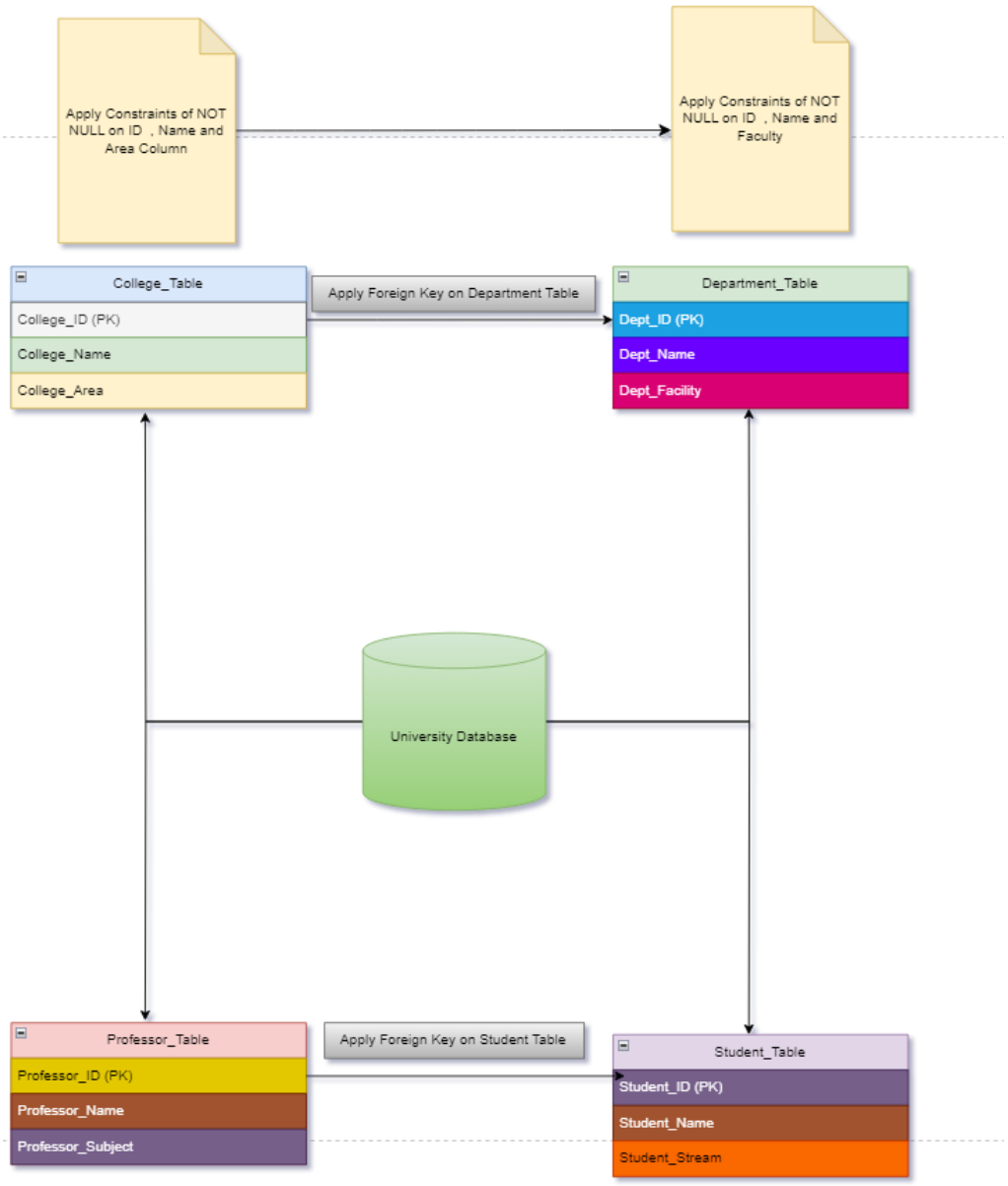
(University DataBase Management System)



University Database Management System is one of the Fundamental and Intermediate level SQL project

Here in this Project you have to create an efficient DBMS for the any University .

Inorder to create this system Perform the following task:-

Task 1:-

1.Create University Database give any University name you want

Create database IITH;

Use IITH;

2. Under this University Create four tables and each table should have following three Column named as:-

A. College_Table

College_ID(PK)

College_Name

College_Area

Create table College_Table(

College_ID varchar(10) primary key not null,

College_Name varchar (20) not null,

College_Area varchar(20) not null

);

B. Department_Table

Dept_ID(PK)

Dept_Name

Dept_Facility

Create table Department_Table(

Dept_ID varchar(10) primary key not null,

Dept_Name varchar (20) not null,

Dept_Facility varchar(20)

);

C. Professor_Table

Professor_ID(PK)

Professor_Name

Professor_Subject

Create table Professor_Table(

Professor_ID varchar(10) primary key not null,

Professor_Name varchar (20) not null,

Professor_Subject varchar(20)

);

D. Student_Table

Student_ID(PK)

Student_Name

Student_Stream

Create table Student_Table(

Student_ID varchar(10) primary key not null,

Student_Name varchar (20) not null,

Student_Stream varchar(20)

);

3. Apply foreign key on Department key from College_table

```
Create table College_Table(
College_ID varchar(10) primary key not null,
College_Name varchar (20) not null,
College_Area varchar(20) not null,
Foreign key College_ID References Department_Table.Dept_ID;
);
```

4. Apply foreign Key on Student_Table from Professor_Table

```
Create table Student_Table(
Student_ID varchar(10) primary key not null,
Student_Name varchar (20) not null,
Student_Stream varchar(20),
Foreign key Student_Stream References Professor_Table.Professor_Subject;
);
```

5. Insert atleast 10 Records in each table

```
Insert into College_Table (College_ID, College_Name, College_Area) values
(11, 'Shweta_College', 'Shakti_Nagar'),
(12, 'Gowthami_College', 'Radha_Nagar'),
(13, 'Priya_College', ‘Shanti_Nagar’),
(14, 'Om_College', ‘Jewargi_Colony’),
```

(15, 'Anshu_College', ‘Ram_Nagar’),

(16, 'Anu_College', ‘Shiv_Nagar’),

(17, 'Riya_College', ‘PNT_Area’),

(18, 'Seema_College', ‘CIB_Colony’),

(19, 'Raj_College', ‘Sita_Nagar’),

(20, 'Reem_College', ‘Vidya_Nagar’)

);

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D001', 'Human Resources', 'Building A');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D002', 'Finance', 'Building B');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D003', 'IT Services', 'Building C');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D004', 'Sales', 'Building D');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D005', 'Marketing', 'Building E');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D006', 'Customer Support', 'Building F');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D007', 'Legal', 'Building G');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D008', 'R&D', 'Building H');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D009', 'Operations', 'Building I');

INSERT INTO Department_Table (Dept_ID, Dept_Name, Dept_Facility) VALUES ('D010', 'Procurement', 'Building J');

```
INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P001', 'Dr. John Smith', 'Mathematics');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P002', 'Dr. Emily Davis', 'Physics');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P003', 'Dr. Michael Brown', 'Chemistry');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P004', 'Dr. Sarah Johnson', 'Computer Science');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P005', 'Dr. Daniel Wilson', 'History');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P006', 'Dr. Olivia Taylor', 'Economics');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P007', 'Dr. James Moore', 'Biology');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P008', 'Dr. Isabella Lee', 'Philosophy');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
```

```
VALUES ('P009', 'Dr. Robert Harris', 'Psychology');

INSERT INTO Professor_Table (Professor_ID, Professor_Name, Professor_Subject)
VALUES ('P010', 'Dr. Ava Clark', 'Sociology');
INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S001', 'Alice Walker', 'Science');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S002', 'Bob Martin', 'Arts');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S003', 'Charlie Johnson', 'Commerce');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S004', 'Diana Lewis', 'Science');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S005', 'Eva Roberts', 'Arts');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S006', 'Frankie Green', 'Commerce');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S007', 'Grace Carter', 'Science');
```

```
INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S008', 'Harry Lewis', 'Arts');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S009', 'Ivy Young', 'Commerce');

INSERT INTO Student_Table (Student_ID, Student_Name, Student_Stream)
VALUES ('S010', 'Jack Turner', 'Science');
```

Task 2:-

1. Give the information of College_ID and College_name from College_Table

```
Select College_Id, College_Name from College_Table;
```

2. Show Top 5 rows from Student table.

```
Select * from Student_Table limit 5;
```

3. What is the name of professor whose ID is 5

```
Select Professor_Name from Professor_Table where Professor_ID = 5;
```

4. Convert the name of the Professor into Upper case

```
Select Upper(Professor_Name) from Professor_Table;
```

5. Show me the names of those students whose name is start with a

```
Select Student_Name from Student_Table where Student_Name like “a%”;
```

6. Give the name of those colleges whose end with a

```
Select College_Name from College_Table where College_Name like “%a”;
```

7. Add one Salary Column in Professor_Table

```
Alter table Professor_Table add column Salary int;
```

8. Add one Contact Column in Student_table

```
Alter table Student_Table add column Contact  int;
```

9. Find the total Salary of Professor

```
Select sum(Salary) from Professor_Table;
```

10. Change datatype of any one column of any one Table

```
Alter table Student_Table modify column Contact varchar(20);
```