Software Requirements Specification

for

HALL MANAGEMENT SOFTWARE

Version 1.0

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REVISION HISTORY

DESCRIPTION	REASON FOR CHANGES	VERSION
		1.0

1.INTRODUCTION

'Hall management software' is software to manage various activities in hall on day-to-day basis. From past few years, the number of halls are increasing rapidly, but still all the basic works in halls are done manually, taking lot of effort and time.The present way of doing things is difficult to handle, record keeping is difficult and has low security.

This software is made to deal this, and make work flexible and easy student recording.The system automates many of the current manual process and avoids repetition of tasks.

1.1.PURPOSE

As per the request of Hall management centre(HMC), this draft is made to automate day-to-day jobs in halls according to their needs. This software would act as common platform for all users, both administration and students.

1.2.PRODUCT SCOPE

The website would be used by students from all halls, hall office members, hall wardens, mess managers, HMC Chairman.The software is to be made with following objectives.

STAKEHOLDER	OBJECTIVE
Student	To check his/her due for the month and raise complaints.
Warden	To check the students in their hall, manage funds and check complaints with status
HMC Chairman	To allot salary for hall management staff and funds for halls.
Mess manager	To upload dues for all students in the hall
Hall clerk	For temporary employee management and staff management

1.3.DESIGN AND IMPLEMENTATION CONSTRAINTS:

The database would be accessible only to the administrator.Every user would have their own user id and password, approved by the administrator.

2.OVERALL DESCRIPTION

2.1.PRODUCT FUNCTIONS

All the major functionalities are classified into three modules according to the stakeholder.

- ***Student module :***
    - Checking bill status
    - Complaint placing
- ***Hall management centre module:***
    - *Administrator login:*
        - Hall allotment
        - Maintaining database by administrator
    - *HMC Chairman login:*
        - Staff payment
        - Expense management
- ***Non-Administrative module:***
    - *Mess management:*
        - List printing
        - Bill management
    - *Hall clerk login:*
        - Temporary employee management
        - Cheque printing
        - Staff attendance management
    - *Warden login:*
        - Fund management
        - Complaint management

2.2.ASSUMPTIONS

It is assumed that the administrator would add all the students joining in the year to the database and allot halls.

The data submitted or updated by any user should be visible and accessible from administrator's account.

3.INTERFACE REQUIREMENTS

3.1.USER INTERFACES

Overall the software would have five interfaces:

1. Hall management centre interface
2. Mess manager interface
3. Hall clerk interface
4. Warden interface
5. Student interface

Error message is printed for invalid login.

3.2.HARDWARE INTERFACES

System should completely operate on a web based environment on single web browser.

3.3.SOFTWARE INTERFACES

No local plugins need to be installed.

3.4.COMMUNICATION INTERFACES

Email of month's due is sent to each student at month end automatically.

4.FUNCTIONAL REQUIREMENTS

4.1.STUDENT MODULE

Each student is provided with unique user id and password at the time of joining after verification.

INPUTS: Student's user id and password.

REQ-1:Checking bill status: Allows students to check their due for the month which includes mess, amenities pay of fixed amount and rent. And rent is calculated based on the hall he is allotted, new halls having higher rents.

REQ-2: Complaint placing: Allows students to raise complaints for repairs as electrical problems like fan, bulb, lan connection, non-functional water filters, non functional water coolers, geysers and any other by specifying it.

They can also register complaints about behaviour of mess staff, attendants.

OUTPUTS: Each student after login would open into his dashboard, which would have options to file a complaint, check his previous bills payed, and show the current or running month's due in detail, and status of it's payment.

4.2.HALL MANAGEMENT CENTRE MODULE

The administrator would manage the database, and has unique userid and password already setup.And HMC Chairman would manage the fund distribution to all halls.

4.2.1. Administrative login:

REQ-1: Hall allotment: Register new students(modifying database) after results.Allotment of rooms to new students.

Their will be pre-defined criteria for the admission to the hostels. He checks the attested application forms of the students they submitted and verify it. If the students are found eligible then they are allotted room.

REQ-2: Maintaining database: Update and maintain the database of all students and their present allotted rooms, as students may change rooms after first year.

When student's course is over they will vacate their rooms. So it is required for the administrator to remove their records from the database tables.

4.2.2.HMC Chairman login

INPUTS: Chairman's user id and password

PROCESSES:

REQ-1: Expense management: Calculate small expenses such as repair works.

REQ-2: Staff management: Update the staff details if anyone new joined, including his day pay, and also delete if he/she leaves.

OUTPUTS: He could manage the database of all students, add or remove any student. And each student in database would have his name, roll number, present allotted room and hall, his mess bills and status, and details of parents.

4.3.NON-ADMINISTRATIVE MODULE:

4.3.1.Mess management:

This is managed by the mess manager.

INPUTS: Mess manager's user id and password.

PROCESSES:

REQ-1:List printing: List of every student and his/her due for the month is printed and signed after paying.

REQ-2: Bill management: Should be able to input dues for each student and change status of each student's month bill.

OUTPUTS: Mess manager could see and access bill due list of all students.

4.3.2.Hall clerk login:

Hall clerks in every hall would have their own account.

INPUTS: Hall clerk's user id and password

PROCESSES:

*REQ-1: Staff management:*Maintain leave register of all staff in hall.

REQ-2: Cheque printing: Print list of salary payable to all staff in hall, and cheques at end of month.

REQ-3: Temporary employee management: For temporary workers like gardeners and attendants, pay on daily basis.

OUTPUTS: Hall clerk's login could access leave register of everyone in hall, and he could mark the presence of staff on the same day, cannot change previous days attendance.

4.3.3. Warden module:

INPUTS: Warden's user id and password

PROCESSES:

REQ-1: Able to view statement of accounts anytime.And print the list anytime.

*REQ-2: Fund management:*Update their expenditure details against the allocations.

*REQ-3: Complaint management:*View complaints raised by students and post his Action taken report(ATR) to each complaint.

OUTPUTS: Warden will list of all students in their hall and could access the complaints of students and give ATR after done.

5. NON FUNCTIONAL REQUIREMENTS

- ***Performance requirements***

Database could store data 10,000 students at time. The software should support multiple users at one time.

Considering that about 10,000 students live in hostels, the response time of the web site should be acceptable even under 1000 simultaneous clicks.

The round-the-clock operation of the software is required and down-time should be negligible.

- ***Software quality attributes***

  - *Reliability:* For the system to be reliable, the system is being developed using software that is established to be stable and easy to use.
  - *Flexibility:* In case the system stops suddenly due to network speed or any other constraint, the data entered by the user is not cleared.
  - *Maintainability:* The system shall provide the capability to back up data
  - *User friendly:* The software should be user friendly, and server should load fast.
  - *Safety requirements:* The database may get crashed anytime, hence it is required to have backup of all database.

6.OTHER REQUIREMENTS:

The system requires a database to maintain the records of all the students and details.