harnesses and optimises the available resources (factors of production) towards achieving its organisational objectives. By resources, we mean the physical resources and conceptual resources. The physical resources are and, labour/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 organisation in its quest towards realising its corporate objectives.

OBJECTIVE:

•The hostellers list and waiting lists for admissions are maintained separately and allotment of seats will be done on availability for waiting list.
• Admin can send the approval notification to every approved student via mail and sms.
• Automatically insert student's details to the hostellers record when the allotment is confirmed by the admin and deleted
when vacation is confirmed or after the course end date.
• Students can register their complaints in confession box or suggestion box.
• Admin can edit notice board and each hosteller can view it.
• Online payment of fee amount.
• Hostel authority can easily calculate the expenditures.
• Hostellers can check the status of every month's hostel fee.
• Parents will be informed about the attendance and curricular of their ward.
• Hostellers attendance will be registered by the help of biometrics.

II. EXISTING SYSTEM

The existing system is manual based and need lot of efforts and consume enough time. In the existing system we can apply for the hostels online but the allotment processes are done manually. It may lead to corruptions in the allocation process as well as hostel fee calculation. The existing system does not deals with mess calculation and complaint registration. The population of students gaining admission to higher institutions is increasing on yearly basis. This is putting enormous pressure on the facilities in these institutions. Adopting the conventional manual scheduling methods to the facility management job is the common practice in most institutions here in developing world. This method is characterized by numerous drawbacks, some of which are human error, low security, data redundancy, difficulty in management, difficulty in data update, difficulty in record keeping, difficulty in data recovery in case of disaster etc. 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 utilisation 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 whole exercise is time-consuming and a waste of human and material resources.

III. PROPOSED SYSTEM

The proposed system is having many advantages over the existing system. It require less overhead and very efficient. The proposed system deals with the mess calculation and allotment process efficiently. The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not. It happens that after a system is prepared a new technology arises and the user wants the system based on that technology. This system use windows platform, .net as front end technology and SQL server as backend technology. Thus ONLINE HOSTEL AUTOMATION SYSTEM is technically feasible. Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis. .net using visual C# and sql database easily available in internet. The project has been developed in such a way that it becomes very easy even for a person with little computer knowledge to operate it. This software is very user friendly and does not require any technical person to operate .Thus the project is even operationally feasible.

ADVANTAGES
• Less human power is needed.
• High security since we provide biometric.
•No Data redundancy.
• Easy to handle.
• Automatic updating of data.
• Record keeping is very easy.
• Backup data cannot be easily generated.

III. REQUIREMENTS

SOFTWARE REQUIREMENTS:

Operating System : Windows
Web Server   : Tomcat
Database   : MySQL

Front end tool   :   ASP.net with C# as scripting language

Backend   :   Microsoft SQL Server

Client Side   :   HTML

HARDWARE REQUIREMENTS:

Hardware   : Pentium based systems with a minimum of p4

RAM   : 512 MB

Cache size   : 512 KB

Network card   : Any card can provide a 100mbps speed

User Interfaces

- This software starts with a login form.
- There are many pop - up menus in the main form which are enabled only after the proper login.
- Each pop - up menu contains sub menus which will enable easy interaction.

Functional Requirements

This Hostel Management system (HMS) contains 7 modules in it. They are given below:

1. Details of Students.
2. Details of Rooms.
3. Room Allocation & Availability.
4. Attendance calculation.
5. Total Expense calculation.
6. Mess bill calculation.
7. Mess income and expenditure calculation.

From the above 7 modules, we divide it into 2 parts and assign each part to each group member.

My modules are –

    ✓ Details of Rooms & Students.
    ✓ Mess bill calculation.

Details of Rooms & Students

This module will display details such as-

    ➢ Student details
    ➢ Number of rooms
    ➢ The capacity of each room
    ➢ Total number of students in the hostel
    ➢ Information about the hostel (Hostel name, Building information etc.).

Mess bill calculation

In this module, the mess item expenditure for each student in the hostel is calculated for each month and the mess bill for each student in calculated and displayed.

Non-Functional Requirements:

Performance

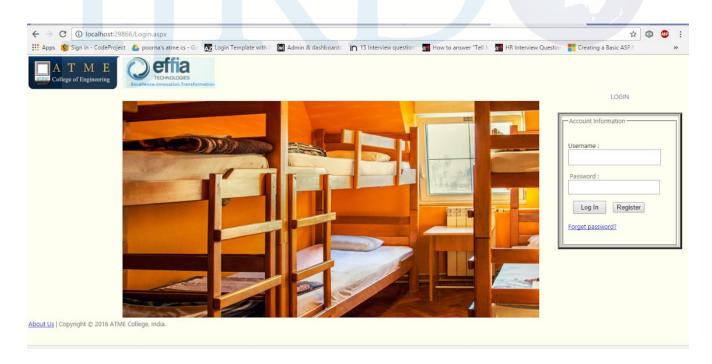The system shall support up to 3 students per room.

Reliability

The two aspects are primary concerns of the reliability requirement:

- **System** The system should be fully operational at any given time. In case of faults, the system should degenerate slowly and gracefully.
- **Content** Content reliability is an important issue. Not only the content should be accurate and safe, it also has to reliable.

Availability

The system shall be available 99.9% of the time.

V. IMPLEMENTATION

The implementation of the system begins with the first web page that is the login page as shown in the above screenshot of the web page. The login page takes the username and password as the input, it also provides a option for a new users to register and then login. Based on the username and the password

the next page will be displayed as they are configured as student, warden, mess manager or admin. As they are developed as different modules.

VI. CONCLUSION

The proposed system provides solution to the problems of traditional method of managing hostel facilities. The system attempts to improve institutions' hostel services for stakeholders - administrator, management and students of the hostel. It automates the administrative processes and reduces the stress associated with searching for information on a student/a facility in a bundle of registers. It is specially designed to centrally allocate and manage accommodation spaces in a typical student's hostel. The system user can store the data of those students who had left the hostel, and check the personal profile (retrieves from the database) of all the current students within few minutes. Thus the system or the online hostel automation overcomes most of the difficulties in the existing system and also it automates management which in turn satisfies the user need and provides the good user interface.

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