

# Smart Hostel Management System for Smart City College Management

Shweta Bohara<sup>1</sup> Saloni Jain<sup>2</sup> Vaidehi Ojha<sup>3</sup> Pooja Sisodia<sup>4</sup> Payal Regar<sup>5</sup>

<sup>1,2,3,4,5</sup>UG Student

<sup>1,2,3,4,5</sup>Department of Computer Science & Engineering

<sup>1,2,3,4,5</sup>Geetanjali Institute of Technical Studies Udaipur, Rajasthan 313001, India

**Abstract**— In an era institutes are increasing rapidly. So for accommodation, hostels are increasing day by day. Still, there is the problem of the many of the hotels are using manual entry for the manage it. Parents are also not aware about their ward every day and their problems in hostels. This is the time of digitization and converted all the manual work to the online. So the solution is provided in the hostel. In that some module is added to the facility to the management module is an attendance module for the student every day and update their parent about their ward. Module of the rector, warden and student registration module and fee due module. Room allotment module for student. Another online leave application module in this module information goes to the warden it will be approved by him and the information goes to the main gate guard about confirmation. So this software improves the efficiency for hostel management.

**Key words:** Digitization, Room Allotment Module

## I. INTRODUCTION

Recent scenario is based on the digital India. Every work of Government, companies even though the small Kirana store also becomes online to their product. By using the internet every product or any new things become generalized and approachable to everyone.

Recently education system has become the compulsory to everyone and every parent of a child wants to his ward get a good education and mostly institute even though coaching institute are in the city area. The many of student belong to the remote area. Every parent sends his ward to city get education and get jobs there. So they need to settle their ward in private hostel or government hostel by that they aren't worried of their ward. But still is problematic for the parent when they ward come to the city hostel, they can't know that their ward is safe in a hostel or not. They can't know that their ward is at night in a hostel or not. Every day they can't get information about the ward. These days the hostel is managed by the manual by that every work related hostel is managed by manual. Even though the parent can't know about the hostel which is best for their children. Registration verification are is done manually. The hostel management website helps the caretaker to manage the information on the system for managing the asset information and the student informed of the hostel. The system will become the user friendly for the caretaker if used the online hostel management information. By this it will overcome the existing system drawbacks. This system is designed for the college management system. If the city is smarter than the hostel would be smart to get the information of the student living in the hostel. This system automatically calculates the fee information of student and issued the notice if student do some mischief in the hostel premises. In this automated system the parent can get the information about his ward by getting message to their cell phone. If the student takes leave from hostel the automated leave management system used by this the faculty, warden, rector and guard got the information automatically that he/ she is on leave so and so date. Here parent can get a monthly record about taking leave of the ward. By registration form get the information about students who are in hostel and which room was allotted him/her. This system track the student and his ID give the authenticity about the student.

## II. LITERATURE REVIEW

Till now there some paper only published on hostel management most of the project is developed by the student in his/her B Tech, MCA, and BCA time. So this is not a new for the people [1]. This paper developed automated system this is more user friendly, graphical-user-interface oriented, reliable and secured mechanism. Many of the colleges are using this product worldwide to describe below [2]: Initio describe his six modules that college hostel management module, the inventory /store module, the inquiry module, visitor tracking module etc. It provides information on building, rooms and students [3].

The Microbes hostel system software includes many features like powerful reservation management, reception and cash box administration, statistics and reports etc [4]. Loventis booking system it has property management system, channel manager, booking engine etc. Indocon micro engineers develop the hostel management system that include features such as customizing technology, revenue management, integrated web booking engine etc[5].

## III. PROPOSED WORK

Following module are here:

- 1) Registration Module.
- 2) Hostel Allotment module.
- 3) Fee Details module.

- 4) Attendance module.
- 5) Leave Detail module.

#### A. Registration Module

In this form it gives the information about the hierarchy by which, if any complaints of student is. There if one of them is present the student can complain about his problem.



**Warden Registration Form**

Name:

Warden Id:

Age:

DOB:

Gender: ☒ Male ☐ Female

Contact No:

Blood Group:

State:

City:

Address:

Email Id:

Hostel No:

Seater:

Hostel Name:

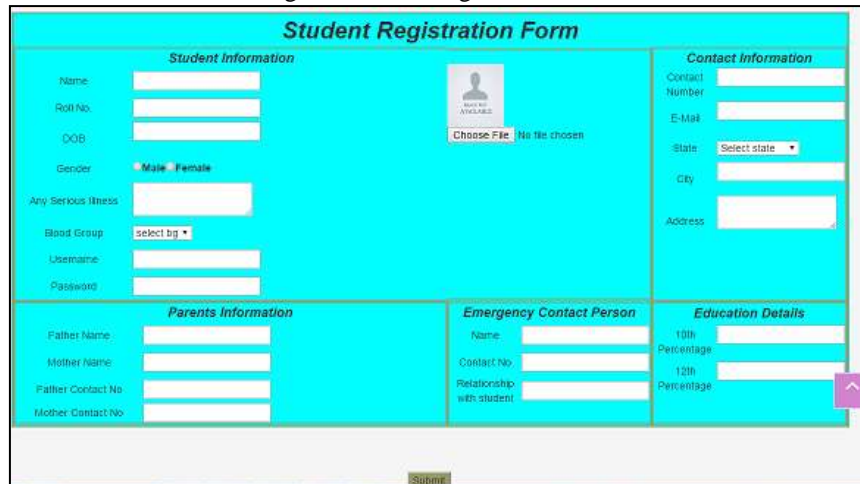
Username:

Password:

March 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Fig. 1: Warden Registration form



**Student Registration Form**

**Student Information**

Name:

Roll No:

DOB:

Gender: ☒ Male ☐ Female

Any Serious Illness:

Blood Group:

Username:

Password:

**Contact Information**

Contact Number:

E-Mail:

State:

City:

Address:

**Parents Information**

Father Name:

Mother Name:

Father Contact No:

Mother Contact No:

**Emergency Contact Person**

Name:

Contact No:

Relationship with student:

**Education Details**

10th:

Percentage:

12th:

Percentage:

Fig. 2: Student Registration form



**Rector Registration Form**

Name:

Rector Id:

Age:

DOB:

Gender: ☒ Male ☐ Female

Contact No:

Blood Group:

State:

City:

Address:

Email Id:

Username:

Password:

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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Fig. 3: Rector Registration form

### B. Hostel Allotment Module

Warden is click on that room that is not fully occupied, in which warden enter the student roll number and then, after enter get all details of student and she approve that room to the student .And that is update automatically in student and room database. If any student wants to leave the room than warden click on delete button then room and student detail will update.

And Warden can also see the detail of student by their select roll number and also by select their room number.

Room No	Action	Fully Occupied
101	Edit	True
102	Edit	False

Fig. 4: Student Hostel allotment form

Room No	Student Roll No	Student Name	Action
101	13EGIC3109	Chhaya Sharma	Delete
102	13EGIC3115	Student Cpa	Delete

☐ Fully Occupied

Hostel No: 101 Room No: 101 Student Roll No: Student Name: Approve

Fig. 5: 2-Seater hostel allotment

### C. Fee Details Module

After student login student name and roll number will be automatically shown he/she will enter only fee details like receipt number, amount paid, date of paid and image of fee receipt. On top of this page the list of receipt numbers of particular student will generate on page loaded. So a student can prevent from the re-entered their same fee detail.

#### 1) Warden

On this page the list of students will be loaded if warden wants to confirm the receipt number, then click on leave with the particular receipt number process to another page, here image of that particular receipt number will be open so from this warden can confirm the receipt number which is entered by the student. After confirmation of receipt, number warden will send the amount details to the student's parents.

#### 2) Rector

On click on hostel number than generate the fee detail of the student which is belong to that hostel.

Receipt No: 1234

Student Name: Shweta Bohara

Roll No: 13EGIC3109

Receipt No:

Amount Paid:

Date Of Paid:

Fee Form:

Upload

Fig. 6: Fee Detail form for student



Welcome harshlata

[Edit Profile](#)  
[Edit Image](#)  
[Change Password](#)

*Fee Details*

S.No.	Student Name	Receipt No	Date	Amount Paid	Amount Due	Actions
1	shweta	1245	01/02/2017	20000	20000	<a href="#">Edit</a> <a href="#">Delete</a>
5	warden	1247	02/03/2017	40000	10000	<a href="#">Edit</a> <a href="#">Delete</a>
8	warden	1342	21/02/2017	30000	20000	<a href="#">Edit</a> <a href="#">Delete</a>
9	poorja	1389	22/02/2017	30000	20000	<a href="#">Edit</a> <a href="#">Delete</a>
10	payal	1225	02/02/2017	20000	0	<a href="#">Edit</a> <a href="#">Delete</a>

Fig. 7: Warden fee-detail form.

#### D. Attendance Details Module

Through Biometric machine the attendance list will save into database and from here this is shown on the warden and the rector attendance detail page. If a student is not present without permission, then the message will send by warden to the student's parent.

#### E. Leave Detail Module

After student login on this page the student detail will automatically come from the database he/she only enters leave on from this date to this date, reason for the leave and the number of days.

##### 1) Warden

Here the list of those student will be open who applied for a leave form. If warden wants to approve, then click on approving and this is automatic, save in the database and from here the student can get that her application form has been approved by the warden or not. This will show on student leave detail page.



*Leave Form*

Roll No: 13EGRC5105  
Name: Shweta Richard  
Father's Name: Mr. Sumit Richard  
Hostel Name:   
Hostel Number: 0  
Leaving To:   
From:   
To:   
Reason:   
Student Contact No: 9795786710  
Parent's Contact No: 9975832421

Fig. 8: Leave Form



*Student's Leave Details*

S.No	Register Number	Student Name	Father Name	Hostel Name	Hostel Number	Leaving To	From	To	Reason	Student Contact Number	Parent Contact Number	Actions
1	215EGRC5005	Sumit Jain	Mr. Sumit Richard	Wardens	0	Home	21/02/2017	21/02/2017	Message	9414557950	9414570051	<a href="#">Delete</a>
2	215EGRC5004	Pooja Bhaskar	Mr. Sumit Richard	Wardens	0	Home	21/02/2017	21/02/2017	Message	9414557950	9414570051	<a href="#">Delete</a>
3	215EGRC5001	Pooja Ragar	Mr. Sumit Richard	Wardens	0	Home	21/02/2017	21/02/2017	Message	9414557950	9414570051	<a href="#">Delete</a>
10	215EGRC5100	Shweta	Mr. Sumit Richard	Wardens	0	Home	21/02/2017	21/02/2017	Message	9414557950	9414570051	<a href="#">Delete</a>
11	215EGRC5113	Shweta	Mr. Sumit Richard	Wardens	0	Home	21/02/2017	21/02/2017	Message	9414557950	9414570051	<a href="#">Delete</a>

Fig. 9: Student leave detail form

#### IV. CONCLUSION AND FUTURE WORK

Smart online hostel management system is very useful for hostel allotment, online application approval. Here by the numbers of hostels are also increasing for the accommodation of the students studying in any institutions, hence there is a lot of strain on the person who is running the hostel. This particular project deals with the problems on managing hostels and avoids the problems which occurred when carried manually. Identification of the drawbacks of the existing system leads to the designing of a computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented. It is reached in a matter of the leave management system, it will apply by the student and accepted by the faculty or warden online. In this system most important module can be implemented that using IOT it become very rich in working that automated message goes to the parent about the attendance of students.

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