**SOFTWARE REQUIREMENT SPECIFICATION**

**APARTMENT MANAGEMENT SYSTEM**

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**1. INTRODUCTION**

1.1. Purpose

1.1.1. The purpose of this SRS is to describe the requirements involved in developing an apartment management system.

1.1.2. The intended audience is any person, who wants an apartment for rent.

1.2 Scope

1.2.1. The product is titled as Apartment management system.

1.2.2. The product will perform the following tasks

1.2.2.1. User can login, view or update the profile details and change the password.

1.2.2.2. User can be tenant, employee & admin.

1.2.2.3. New users can register and enquires about the availability of apartment and essential amenities.

1.2.2.4. Tenant can view the flat details, block details and apartment allotment details and rent.

1.2.2.5. Admin Provides monthly maintenance expenses, electricity bill, water bill and flat rent.

1.2.2.6.. Tenant can make payments, register complaints and check status.

1.2.2.7. Employee respond to the complaints of tenants.

1.2.2.6. Employee maintains monthly rent receipts and reports.

1.3 Definitions, Acronym, Abbreviations

1.3.1. DBMS Database Management System

1.4 References

1.4.1. IEEE standard 830-1998 recommended the practice of Software Requirements Specification description.

1.5 Overview

1.5.1. The SRS contains an analysis of the requirements necessary to help easy design.

1.5.2. The overall requirements provides interface requirements for the apartment management system, product perspective, hardware interfaces, software interfaces, communication interfaces, memory constraints, product functions, user characteristics and other constraints.

1.5.3. Succeeding pages illustrates the characteristic of the typical naïve users accessing the system along with the legal and functional constraints enforced that affect the apartment management system.

**2. THE OVERALL DESCRIPTION**

2.1 Product Perspective

2.1.1. Hardware Interface

2.1.1.1. Processor such as Intel Core Duo 2.0 GHz or more and Hard disk of 80GB or more with a monitor of 15” CRT, or LCD monitor

with Normal or Multimedia Keyboard and compatible mouse with minimum 1GB RAM.

2.1.2. Software Interface

2.1.2.1. Front End : HTML5, CSS, JS, PHP

2.1.2.2. Back End : WAMP server with MYSQL

2.1.3. Memory Constraints

2.1.3.1. No specific constraints on memory.

2.1.4. Operations

2.1.4.1. The software allows four modes of operation

Ensuring the availability of apartments.

Requesting apartment service after enquiring the flat details and essential amenities for new users.

Monitoring monthly maintenance expenses and bill generation for tenants.

Generation of receipts and reports by employee.

2.2 Product Functions

2.2.1. Register the new users details.

2.2.2 Registered users can update their profile details.

2.2.2. Accessing the availability of apartment services.

2.2.3. Enquires the flat details, apartment details and block details.

2.2.4. Enquires the essential amenities.

2.2.5. Generates the monthly rent and maintenance expenses.

2.2.6. Monitor monthly maintenance expenses and bill generation.

2.2.7. Generation of receipts and reports.

2.3 User Characteristics

2.3.1. Super admin: Is a person who is responsible for editing, deleting or adding the details of apartments.

2.3.2. Employee : Is the person who receives complaints from tenants and gives response and also generation of receipts and reports.

2.3.3. Tenant : Is the person who lives in the house and pay rent

2.3.4. New user : Is the person who needs the apartment for rent.

2.4. Constraints

2.4.1. Delay in data transfer may be one of the issues.

2.4.2. A constant internet connection for this system.

2.4.3. Apartment may not have a particular service.

2.4.4. SAMS may not be backed up daily.

**3. SPECIFIC REQUIREMENTS**

3.1. Logical Database Requirements

3.1.1. The data collected from the tenants is stored to the connected database. These includes relation such as tenant’s payment details

3.1.2. The tenants details refer to the information such as tenant name, mobile number, residential address, date and time of admission.

3.1.3. The payment details refer to the information such as receipts of monthly rent, electricity bill, water bill and monthly maintenance receipts and reports.

**4. NONFUNCTIONAL REQUIREMENTS**

**4.1 PERFORMANCE REQUIREMENTS**

The steps involved to perform the implementation of airline database are as listed below.

**A) E-R DIAGRAM**

The E-R Diagram constitutes a technique for representing the logical structure of a database in a pictorial manner. This analysis is then used to organize data as a relation, normalizing relation and finally obtaining a relation database.

* **ENTITIES:**Which specify distinct real-world items in an application.
* **PROPERTIES/ATTRIBUTES:** Which specify properties of an entity and relationships.
* **RELATIONSHIPS:** Which connect entities and represent meaningful dependencies between them.

**B) NORMALIZATION:**

The basic objective of normalization is to reduce redundancy which means that information is to be stored only once. Storing information several times leads to wastage of storage space and increase in the total size of the data stored. If a database is not properly designed it can give rise to modification anomalies. Modification anomalies arise when data is added to, changed or deleted from a database table. Similarly, in traditional databases as well as improperly designed relational databases, data redundancy can be a problem. These can be eliminated by normalizing a database.

Normalization is the process of breaking down a table into smaller tables. So that each table deals with a single theme. There are three different kinds of modifications of anomalies and formulated the first, second and third normal forms (3NF) is considered sufficient for most practical purposes. It should be considered only after a thorough analysis and complete understanding of its implications.

**4.2 SAFETY REQUIREMENTS**

If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

**4.3 SECURITY REQUIREMENTS**

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

**4.4 SOFTWARE QUALITY ATTRIBUTES**

* **AVAILABILITY:** The apartment should be available on the specified date and specified time as many tenants are doing advance reservations.
* **CORRECTNESS:** The apartment should met the facilities of tenants in right time.
* **MAINTAINABILITY:** The manager and caretaker should maintain the receipts and reports.
* **USABILITY:** The apartment should satisfy a maximum number of tenant’s needs in optimal time.

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