College Hostel Portal

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***Abstract*: The existing system in our College Hostel is highly manual involving a lot of paper work, this lead to inconsistence and inaccuracy in maintenance of data. The data, which is stored on the paper only, can be lost, stolen or destroyed due to natural calamity like fire and water. The existing system is sluggish and consumes a lot of time causing inconvenience to students and the wardens. Due to manual system, it is difficult to update, delete, add or view the data.**

College Hostel Portal is a web application developed for managing various activities in hostel. This application will ease the work of student, admin as well as wardens. This system will eliminate the drawbacks in the manual hostel management system and is more user-friendly.

Keywords: JavaScript, HTML, CSS, PHP, MySql, College Hostel, Website, 24X7.

I. Introduction

College hostel portal is an online website which is developed for students, admin and warden to reduce their effort and time. This website is platform independent. It is developed for student, warden and admin. For developing this website the languages which we are using are: HTML, CSS, JavaScript, PHP, and MySQL. The aim is to reduce the effort of wardens and provide better service to the students.

The usual process of student registration at college hostel involves filling registration form which is a tedious task that needs lot of supervision, efforts and time. This system is completely manual and unreliable and it is accessible during daytime only. The information stored on the paper is sensitive and can be lost, stolen or misplaced.

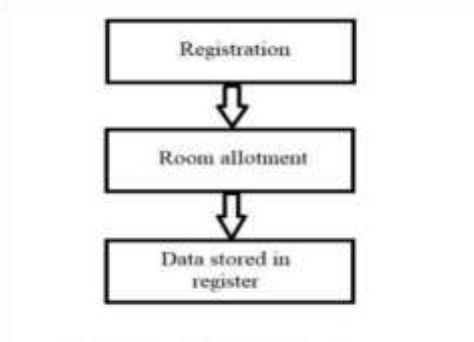

Fig 1 Current Hostel Management System

This traditional system is hectic and puts a lot of stress on hostel employees and takes a lot of time for management. Traditional system is shown in fig.1. Hence we have developed new hostel management system using online website. This online web based hostel management system will reduce human efforts and time consumption of employees for managing hostel data. Also with online system, retrieving and updating of student/hostel detail will be much easier and will be accessible to employees and students 24X7.

II. Literature Survey:

Up till now there is no extendible software availability for our college hostel management process. In existing system our College Hostel is run manually by entering data in register and keeping track of all this data. Adding, searching data is quite difficult if it is it the form of long books. The different processes involved are:

To maintain the hostel students details manually. To maintain monthly bills. To maintain the provisions details. To maintain information about the fee payment. This records are prone to get damaged by natural calamities such as fire, water or get stolen.

In paper [1] Authors have used four languages such as HTML, JavaScript, CSS and AJAX for frontend and for backend they have used PHP. For storing the information they used MySQL server which is a database server. They also included the functionality of mailing. When a person does a successful registration, the login id and password will be mailed to respective registered E-mail id.

In paper [2] the authors have used HTML, JavaScript, and CSS for frontend. For storing records, here they have used MySQL server as database server from client machine over the internet. They have also provided security for information from being hacked. Hacking attacks like SQL injection, XSS, Remote Command Execution, and Path Traversal. For backend coding, they have used PHP which will fetch the information entered by the student and will store it in the database server.

In paper [3] Authors have developed a Hostel Management System website for student, warden and administrator. The website is developed using HTML, CSS, PHP and JavaScript. RFID technology is implemented in this system along with website. The RFID includes tag and receiver antenna for tracking movement of student in hostel. The student module is for student which helps student in viewing his/her details, hostel details, mess details and paying fees. The warden module helps warden to update hostel details, view student details and acknowledge complaints of students.

In paper [4] the authors has developed hostel management system using HTML, JavaScript for the front end. For the backend they have used PHP and all the data is stored in MySQL database server. This portal is available for multiple hostel, students are able to choose whichever hostel they wish. Students have to register and then they are able to choose room they want with different facilities and prices. There are three logins namely admin of the site, student and hostel. Admin will be able to keep watch on the whole process. Hostels will be able to take fees from students, show them allotted and available rooms etc.

In paper [5] Authors have developed Hostel Management System using Image Recognition. For developing frontend of the website, they have used HTML, JavaScript, CSS and for backend C#. Here the database server used is MySQL database server which is used to store the records of students. They have introduced two modules- Student and Hall Admin. They have also included other modules like the one which finds the missing item, a module for hostel registration and a module for giving feedback. This project contains software as well as hardware. For hardware they have used camera for detecting the missing item. In software they have included frontend, backend, SQL server and cloud nary. For developing this project they have used platform called as visual studio code.

In paper [6] the author has proposed a system about administrative monitoring of the hostel. Student will have to register and then he/she will get all the information about the hostel. Admin will be able to allot rooms, see their fee status, and approve leave to students and employees. They have used HTML, CSS, and JavaScript for the frontend and PHP and MySQL (XAMPP) server for the backend.

III. Portal Overview:

In this portal there are three modules:
1) Student Module
2) Warden Module
3) Admin Module

This portal is developed according to our college hostel. The home page of our website is welcome page and it also has information about hostel facilities, mess menu, hostel rules and hostel warden information. The student module is built for hostel students. The student will login to the portal through student module with the help of college registration number and password. When student correctly enters ID and password he/she will see his/her profile. This module allows student to view his room details, pay fees, send leave application, suggestion/complaints etc. The warden module has abilities to view, delete and update student details, hostel details as required and also warden has ability to approve/reject leave application. The admin module has similar abilities plus he has ability to approve or reject leave application of warden. For hosting this website we have used 000webhost site and for storing data we have used MySQL server.

A. Student Module:

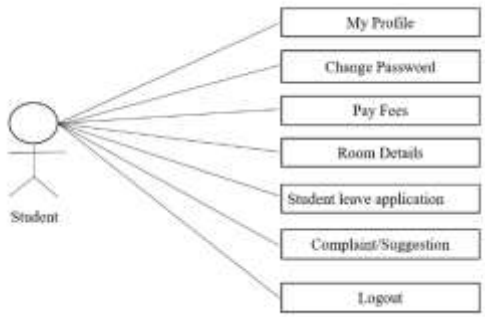

Fig 2 Student Module

- My profile: In my profile tab student see their personal information.
- Change password: Students change password by entering old and new password.

- Pay fees: Students can pay hostel fees through this tab.
- Room details: From this tab students view information about their room.
- Student leave application: In this student can apply for short leave for visiting their home as well as for different purposes.
- Complaint/suggestion: Student can write complaint or suggestion using this tab and send it to warden and admin.
- Logout**:** It is use for logging out of the portal

B) Warden Module:

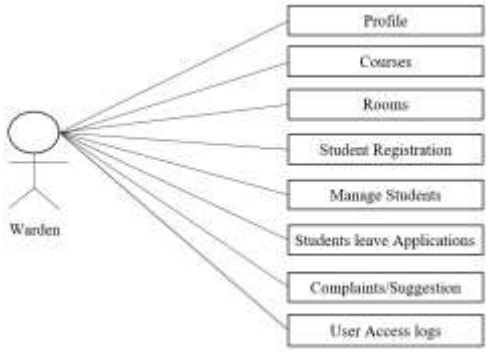

Fig 3 Warden Module

- Profile: In profile tab warden see their personal information.
- Courses: Through this tab warden manages the courses i.e. the engineering fields in which students of college are studying like electronics, mechanical, IT, etc.
- Rooms: Warden manages, adds hostel rooms with the help of this tab.
- Student registration: When student takes admission in hostel warden registers the student on online portal through this tab.
- Manage students: Warden manage hostel students through this tab.
- Student leave application: warden accepts/rejects leave application of student through this tab.
- Complaint/suggestion: Warden views complaint/suggestion sent by the student for making necessary changes or decisions.
- User access log: Warden can view history of which students have logged in to the website and at what time through this tab.

C) *Admin Module*:

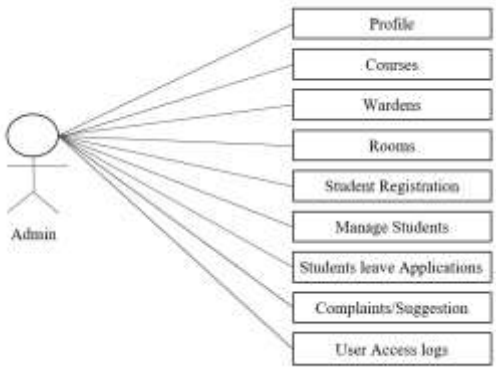

Fig 4 Admin Module

- Profile: In profile tab admin sees his/her personal information.
- Courses: Through this tab admin manages the courses i.e the engineering fields in which students of college are studying like electronics, mechanical, IT, etc.
- Wardens: This tab allows admin to add and mange wardens of hostel.
- Rooms: Admin manages, adds hostel rooms with the help of this tab.
- Student registration: When student takes admission in hostel admin can also register the student on online portal through this tab.
- Manage students: Admin also manages hostel students through this tab.
- Students leave application: Admin also accepts/rejects leave application of student through this tab.
- Complaint/suggestion: Admin also views complaint/suggestion sent by the student for making necessary changes or decisions.
- User access log: Admin can view history of which students as well as wardens have logged in to the website and at what time through this tab.

IV. Languages Used:

1) HTML: HTML stands for Hypertext Markup Language. HTML provides a set of tags and attributes that are used to define the structure, layout, and appearance of web pages. HTML is used to create the basic building blocks of web pages, such as headings, paragraphs, lists, links, images, and forms. It is also used to define the structure of the document, such as the document type, the head section, and the body section. HTML is a language that is interpreted by web browsers, which use it to display web pages to users. It is a crucial part of web development, and is often used in conjunction with other technologies such as CSS (Cascading Style Sheets) and JavaScript to create interactive and visually appealing web pages.

2) CSS: CSS stands for Cascading Style Sheets. It is a language used to describe the presentation of HTML or XML (extensible markup language) documents, including their layout, colors, fonts, and other visual aspects. By separating the presentation layer from the content layer (HTML), CSS allows web developers to create more flexible and responsive designs and make changes to the visual appearance of a website more easily. CSS is often used in combination with HTML and JavaScript to create modern and interactive web applications.

3) JavaScript: JavaScript is a high-level, object-oriented programming language that is primarily used to create dynamic and interactive web pages. It was originally developed by Netscape in the mid-1990s and has since become one of the most popular programming languages on the web. JavaScript can be used to create a wide range of applications, including web and mobile apps, server-side applications, games, and more. It is a client-side language, which means that it runs in the browser and can manipulate the content of a web page in real-time based on user interactions or other events.

4) PHP: PHP stands for Hypertext Preprocessor, and it is a popular server-side scripting language used to create dynamic web pages and web applications. It was first created in 1994 by Rasmus Lerdorf and has since become one of the most widely used programming languages on the web. PHP is often used in conjunction with a web server, such as Apache or Nginx, to generate dynamic web pages in real-time. It can be embedded directly into HTML code and is often used for tasks such as processing form data, accessing databases, and creating user authentication systems.

5) MySQL: MySQL is a popular open-source relational database management system (RDBMS) used for storing and managing data. It was first released in 1995 and has since become one of the most widely used databases in the world, particularly for web-based applications. MySQL is known for its scalability, reliability, and high-performance capabilities. It is commonly used with web applications and websites that require complex data queries and data management. MySQL supports a variety of programming languages, including PHP, Python, and Java, making it a popular choice for developers who work with web applications.

V. Portal Design:

Fig 5 Welcome Page

Fig 6 Contact Information Page

Fig 7 Student/Warden/Admin login page

Fig 8 Profile page

Fig 9 Student Registration Page

Fig 10 Student Management Page

Fig 11 Warden Management Page

Fig 12 Leave Application Management Page

VI. Summary and Conclusion:

In this paper, we have discussed the overview of Online College Hostel Portal. This system reduces human efforts and time. It is the online software which can be accessible from anywhere at any time. We have used languages HTML, JavaScript, CSS, for frontend and PHP and MySQL for backend. By using this system student will be able to do registration, payment of fees, apply for leave, and warden as well as admin will be able to view and monitor student details, approve or reject leave application etc. This system will improve reliability and ease of existing hostel management system. In future we can add attendance monitoring using RFID technology for tracking student's attendance and parent module will enable parents to view their attendance, college fees etc.

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