PG Management System

Software Requirement Specification

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# Introduction

## Purpose

The Software Requirements Specification (SRS) will provide a detailed description of requirements for the PG Management System (HMS). This SRS will be helpful for complete understanding, what is to be expected from the newly introduced system which is to be constructed. The clear understanding of the system and its functionality will allow for the correct software to be developed for the end user and will be used for the development of the future stages of the project.This SRS will provide the foundation of the project. From this SRS, the PG Management System can be designed, constructed and finally tested. The Project team will use the SRS to fully understand the expectations of the PGMS to construct the appropriate software.

## Objective

* To deal with PG Management System in an easy and an efficient manner.
* Create strong and secrete database that allow for any connection in a secret way, to prevent any outside or inside attacks.

## Scope of the Project

* PG Management System is designed for paying guests, for easy and efficient management. (like schools, Universities).
* This application helps the parents track the details of their children staying in the PG as it stores all the records for the same.
* It reduces the workload of the wardens and the managers, helps the students get the services without hassle, and also assigns the routine for all the other employees of the PG.
* This gives an outsider a view of the working of the PG and an option to book the rooms and request a visit or generate a query about the pg.
* This system helps in the systematic management of the ingredients required in the PG along with the allotment of employees for specific tasks.

## Overview of Project

PG System is a web application which aims at computerization of current procedure of managing a PG. Currently the process involves students visiting the pg finalizing the room and booking it, manually paying the rent.

Parents contact the wardens manually for any enquiry.

The fees payment details are stored manually, and for each and every payment the student has to visit the reception.

The attendance of students has to be recorded by the warden on physical registers.

A manual list of the ingredients is created and then given to the management making it a lengthy procedure.

All the above problems and many more things will be digitalized making it quite simple.

# Study

## Existing system and its limitations

* The existing system is based on manual work and all the processes are done manually, so they maintain registers and files for recording all the details of the system.
* They maintain several registers for recording the entry of daily transactions such as visitors visiting the hostel, visitor drop messages for a particular student, etc.
* They maintain the record of the students so they keep each and every piece of information regarding the students in the student master file. In a similar fashion, they maintain the records of their fees so they keep each and every piece of information regarding their fees details in the fees master file.
* They keep the bill Book or receipt Book to maintain the record of the fees collected by the student.
* They maintain the register or Book for staff so they can pay the salary.
* Thus maintaining Staff information, Student Information, Visitors information, Check-in and Checkout information, and all the things are done manually.

1. Proposed System

This website aims to give a complete package to a PG(paying guest), leading to the complete digitalization of the organization. Be it the attendance of the student, rent of the room, ordering ingredients for the kitchen, the salary of employees, or room cleaning services, it makes the working of a PG a lot easier by bringing everything together in a student-friendly manner.

1. Benefits of proposed system

There might be some websites about PG managing including taking care of the rent and attendance, but this application completely digitalizes the working of the Paying Guest service.

Thus to bring it in,

“WE ARE CLUBBING ALL THE FEATURES OF WEBSITES WHICH ARE PRESENT IN THE MARKET AND, ALONG WITH THEM, MANY EXCLUSIVE FEATURES WHICH HAVE YET TO BE DIGITALIZED”

1. Module description

* Rent
* Attendance
* Salary
* Cleaning
* Order
* Rooms
* Gallery
* Feedbacks
* Employees
* Profile

# Overall Description

## System Requirement

The Web Application has two main parts:

1. Management
2. Students

The student can request for room cleaning from the website itself and pay the rent and put any complains without having any problem. On the other hand making the management easy as most the work will be handled by the website itself and making everything systematic.

# User Requirements Definition

The user requirement for this system is to make the system fast, flexible, less prone to error, reduce expenses and save the time.

1. Less human error
2. Strength and strain of manual labour can be reduced
3. High security
4. Data redundancy can be avoided to some extent
5. Data consistency
6. Easy to handle
7. Easy data updating
8. Easy record keeping
9. Backup data can be easily generated.

# System Requirement Specification

## Functional System Requirement

This section gives a functional requirement that applicable to the PGMS.

These are sub modules in this phase.

1. Owner module.
2. Manger module.
3. Warden module.
4. Student module.
5. Parent module.
6. Chef module.
7. Housekeeper module.

**The functionality of each module is as follows:**

1. Owner module:

* The owner has access to all the details of each unit including the managers, wardens, and employees that have been assigned to each unit.
* The owner of the PG has the ability to add and remove users in the application, including managers, wardens, cooking and cleaning heads, students, parents, etc.
* The owner takes care of the salary of manager and warden and oversees the working of the employees.
* The owner also addresses the grievances of the students or parents in case the wardens or managers fail to do it.

1. Manger module:

* The manager of each unit has access to all the inquiries about that specific unit that only they can respond to. The inquiries that people post about the PG come directly to the manager’s page which in turn they respond to.
* The managers have access to the rent status of the students and only they can update it. They check whether the rent has been paid by the students and notify the warden if a reminder has to be sent.
* The occupancy status of each room, be it fully or partially, and details of the old/current residents of each room are managed and accessed by the manager of the unit.
* The manager receives requests for the ingredients from the cook-head according to the menu and makes sure the kitchen is stocked.
* Managers also have access to the attendance of all employees and their salary payment details.

1. Warden module:

* Each unit of the PG has a day warden and a night warden.
* The wardens are supposed to keep track of the in and out times of the students, by taking attendance through the app, which is then reflected in the student profile.
* Past curfew time, the wardens have to notify the parents about the presence or absence of their children.
* Wardens keep track of the rent paid and remind the students if they are past the due date.
* Wardens address the grievances and concerns issued by the students and take appropriate measures to look into the same.
* Overall, wardens are a communication link between the students and parents and give parents updates about their kids, as well as take care of the residents of the PG and address their complaints and issues.

1. Student module:

* Each student has their own profile with a unique ID which distinguishes them from other students in the same/different units of the PG.
* The student profile consists of details like their contact, the unit they belong to, room number, etc.
* Every profile has a check-in and check-out time which gets updated regularly.
* The students can make a request to the cleaning head to get their room cleaned, after which cleaners are assigned.
* The students can check the menu, request the cook-head for specific needs, and rate the food.
* The student profile shows the rent due for each month, and students have the option to pay through the app, which reflects on the profile once the rent has been paid.
* The students can also complain through the app and talk about room-related, mental/physical health-related, and night-out permission-related queries. This gives them a safe space to issue their grievances and get them addressed by the respective wardens.

1. Parent module:

* Parents have access to their ward’s profile and attendance details along with check-in and check-out timings. This gives parents a sense of safety when it comes to their wards.
* The parents are notified by the warden if their students haven’t reached the PG once its past curfew time.
* In case of any queries from the parent’s side there is an option for parents to add in their queries which will further be responded to by the manager/wardens. Parents can add in as many queries as they want to.
* Parents will also have the option to pay the monthly rent. In addition to other options, parents can also pay the student’s rent online for much more convenience.

1. Chef module:

* The cook head displays the weekly food schedule for the student’s convenience.
* The cook head also alerts the managers regarding the required ingredients and other needs through the application. The ingredients for the food to be prepared are selected by the cook-head according to the menu, which are then added to the cart and sent to the manager weekly.

1. Housekeeper module:

* The cleaning head manages and organizes the cleaning requests from different rooms and allots staff for the same.
* The cleaning head records the past cleaning history. A room will only be cleaned thrice a week and this information is recorded.
* The cleaning head is also responsible for going through all the complaints regarding the cleaning of rooms and taking action for the same.

## Non-Functional System Requirements:

### Performance Requirements

Some Performance requirements identified is listed below:

1. The database shall be able to accommodate around thousand records to store.
2. The software shall support use of multiple users at a time.

### Safety Requirements

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database Backup.

### Security Requirements

Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets

1. Assign certain functions to different modules
2. Restrict communications between some areas of the program
3. Check data integrity for critical variables
4. Later version of the software will incorporate encryption
5. techniques in the user/license authentication process.

# Hardware Requirements

* Processor: Pentium or greater
* RAM: 512MB
* Hard Disk: Depends on how much data is stored in DATABASE (min 1GB)
* Keyboard
* Monitor

# Software Requirements

* OS: Windows
* Database: SQL