Project 1

College management system

Introduction

The college management system (CMS) project aims to develop to comprehensive database management system (DBMS) to manage college activity . In this college activity include handling student record, faculty record, exam ,courses, hostel, subject, ,department information.

Requirement Analysis

* Table present in CMS Database such as :-

1. Hostel
2. Faculty
3. Students
4. Subjects
5. Exams
6. Course
7. Department
8. Hostel table :- This table is created to store the data of student who live in hostel. Data of this table can be used in to check the number of student present in hostel using number of seats.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Hostel\_name | Nvarchar | Unique, Not null |
| Hostel\_ID | INT | Primary key |
| No\_of seats | INT | Not null |

1. Faculty table :- This table is created to store the data of faculty present in college . Data of this table can be used to check the activity about faculty.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Faculty name | Nvarchar | Not null |
| Faculty ID | INT | Primary key |
| Department | Varchar | Not null |
| Mobile number | Varchar(10) | Unique,not null |
| SALARY | Nvarchar | Not null |

1. Student table:- This table is created to store the data of student present in college . Data of this table can be used to check the student information such as name,address and so on.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Student name | Nvarchar | Not null |
| S\_First name | Nvarchar | Not null |
| S\_Last name | Nvarchar | Not null |
| Student Id | INT | Primary key |
| Age | INT | Not null |
| DOB | Date | Default |
| Phone number | Varchar(10) | Unique,not null |
| Address | Nvarchar | Not null |
| City | Nvarchar | Not null |
| State | Nvarchar | Not null |
| Pincode | INT | Not null |

Note :- Student name, Address is a composite attribute and Ageis a derived attribute and phone number is a multivalued attributes.

1. Course :- This table is create to store the data of course present in college . Data of this table is used to check the the information about courses.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Course ID | Varchar | Primary key |
| Course name | Nvarchar | Not null |
| Duration | Varchar | Not null |

1. Department :- This table is created to store the data of department present in college .

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Department name | Varchar | Not null |
| Department ID | Varchar | Primary key |

1. Exam table :- This table is created to store the data of exam conduct in college . This is used to see the information about exam.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Exam code | Varchar | Primary key |
| Time | INT | Not null |
| Date | Date | Not null |
| Room | Varchar | Not null |

1. Subject table :- Subject table is created to store the data of subject teaching in college. It us used to see the information about subject.

|  |  |  |
| --- | --- | --- |
| Attributes | Data type | Constraints |
| Subject ID | Varchar | Primary key |
| Subject name | Nvarchar | Not null |

er diagram of college management system

Living

Hostel

Enrolls

Teaches

Student

Course

Faculty



Takes



Has

Handles

Conduct

Exams

Department

Subject

Assumption :-

1. Hostel and students

Cardinality ratio:- One -to - Many ( Many students can live in one hostel)

2. Student and course

Cardinality ratio:- Many - to - Many (Many student enrolls many course)

3. Faculty and student

Cardinality ratio:- One -to - Many ( One faculty can teach many students)

4. Faculty and subject

Cardinality ratio:- One -to - Many ( One faculty can takes subject)

4. Department and exam

Cardinality ratio:- One -to - Many ( One department can conduct many exam)

5. Department and faculty

Cardinality ratio:- One -to - Many ( In one department has many faculty)

6. Department and course

Cardinality ratio:- One - to - many ( One department can handles many course)

7. Faculty and student

Cardinality ratio:- One -to - Many ( One faculty can teach many students)