Database Management System

**Hostel Management System**

**Aim:**

The primary goal of the Hostel Management System Project is to create a user-friendly platform for staff, admin, and students. It offers a platform where they can store and retrieve essential information for various works. Instead of managing it manually which would have become messy to handle, here we can do it in a much more efficient way. Students are also given the option of complaints in which they can add their complaints if any.

**Description :**

The hostel management system is an excellent platform for handling every data in an efficient and user-friendly way. In a hostel, it is important that the authority knows basic personal and academic information about the students, and they need to keep a record of all such things for reference. Here, in the hostel management system, each student is allocated a room with a room number. Basic information of students like name, roll no, department, year of study, etc. is stored. Then also a record of visitors coming to visit a particular student is maintained by keeping a track of in and out time and their names. Also, a section of complaints is maintained for students where they can lodge their complaints if any.

**Table Description:**

Following are the tables along with constraints used in the Hostel Management database.

1. **STUDENT:** This table stores details about all Students. The information stored in this table includes student name, email, mobile number, department, year of student, gender, and roll no.

*Constraint:*  Student Roll no is unique for each student.

1. **COMPLAINT:** This table consists of complaints lodged by students. The information stored in this table includes the Complaint id, date, and description of the complaint.

*Constraint:* The complaint id should be unique for each complaint.

1. **VISITOR:** This table consists of the record of visitors coming to visit students. It includes visitor Id, Name, date, in-time, and out time.

*Constraint:* The visitor id should be unique for each visitor.

1. **ADMIN/STAFF:** This table consists of information related to admin/staff. It includes first name, last name, email id, and password.

*Constraint:* email id should be unique for each admin/staff member

**ER Diagram**

Diagram

Description automatically generated

**Relational Database Schema**

The relational database schema for Hostel Management database is as follows:

1. STUDENT\_TABLE(**ID, NAME ,EMAIL, PHONE NUMER, GENDER, YEAROFSTUDY, DEPARTMENT**)
2. COMPLAINT\_TABLE (**ID**, DATE, DESCRIPTION)
3. VISITOR\_TABLE(VISITOR\_ID,NAME, DATE,IN-TIME,OUT-TIME)
4. ADMIN/STAFF\_TABLE(EMAIL,FIRST\_NAME,LAST\_NAME,PASSWORD)

Graphical User Interface, Source Code

Graphical user interface, website

Description automatically generated

Graphical user interface, website

Description automatically generated

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Test Browser** | **Test Result** |
| 1 | Launch Application | http://localhost:3000/ | Website Homepage | Website Homepage | Google Chrome | Pass |
| 2 | Login User | http://localhost:3000/login | Admin Login | Admin Login | Google Chrome | Pass |
| 3 | Enter invalid email and any password and hit login button | Email Id: invalid@gmail.com , Password: \*\*\*\*\*\*\* | Please register to login | Please register to login | Google Chrome | Pass |
| 4 | Enter valid email and incorrect password | Email Id:  anjankaraovi@gmail.com , Password: \*\*\*\*\*\*\* | Successfully registered | Successfully registered | Google Chrome | Pass |
| 5 | register new user | don’t fill any value | Please enter all the values | Please enter all the values | Google Chrome | Pass |

**TEST CASES:**

**For Student Registration**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Test Browser** | **Test Result** |
| 1 | Register new student:  Ask for  Registration id , Name, Email, mobile number, room number, branch, year of study, image. | C2k191879076  Aovi Anjankar  [anjankaraovi@gmil.com](mailto:anjankaraovi@gmil.com)  70246398212  211  Computer  TE image.jpg | Student registered | Student registered | Google Chrome | Pass |

**Conclusion:**

The implementation of the Hostel management system helps to create a user-friendly and essential platform that keeps a record of all essential information of students for reference in an efficient way.