



**Sinhgad Institutes**

Sinhgad Technical Education Society's

**Sinhgad Academy of Engineering, Kondhwa (Bk.), Pune**

Employability Skills Laboratory

**Mini Project**

## **HOSTEL MANAGEMENT**

**National Board Of Accreditation**

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Year 2015-16.



## Sinhgad Institutes

# CERTIFICATE

This is to certify that the project report entitled “**HOSTEL MANAGEMENT**”

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is a bonafide work carried out by them under the supervision of Prof. Poonam Pate and it is submitted towards the partial fulfilment of the requirement of Savitribai Phule Pune University, for completing the requirements of Computer Engineering.

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## ACKNOWLEDGEMENT

I would like to take this opportunity to thank all the people who were a part of this project in numerous ways, people who gave un-ending support right from the initial stage. In particular, I wish to thank **Prof. Poonam Pate** my internal project guide who gave her co-operation timely and precious guidance without which this project would not have been a success. I thank her for reviewing the entire project with painstaking efforts. And more of her, uncanny ability to spot the mistakes.

I would like to thank our H.O.D **Prof. B.B.Gite** for his continuous encouragement, support and guidance at each and every stage of development of this project.

And last but not the least I would like to thank all my friends who were associated with me and helped me in preparing my project. The project named **NATIONAL BOARD OF ACCREDITATION** would not have been possible without the extensive support of people who were directly or indirectly involved in its successful execution.

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## **1. ABSTRACT**

"Hostel Management" is an idea to computerize the various functionality of management in hostel. Using this software application we can help the users to view their information and the management can organize students' information in database. The main objective of this project was to avoid lots of paper work to maintain record of every individual.

This software deals with overall functionality of hostel administration including students' records. It also enables the functions to login, logout and to insert, update, display and delete the records. It also generates the respective reports.

The main challenge was to make the system work without any errors so that all the reports were generated accurately

## **2. INTRODUCTION**

Hostel management system which is prevalent these days is done manually on paper. This system is inefficient as it relies on manual work which can induce errors.

In the currently used system there is a probability of data loss as the records can be misplaced or lost. Also the records can be manipulated by anyone. This system is also slow and the cost is also more as it includes paper work, labour and storage space to store the records.

“Hostel Management” is an automation system that replaces the manual working mode of a hostel by a more convenient, user-friendly, efficient and user-oriented working environment.

It resolves the problems such as, automation of the administration of the hostel and automation of report generation at administration and user level.

The system is divided into two Modules:

1.0 Administration Module.

1.1 User Module.

### **Administration Module:**

This Module provides forms for login(authentication), and validates the data filled in forms provided for girls' hostel and boys' hostel. And enables operations to insert, update, display and delete the records.

### **User Module:**

This Module allows to view a particular record stored in the database of the hostel.

### **3. SYSTEM STUDY**

#### **3.1 Proposed System**

The system provides a user friendly interface which saves time and cost of paper work.

The main motto of this system is to computerize the whole record keeping the protocol of the hostel with minimum human efforts and in least possible time and most importantly without errors.

The system also provides accurate, quick and meaningful information based on the transaction processed. It also provides quick and accurate reports relating to the organization.

The System makes sure that the transaction records are complete, accurate and readily available. It provides Standard for Data sharing and analysis keeping in mind the standards for privileges and data security.

There is Login Form for authenticating Users for gaining authorised access to the system and restrict invalid access to the system by unauthorised users.

#### **3.2 Scope of System**

The System helps to Access real time information. It has an effective use of well laid-out Graphical User Interface.

The System provides Validation and Error Handling. Students (Users) can also do online enquiry. The system provides automatic generation and validation of Reports according the User. It also has powerful transaction and routine data processing capabilities. The system enables a strong controlled environment.



Thoughtful and Timely changes are made to keep pace with advances in both Technology and Business. An effective governance and administrative structure is created and maintained to support the management with network or improved functionality, fixes and service releases.

### 3.3 Working of System

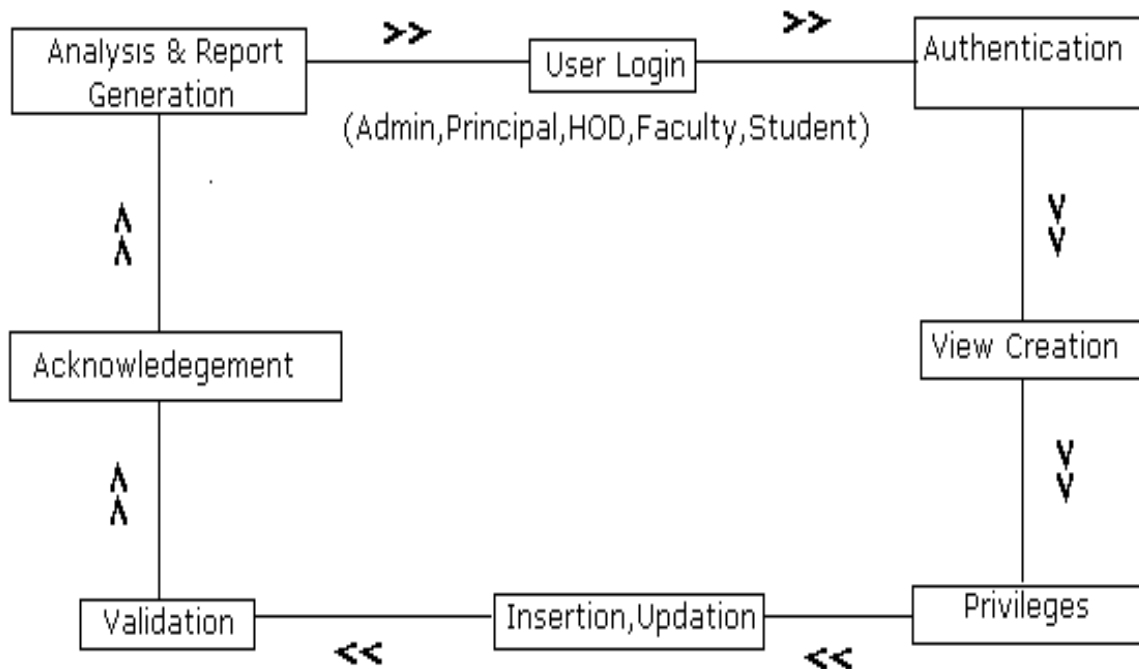


FIG. 1: WORKING OF SYSTEM

### 3.4 Feasibility Technique

The main objective of feasibility study is to test Technical, Operational and Economical extensibility for developing computerised system. This is done by investigating and generating idea about a new system.

Feasibility study helps to obtain an overview of the problem and get rough assessment of whether any feasible solution exists. There are three types of feasibility studies in order to understand whether the proposed system would be feasible if implemented.

They are as follows:

- Technical Feasibility
- Economical Feasibility
- Operational Feasibility

### **1. Technical Feasibility**

Technical Feasibility will need to consider the possibilities of using machines available and the nature of hardware being used in the system. It's always better to select the best package that will be flexible with other programmers or outside developers and also possible for the user.

We are using JSP scripting language and Netbeans-8.0.2-javaee IDE. To develop this application this is the feasible technology due to its strong desktop development architecture and its simplicity of use.

### **2. Operational Feasibility**

The system is user friendly and it is accessible to user, and much easier to operate because the interface of the system and screen display is quite clear. The system must operate in proper cyclic frequency of transactions. There are navigation bars by which the users and administrator both can lead to system operations.

### **3. Economical Feasibility**

Proposed or developed system is been justified by the cost and analysis benefits to ensure that efforts are concentrated on the project that will give best returns at the earliest opportunity. The cost of operation of the proposed system is minimal, since there is no need of installing hardware, training etc as computers are already installed and users are well trained.

### **3.5 Hardware & Software Requirements**

#### **HARDWARE REQUIREMENTS:**

Processor-: 1.2 GHz

Hard Disk-: 20GB

RAM-: 512 MB (Minimum)

Mouse-: Any

Keyboard-: Any

Printer-: Any

Monitor-: Any CRT or LCD

#### **SOFTWARE REQUIREMENTS:**

Operating System-: Windows 2000, WindowsXP, Windows Vista, 7, 8, 10, Ubuntu, Fedora, etc

Front End -: HTML, JSP, CSS

Back End -: MongoDB

## 4. STRUCTURED ANALYSIS

### 4.1 Content Level Diagram

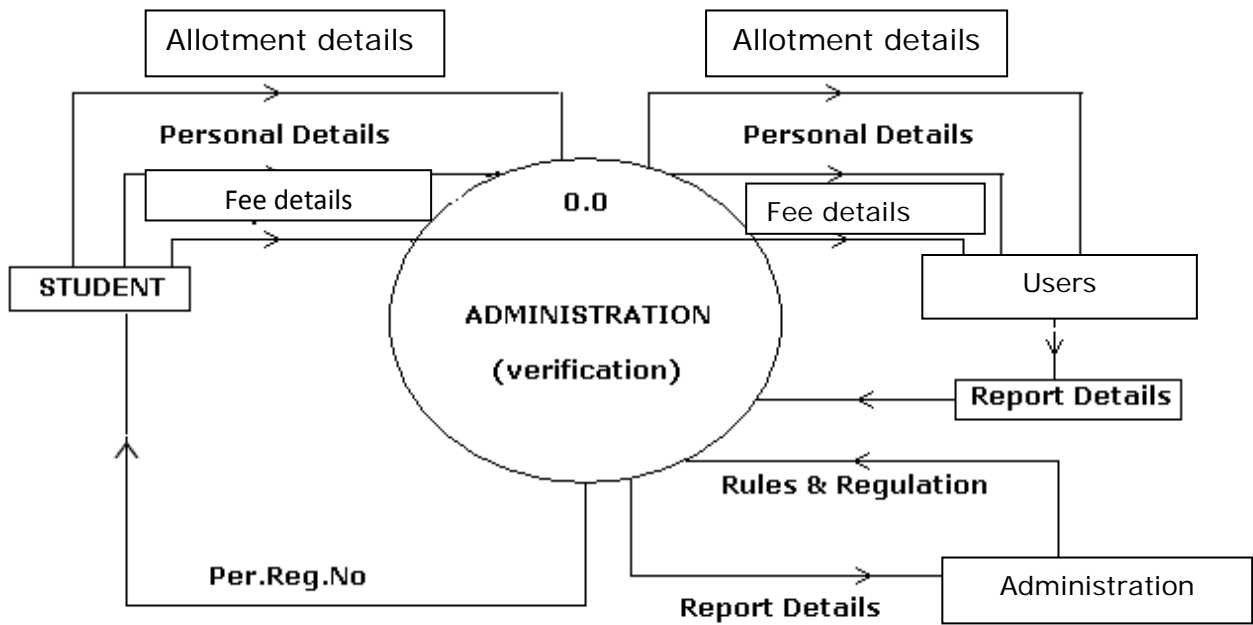


FIG. 2: CONTENT LEVEL DIAGRAM

## 4.2 Data Flow Diagram

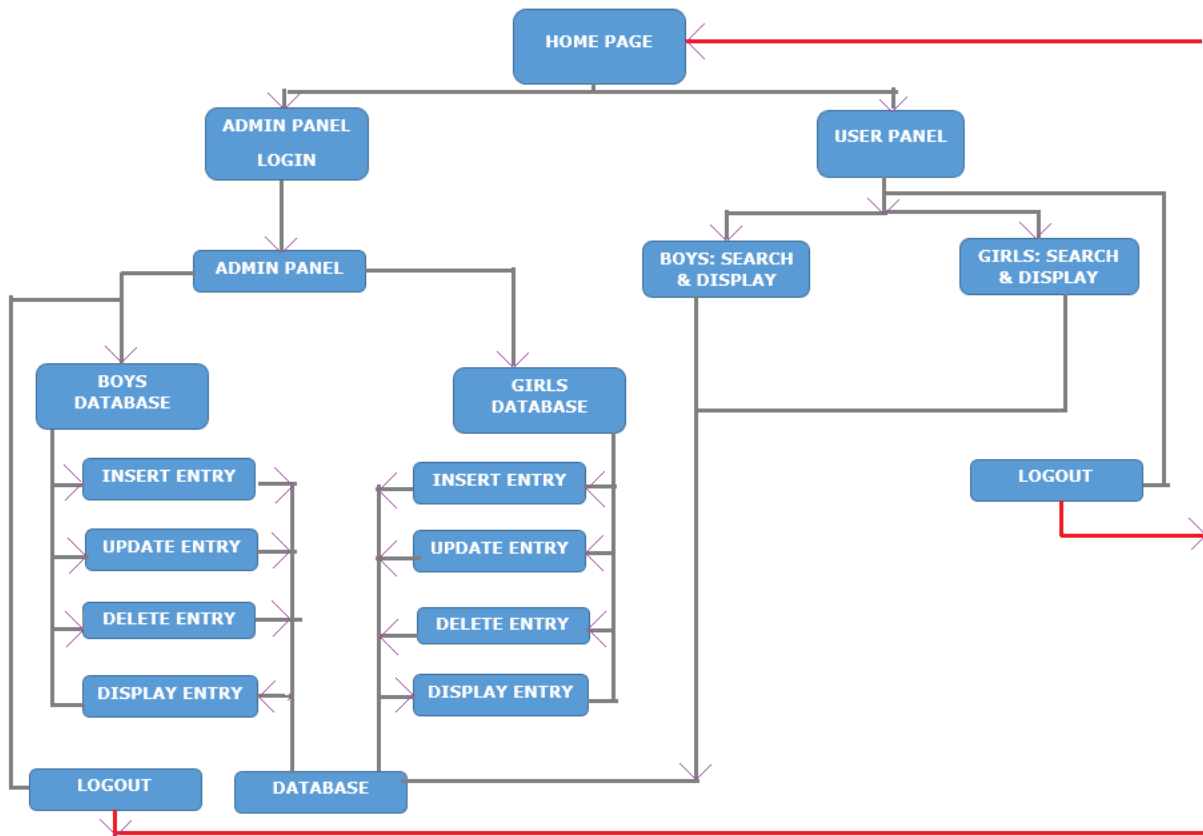


FIG. 3: DATA FLOW DIAGRAM

## 5. SYSTEM DESIGN

### 5.1 Schema Design.

#### Personal details

SR.NO	Key	Value	Width
1.	Student id	_id	20
2.	Name	_name	20
3.	Date Of Birth	DD/MM/YY	20
4.	Address	address	20
5.	Contact no. self	_self	20
6.	Parent Contact no	_parent	20
7.	Blood Group	_bg	20

TABLE 1: PERSONAL DETAILS

#### Fee details

SR.NO	Key	Value	Width
1.	Fee paid	_paid	20
2.	Fee due	_due	20
3.	Date Of payment	DD/MM/YY	20

TABLE 2: FEE DETAILS

#### Allotment details

SR.NO	Key	Value	Width
1.	Wing no.	_wing	20
2.	Floor no.	_floor	20
3.	Room no.	_room	20
4.	Bed no.	_bed	20

TABLE 3: ALLOTMENT DETAILS

## Violation details

SR.NO	Key	Value	Width
1.	Damage	_damage	20
2.	Penalty	_penalty	20

TABLE 4: VIOLATION DETAILS

## 5.2 Input Screen

### Home Form:

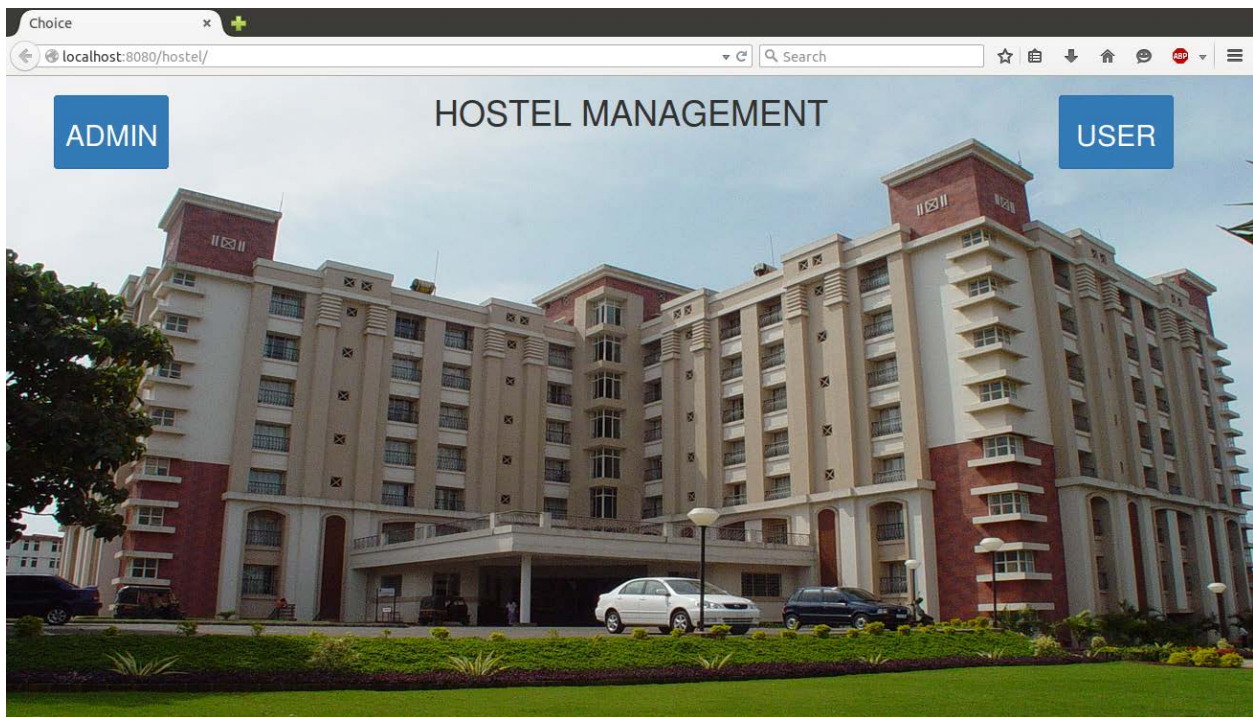


FIG. 4: HOME FORM

## Login Form:

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/login.html'. The page has a blue header with the text 'HOSTEL MANAGEMENT'. Below the header, there is a central login form titled 'Admin Login'. The form contains two input fields: 'Username :' and 'Password :'. Below these fields is a 'Login' button. The background of the page is light blue.

FIG. 5: LOGIN FORM

## Admin (choice) Panel Form:

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/gbchoice.html'. The page has a blue header with the text 'HOSTEL MANAGEMENT'. Below the header, there is a 'Welcome Admin ,' message. On the left side, there is a 'Navigation Panel' with two options: 'Boys Hostel' and 'Girls Hostel'. Each option has a corresponding icon (a blue male figure for Boys Hostel and a pink female figure for Girls Hostel). To the right of the navigation panel, there is a paragraph of text: '"A home away from home". That's what our students experience living in the campus. Students are provided with excellent mess facilities, medical facilities, sports facilities, Wi-Fi enabled premises, besides promoting an informal atmosphere for student-faculty interaction. Hostel Department deals with Hostel admission and administration.' Below this paragraph is a list of six points: 1) This hostel belongs to STES group of institutes. 2) We have well furnished two separate hostels for boys and girls. 3) Each hostel consist of two wings viz WingA & WingB. 4) Each Wing is a 4 storyed building . 5) Each floor has 20 rooms, thereby summing up total of 80 rooms. 6) So in all boys hostel has 160 rooms & so as girls , altogether have 320 room for accomodation of students. In the bottom right corner, there is a red 'LOGOUT' button.

FIG. 6: ADMIN (CHOICE) PANEL FORM



## User Panel Form:

The screenshot shows a web browser window with the title "User LOGIN" and the URL "localhost:8080/hostel/user2.html". The page has a blue header with the text "HOSTEL MANAGEMENT". Below the header, there is a "Welcome User ," message. On the left, there is a "Navigation Panel" with a "User Details" section and a "Display User Details" link. Below this is a graphic of a smartphone. The main content area contains a paragraph about the hostel's facilities, followed by a list of five points: 1) Separate state-of art Gymnasium in Boys and Girls Hostels, 2) Provision of common reading rooms in Boys and Girls Hostels, 3) Proposed common kitchen for students with facilities like refrigerator and microwave etc., 4) Central cooling system for both the Hostels is under progress, and 5) Provision of running hot water in the bathrooms. A red "LOGOUT" button is visible in the bottom right corner.

FIG. 7: USER PANEL FORM

## Hostel Database option Form:

The screenshot shows a web browser window with the title "SELECT YOUR CHOICE" and the URL "localhost:8080/hostel/boyoptn.html". The page has a blue header with the text "HOSTEL MANAGEMENT". Below the header, there is a "Boys Database Options" section. This section contains four blue buttons stacked vertically: "New Entry", "Update Entry", "Display", and "Delete Entry". Below these buttons is a green "HOME" button.

FIG. 8: HOSTEL DATABASE OPTION FORM

## New Entry Form:

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/newEntryB.html'. The page title is 'Enter New Entry'. The main heading is 'BOYS DATABASE NEW ENTRY'. Below this, there are three sections: 'PERSONAL INFORMATION', 'FEE DETAILS', and 'ALLOTMENT DETAILS'. Each section contains several input fields for data entry.

**PERSONAL INFORMATION**

ID:   
Name:   
Date of Birth:   
Blood Group:   
Address:   
Mobile(Self):   
Moblie(Parent):

**FEE DETAILS**

Fees Paid :   
Fee Due :   
Date of Payment :

**ALLOTMENT DETAILS**

Wina No :

FIG. 9: NEW ENTRY FORM

## Search Entry for deletion Form:

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/delBB.jsp'. The page title is 'Search entry'. The main heading is 'HOSTEL MANAGEMENT'. Below this, there is a section titled 'BOYS DATABASE ENTRY SEARCH'. It contains a text input field for 'Enter the ID to Delete:' with the value 'B1' entered. Below the input field is a blue 'SUBMIT' button. On the left side of the page, there is a green 'GO BACK' button.

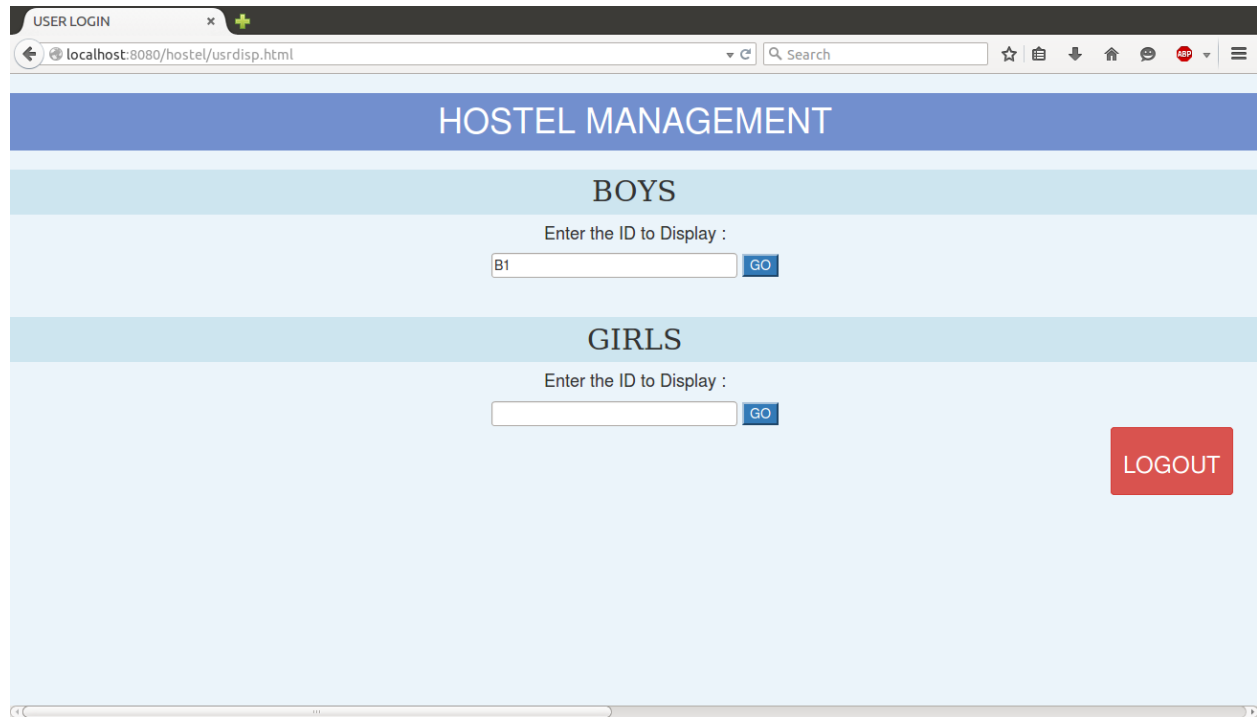
**HOSTEL MANAGEMENT**

**BOYS DATABASE ENTRY SEARCH**

Enter the ID to Delete:

FIG. 10: SEARCH ENTRY FOR DELETION

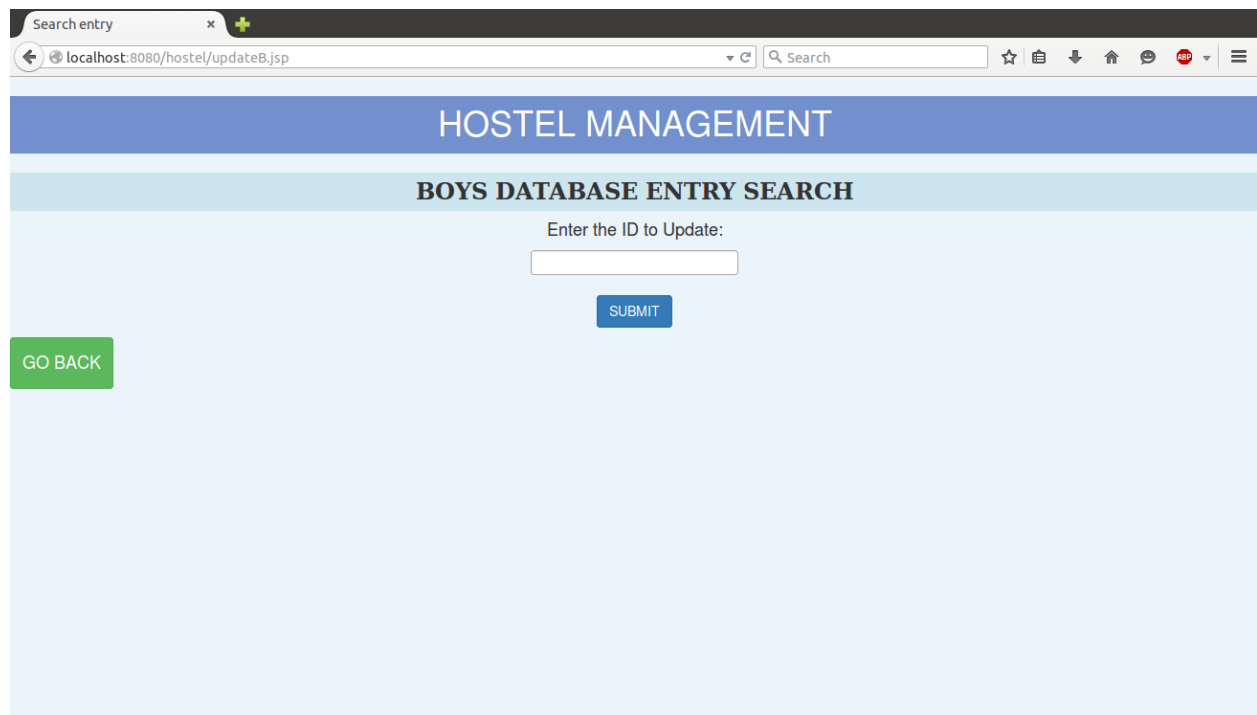
## User Search Form:



The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/usrdisp.html'. The page has a blue header with the text 'HOSTEL MANAGEMENT'. Below the header, there are two sections: 'BOYS' and 'GIRLS'. Each section has a text input field for 'Enter the ID to Display :'. The 'BOYS' section has a 'GO' button next to the input field, which contains the text 'B1'. The 'GIRLS' section has a 'GO' button next to an empty input field. On the right side of the page, there is a red button labeled 'LOGOUT'.

FIG. 11: USER SEARCH FORM

## Update User Details:



The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/updateB.jsp'. The page has a blue header with the text 'HOSTEL MANAGEMENT'. Below the header, there is a section titled 'BOYS DATABASE ENTRY SEARCH'. This section has a text input field for 'Enter the ID to Update:'. Below the input field, there is a blue button labeled 'SUBMIT'. On the left side of the page, there is a green button labeled 'GO BACK'.

FIG.12: USER UPDATE DETAILS

## Updation Form:

The screenshot shows a web browser window with the address bar displaying 'localhost:8080/hostel/updateB2.jsp'. The page title is 'Enter Update Entry'. The form contains the following fields and values:

Field	Value
Name:	Sachin
Date of Birth :	08/05/1995
Blood Group :	A+
Address :	Mumbai
Mobile(Self) :	9856325640
Moblie(Parent) :	9652032012
Fee Paid :	100
Fee Due :	9000
Date of Payment :	15/3/2015
Wing No :	B
Floor No :	1
Room No :	3
Bed No :	4
Damage :	Broke
Penalty :	200

At the bottom of the form is an 'UPDATE' button.

**FIG. 13: UPDATION FORM**

## 6.3 Reports

### Authentication Form:

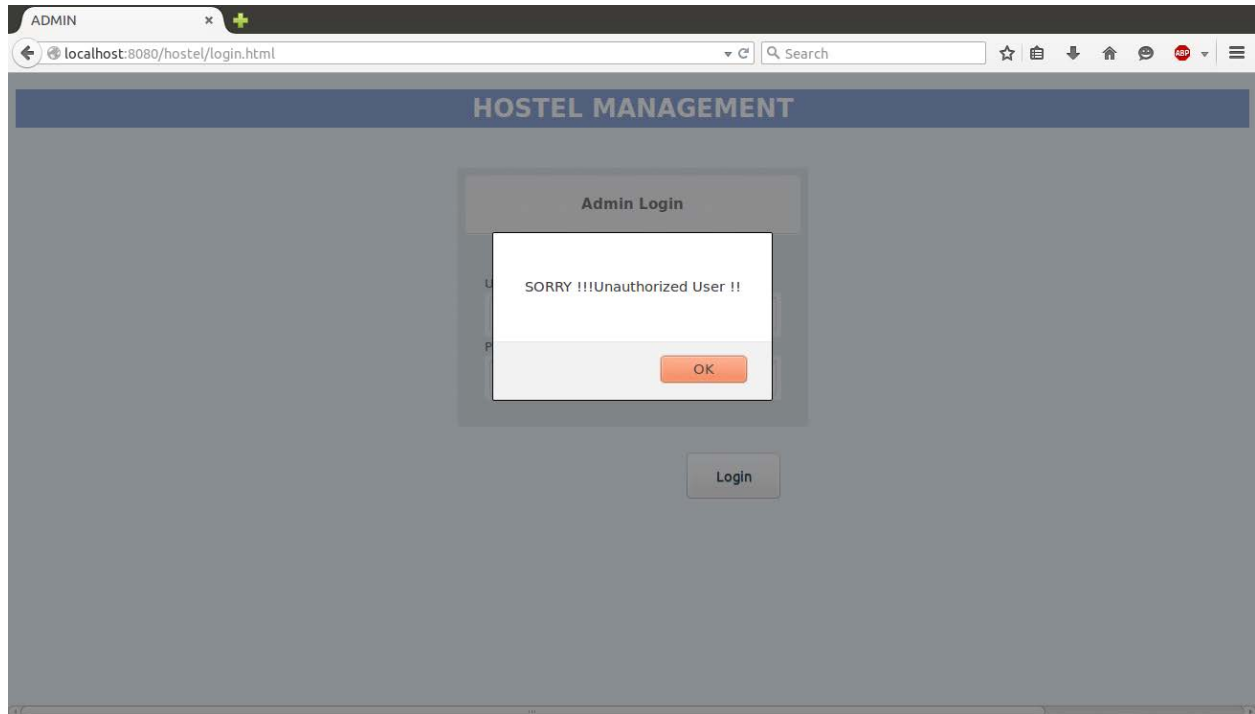


FIG. 14: AUTHENTICATION FORM

## Entry Insertion Successful Form:

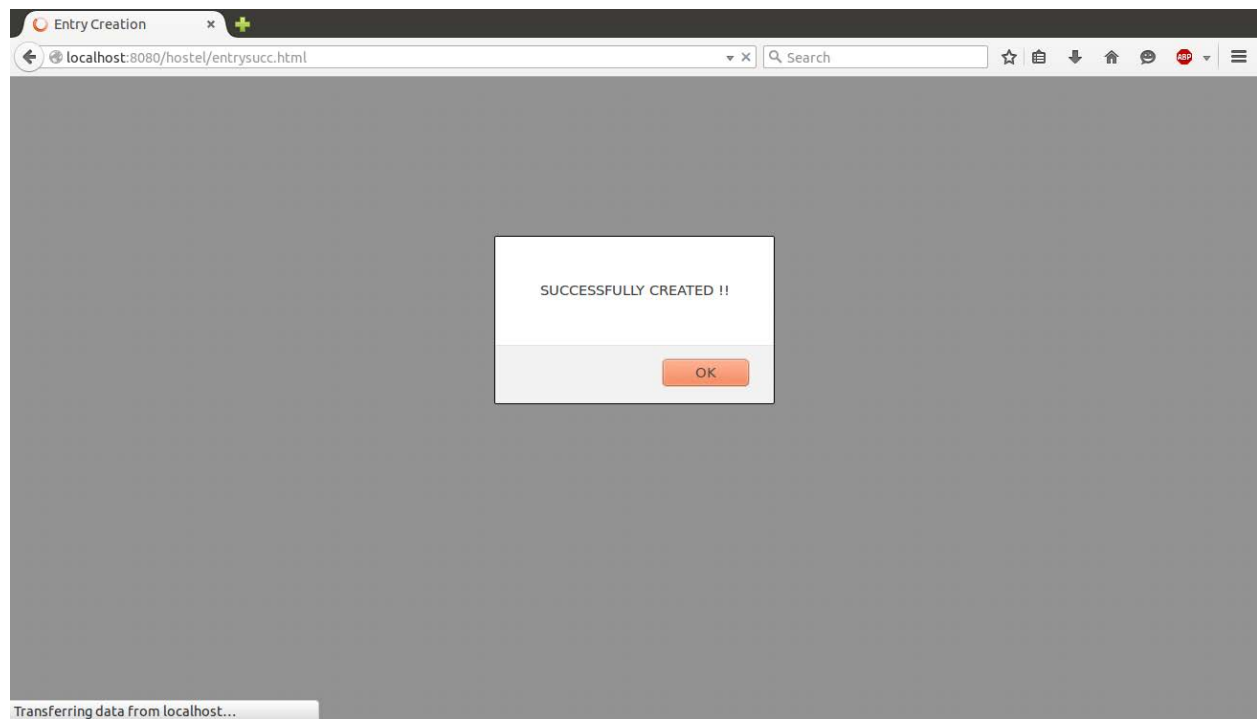


FIG.15: ENTRY INSERTION SUCCESSFUL

## Successful Updation Form:

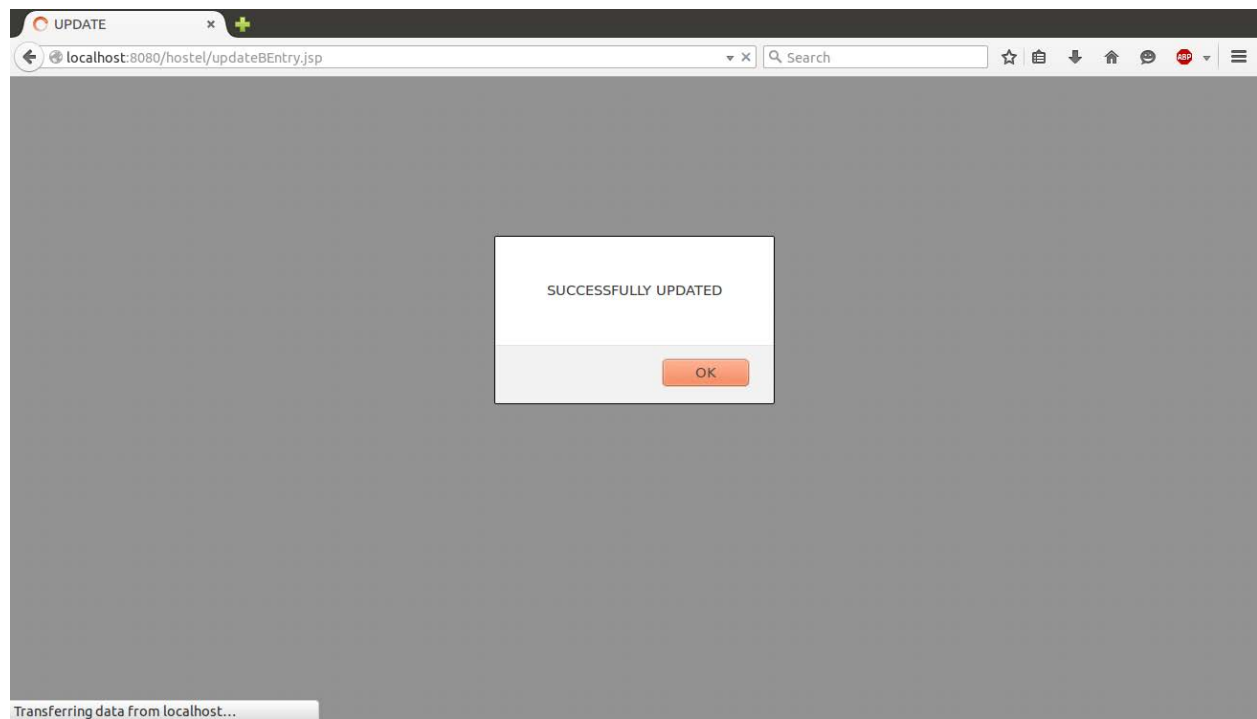


FIG.16: SUCCESSFUL UPDATION FORM

## Successful Deletion Form:

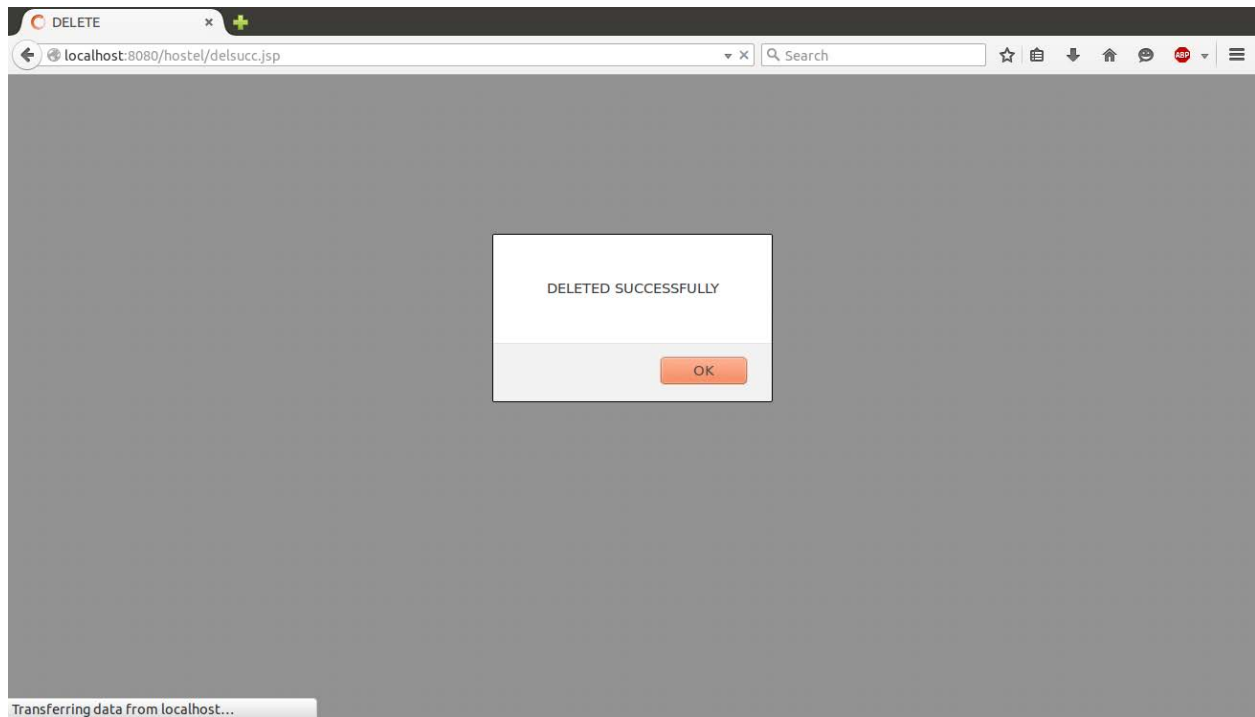


FIG. 17: SUCCESSFUL DELETION FORM

## User Detail Form:

A screenshot of a web browser window displaying a user detail form. The address bar shows 'http://localhost:8080/hostel/Bdisp.jsp'. The form is divided into several sections: PERSONAL, FEE DETAILS, ALLOTMENT DETAILS, and VIOLATIONS. A green 'HOME' button is located at the bottom left.

PERSONAL

NAME	DATE OF BIRTH	BLOOD GROUP	ADDRESS	MOBILE SELF	MOBILE PARENT
Sachin	14/10/1995	A+	Nagpur	9856320124	8741256390

FEE DETAILS

FEE PAID	FEE DUE	Date of Payment
40,000	30,000	15/3/2015

ALLOTMENT DETAILS

WING No.	FLOOR No.	ROOM No.	BED No.
A	1	3	1

VIOLATIONS

DAMAGE	PENALTY
Not	NO

HOME

FIG. 18: USER DETAIL FORM

## Display All Record Form:

HOSTEL MANAGEMENT															
List of All Boys in the Hostel															
ID	Name	Date of Birth	Blood Group	Address	Mobile(self)	Mobile(parent)	Fee Paid	Fee Due	Date Of Payment	Wing No	Floor No	Room No	Bed No	Damage	Penalty
B1	Sachin	14/10/1995	A+	Nagpur	9856320124	8741256390	40,000	30,000	15/3/2015	A	1	3	1	Not	NO
B3	Varun Kumar	14/10/1995	A+	Bhusaval	7856321458	8523101789	40,000	20,000	1/3/2015	A	2	9	2	Not yet	NO
B4	Kunal Balchandra	23/3/1995	B+	Bangalore	8751236940	8956320147	55,000	5000	9/3/2015	B	1	15	3	Chair Damaged	100
B2	Ranjeet	08/05/1995	AB+	Akola	7856230145	8965231457	30,000	30,000	3/3/2015	A	3	2	3	Not	NO
B5	Vivek Chaudhary	16/10/1995	B+	Pune	9635874120	8521445693	15,000	45,000	18/3/2015	A	2	15	2	Not yet	NO
B6	Samkit Jadhav	18/12/1995	A+	Chennai	7856321458	8410236699	30,000	30,000	3/3/2015	A	2	20	2	Not yet	NO

GO BACK

FIG.19: DISPLAY ALL RECORD FORM



## 6. TESTING

Testing is one of the important steps to be performed to ensure successful implementation of the system. The basic idea of carrying out testing is to ensure no error exists in the functionality and operability of the program. Therefore the most useful and practical approach is with intension of finding errors. This is the phase where the system is intentionally made to fail so as to make the system full proof and error free up to the limit possible.

Initially Test data is prepared to check the software. During this phase the system is used experimentally to ensure that the software does not fail. Special test data are inputs for processing and the result is examined. It is very essential for increasing its effectiveness and accuracy.

The testing of system is necessary to ensure the following issues:

- Completeness
- Correctness
- Reliability

In general the system was thoroughly checked at each level, right from the beginning. System was checked at different levels.

<b><u>Testing parameters</u></b>	<b><u>Conditions of failure</u></b>
Submit button	If the values that are entered are null then the submit button should not operate.
Search button	It should not work if no value is entered.

Update button	It should not work if no value is entered.
Insert button	If any of the field is left blank then no entry should be accepted.

TABLE 5: TESTING

- Testing of data entry procedures is done.
- Testing of data validations is done.
- Entering data via different screens (forms) is done.
- Testing for data insertion and updation is done.
- Record saving procedure is done.
- Error routines were checked.

## **7. CONCLUSION**

This system provides reports to each level of hierarchy. The system carries its work from the point of view of administrator as well as the point of other users in the system.

The valid inputs are required which can yield the best results. Unauthorised user will not be able to access the system.

The system was found feasible and operational. The User found the system to be interesting and very easy to handle, apart from the fact that it is accurate and efficient. The system maintained the required information with all the validations and thus implements data consistently throughout. All the tedious reports were generated automatically, hence was tedious work of removing the necessary data for report generation was done, saving time, energy and resources.

Thus the system gives its result properly.

## **8. Future Scope**

The main advantage of this system is – It reduces manpower for the management of a huge data.

It can further be upgraded to –

1. Link it with the particular institution's servers so that it can also be accessed from the institution thereby saving time taken to reach the Hostel.
2. The whole database can be migrated to cloud so that then it can be accessed from anywhere around the globe.
3. Hence, it is not mandatory for the administrator to reach over that particular location.
4. It thus will help the authority to get summarized report on the go.

## 9. References

The details / sites / books we referred to are as mentioned below:

1. Book – MongoDB by O'Reilly
2. [www.google.co.in](http://www.google.co.in)
3. [www.bootstrap.com](http://www.bootstrap.com)
4. [www.flatui.org](http://www.flatui.org)
5. [www.stackoverflow.org](http://www.stackoverflow.org)