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Hostel Management System User manual

User Manual (version 1.1) Group Number-21

IT-314 Software Engineering

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# Introduction

## Purpose

The purpose of the document is to provide the users of the Hostel Management System with a comprehensive guide to use the website in an organized way. This document will empower the users with the tools to satisfy his/her needs in an efficient way by accessing the Hostel management System.

## Document Overview

The document is organized into the following sections:

* **Website Summary**: This section provides a general overview of the website and outlines the uses of the website in supporting the activities of the users.
* **Requirements**: User requirements and system requirements for using the website.
* **Access to Hostel Management System**: This section provides a step by step description of how to access various necessary components of the website on the user’s system. The hostel management system will be a web client server based application which can be accessed by a web URL, leading to the home page of the application. The user will be granted two options to access the website, either to login and access the features as a privileged user (Student, Doctor, Security, Admin, HMC and HMC Convener) or use it as a Guest.
* **Getting started**: An overview of the system flow. Describes the main functionalities a user will encounter.

## Document Scope

The user manual contains all the essential information which would help the administrators, residents and rest of the users to make full use of the Hostel Management System (HMS). This manual includes a description of the system functions and capabilities, contingencies and alternate modes of operation, and step-by-step procedures for system access and use.

## Intended Audience

This user manual is meant to provide detailed information for the usage of system along with its features for:

* The students of DA-IICT Gandhinagar (Primary users)
* Hostel warden and supervisor, student representatives and doctor
* The team of developers i.e. Team 21, IT314 (2013), DA-IICT for reference
* The Professor of IT314, for evaluation and information purposes
* Any other entities intending to deploy/extend the application for personal use

## Document References

* SRS – Software Requirements Specifications, Team 21, IT314, 2013
* SDS – Software Design Specifications, Team 21, IT314, 2013

## Points of Contact

The document can be utilized for informational and/or troubleshooting purposes. It can also be used for the collecting information pertaining to developmental or maintenance operations. The document user may contact IT314 Team 21, (2013) DA-IICT at the following e-mail addresses:

201001244@daiict.ac.in

# General Information

## System Overview

The Hostel Management System is a web-based application that helps the residents of HOR-men and HOR-women to use the facilities provided in the hostels in a better and efficient manner. The hostel authorities are also benefited as the management, through these facilities, will become easier and less cumbersome.

* Major functions: Web-based applications for enhancement of online complaint system, in-out entries of laptops, Mail Receive Notifications etc.
* Architecture : Client-Server web-based application
* User access mode : Graphical User Interface and web-pages
* Developers: IT314 Group 21, 2013, DA-IICT, Gandhinagar.
* System name : Hostel management System
* Operational status: Operational main modules, undergoing some modifications and up gradations.
* System environment: Desktop or laptop with Internet Explorer/Mozilla Firefox/Google Chrome or any other browser installed and having internet connectivity.

# System summary

## System Configuration

The server contains a database of members of HOR-Men and HOR-Women and the records to be maintained are of type ID, Room number, ETIC subscription etc.

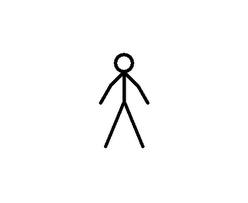
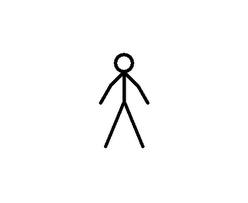
Hostel supervisor

C:\Program Files\Microsoft Office\MEDIA\OFFICE14\AutoShap\BD18215_.wmf Server (accessed and modified by administrator)

Users including Admin, Residents, Security Personnel etc.

## Data Flows

Students are registered by the administration after which students can log in using their respective username and password. The hostel supervisor is registered as super-user and may use the application to search for students, view their profiles and behavioral records, add to or delete students from the user database and add/delete/modify the student data.

*Student Client: Student interface Server Database Admin: Hostel Authority Hostel*

*Login and Logout contains student’s*

*Residential information*

## System Features

The functions and features are made available on the website depending on the varied needs of the User Classes. The features segmented on the basis of the user classes are as follows:

## *Guest user*

A user without login can access a section consisting of rules and regulations and facilities provided in the HOR (men and women). No rights to modify any content in the above will be granted to this category of users. He/she can view the general complains made in the interactive forum denied of the rights to post any complains or to modify any of the existing ones. He can access the information pertaining to TV remote, Laundry Man and Doctor, Activity schedules of clubs and communities, Administrative policies, Contact information of hostel authorities. The person can access the lost and found updates only as a passive user. No rights are provided to post in the section of ‘Lost-n-Found’.

## *Student*

A member of the student community can access all the information provided to the guest user (i.e., the above mentioned features which do not require the task of authentication.). In addition to it, he/she will also have a right to post in the interactive forums like complains section and also lost and found (the user will also be given the rights to modify only his/her posts.). He will also be in a position to view the Mail/Parcel arrival list (i.e., Snail Mail).

### *HMC members*

HMC (Hostel Management Committee) members are responsible for monitoring the problems pertaining to their respective block of hostel. Their responsibilities can include periodic update of the acknowledgement window, where the task of receiving cash for various subscription systems (e.g., ETIC system) could be monitored. He can also accomplish the task of monitoring a ‘Complaint Box’ containing notifications from all the residents (i.e., residents of the block under his control.). He will only be entitled with an option to forward the grievances to the administrators (The Supervisor, The Warden or the Convener). He/she would also be given a right to complain directly to the administrators.

### *HMC Convener*

HMC convener is basically a person entitled to monitor activities of all the HMC representatives. He/she will be granted the rights primarily at a higher authorization level than the HMC representatives. For e.g., he/she will have full access to the subscription database for ETIC and other such related subscriptions. The database will also contain the name of the HMC member who last modified the database (e.g., the received payment by the HMC member for the corresponding student). This will help in the eradication of ambiguities. The convener can also edit the status of not only the TV remote but also other artefacts such as activity room.

### *Doctor*

Doctor will have access to Medical database which will have entry for every visitor via form having necessary detail of the patient like ID, Date and Time of visit, prescription detail etc. This information can be used later for checking the patient’s medical history.

### *Security personnel*

Security personnel can access Entry and exit manager which records the time of arrival and exit, laptop status of the students and automatically sending the Laundry Man and doctor status to the hostel website.

### *Administrator*

Admin users can add and view personnel details of all residents via form which will include ID, Name, Batch, Branch, Room Number, Contact Number, Laptop Registration details, sending email to a targeted group (e.g. H-wing 2nd floor) and access database having personnel details. The accessing of database includes features like:

* Accessing database of patients of doctor (a read only database for the admin)
* Accessing the complains sent by residents and suggestions sent by doctors
* Accessing database of Entry and exit manager maintained by security personnel.

Apart from these, the administrators are also entitled the task of creating new accounts of all categories of users and the authorization to delete them. They can also add an entry to the list of snail mails received in hostel and accordingly a notification to a particular resident will be sent automatically.

## Contingencies and Alternate Modes of Operation

Application will be running using a web browser.

In case of power failure during usage or network disconnection during usage, data flow will be interrupted and database access will be stopped. Data may not be saved to database.

# Requirements

## User Requirements

## *Students*

The student-user is expected to have a working knowledge of how to operate a computer system and perform input/output through the mouse, keyboard and monitor. Also expected is basic knowledge of navigating websites on a web browser. The student should have a working knowledge of English sufficient to understand basic computer and website labels/commands/operations.

### *Hostel Authorities*

The administrators are expected to have a working knowledge of navigating through web-sites equal to that of the average internet-user. It is also assumed that they will have a satisfactory command over English so as to effectively use the user interface.

### *Security Personnel/ Guards*

They should also possess capabilities listed above for hostel authorities but that would require a small task of vocationally training them to do so.

## System Requirements

### *Hardware Requirements*

* The software is designed to work in a fully networked environment.
* The software will run on any desktop computer/ laptop with network connectivity.
* Each computer in a networked system must be equipped with a NIC card that enables the computer to connect to other computers in the LAN. A server software and a database software will run on one of the participating computers and no special hardware for a server is needed.
* The computers in a network will be connected to a hub by RJ-45 connectors and cables.

### *Software Requirements*

Operating system – Windows XP/7, Linux/Ubuntu... Tested web browsers are Mozilla Firefox (recommended) or Internet Explorer 7.0 and higher. The database used (on server or stand-alone system) may be MySQL. In a networked system, Apache server is required. The system will be operated over the institute’s LAN.

### *Safety Requirements*

* The coordinators and administrators have a unique user-name and passwords to view or edit pages depending on their permissions to access the data, so that there is no false or ambiguous data entry from any random person who is not a part of the organization.
* It is assumed that the computers must be well protected from viruses and other Internet-based threats in order to avoid crashing of server system, as it is the most crucial of all the components. Database should be secured with appropriate passwords and data backup options.

### *Security Requirements*

Security will be inbuilt in the system, which will not allow unauthorized access to the system database. Moreover, it’ll be insured that a user is tightly bounded to the permissions/ restrictions of his domain and in any case is not able to violate it.

If any user logs out, then the session is said to be closed and he has to login again to use the system i.e. he/she cannot go back with simply using ‘Back’ button of the web browser. In case the application shuts down abruptly, the system logs off the user automatically. In order to regain entry to the system, the user must log back in.

# Getting Started

The software starts up showing a Welcome screen. It allows the user to use the software in two modes: Log-in mode and non-log-in mode.

Log-in Mode : The user can log-in in different ways depending on whether he is a student , HMC , Hostel Supervisor , Hostel Warden , Security personnel ,In-house Doctor and so-on. After the log-in, various tabs are visible on the top of the window, which will vary according to the access rights provided to the particular category of the users.

Non-Log-in Mode: This mode is for the general user and the core functionalities cannot be used through this mode. This mode can only be used to view the general facilities provided by the hostel and their availability.

# How to use the functions

## Log-in Mode

The Log-in mode provides various functionalities in various tabs shown on top of the page after the user logs in. The Tabs, according to the various access rights of users, are as follows:

### *Residents of HOR-Men and HOR-Women*

He/she will be able to access the following tabs:

* **Snail Mail:** This feature can be used by everyone who is logged in with a user account. A ‘Snail Mail’ tab opens a new window for the user. He/she can see if any parcels, journals or courier has arrived with his/her name. Information will be shown for whether the courier was collected by the student or not.
* **Register for Newspapers (ETIC Scheme):** Clicking the ‘Newspaper Register’ tab enables the user to view a list of newspapers to subscribe for with their respective check-boxes in a dialog box. Pressing the submit button after selecting the list of newspapers registers the student and also updates the records in the database for future use by the HMC.
* **Complaint System:** This feature can equally be used by the student as well as HMC to register complaints regarding any issue with the hostel facilities. Clicking the Register Complaint tab provides the user with a list of categories that he/she may register a complaint in. The complaints will then be grouped into different categories for the effective management by the supervisor.
* **Lost/Found System**: This feature can be used by the students only by logging in their account. They can register an update about any item being lost or found under the ‘Lost & Found’ tag which will be updated on the home page of the website.

### *HMC*

He/she will be able to see the following additional tabs:

* **Complaint System**: Clicking the ‘View Complaint’ tab provides the user with a list of categories under which he/she can view different complains posted by the respective individuals of his/her block.

### *HMC Convener*

He/she will be able to see the following tabs:

* **Register for Newspapers (ETIC Scheme)**: The ‘View Registrations for ETIC’ tab provides the user to see all the registrations made by students for the ETIC Scheme.
* **Status of TV Remote:** This tab can be used to check out where the TV Remote can be found and also whom to contact to obtain the remote. This feature can be used even to update the current status of the remote only by the HMC Convener
* **Calendar:** A tab called ‘Calendar’ can be used to access the calendar specifying the dates and timings of various events occurring inside the campus. The user can edit it according to the schedule of the events proposed to occur in near-future.

### *Security Personnel*

He/she will be able to see the following tabs:

* **In-out entry with or without laptop:** Clicking the ‘Entry-Exit’ tab opens a window for the security personnel to make an entry to the form provided according to the type of entry selected, i.e. whether the entry or exit is for leave, laptop, going outside after 7 p.m. or for a visitor/doctor/Laundry Man.

### *Doctor*

He/she will be able to see the following tabs:

* **View/Edit Patient Details:** This feature is solely dedicated to the use of the Doctor. Under the ‘Patient Details’ tab, the doctor can view past records of the patients and also add new patients wherein the database along with the home-page will be updated.
* **Send Suggestions:** The ‘Send Suggestions’ tab can be used by the doctor to send suggestions to the admin and hostel convener by entering the suggestions in a form that opens as a pop-up window.

### *Administrator*

He/she will be able to see the following tabs:

* **Room-Map:** A tab called the ‘Room Map’ is available for use by the admin only and clicking this tab opens a window where he/she is asked to enter the student id and the corresponding details of the student are listed like: Room number, room-mate, details of the student’s neighbors etc.
* **Group Mail:** This feature under the ‘Send Group Mail’ tab aims to enhance mailing system for the admin’s use only. Through its pop-up window, he/she can send a mail only to a concerned group of students residing in the hostel, say for e.g. : H-Wing 1st Floor students.
* **Snail Mail:** This feature can be used by everyone who is logged in with a user account. A ‘Check Snail Mail’ tab which allows the user to see who has collected the snail mail. Also there will be a tab ‘Snail-Mai Update’ which allows entry of new snail mail details.
* **In-out entry with or without laptop:** Clicking the ‘View In-Out entries’ tab enables the admin to view all the entries made at the gate distributed according to their categories.
* **Create/Delete User Accounts**: On clicking the ‘Create/Delete User Accounts’ tab the admin sees a pop-up window wherein he/she can either add a new user account or delete any existing account.
* **Complaint System**: The ‘View Complains and Suggestions’ tab enables the user to view all the complaints made by the hostel residents and also view the suggestions made by the doctor. He/she is also entitled with the rights pertaining to deletion of complains, once they are accessed.

### *Club Representative*

Apart from the basic non-login functionalities, the user of this account will be able to see the following tabs:

* **Calendar:** A tab called ‘Calendar’ can be used to access the calendar to view the dates and timings of various events occurring inside the campus. The Club Representatives can edit it according to the schedule of their respective events.

## Non-Log-In Mode

This mode is for the guest only and he cannot avail the functionalities provided in the hostel. Only general information about the hostel is provided under various tabs as:

* **Rules and Regulations**: This tab gives the user a complete list of all the rules and regulations which are to be strictly followed by all the residents of HOR-Men and HOR-Women. Actions taken on failure to follow these rules are also listed in a detailed manner.
* **Calendar**: This tab provides the user with a calendar specifying the activities of clubs and committees.
* **Availability of the Doctor and Laundry Man:** This is a minimal feature which can be used by everyone accessing the website to check whether the doctor and/or the Laundry Man is available in the hostel. The ‘Check Doctor Availability’ and the ‘Check Laundry Man Availability’ tab when clicked opens a pop-window which either shows ‘Available’ or ‘Not Available’. This result is based on the in-out entry of the doctor at the main gate which is updated in the database.
* **General Forums for complains/discussions:** The guest users can use the tab called ‘General Forum’ for posting any query related to the facilities provided by the hostel.