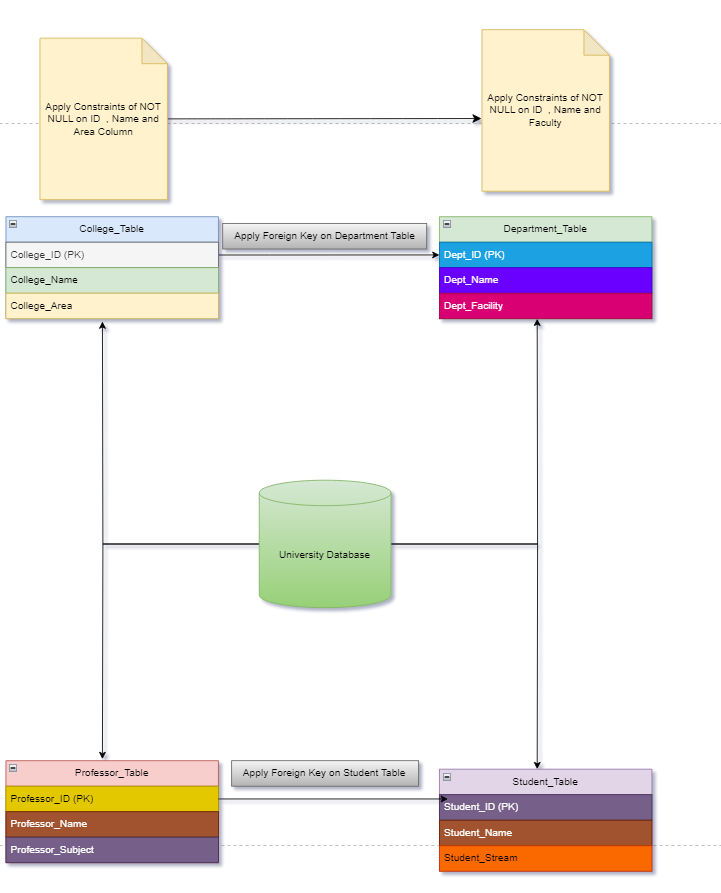


**Capstone Project**

**(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 **Dayanand Sagar University**

Create table College\_Table(College\_ID Int Primary Key,College\_Name Varchar(25),College\_Area Varchar(25))

INSERT INTO College\_Table (College\_ID, College\_Name, College\_Area) VALUES

(1, 'SBR College', 'Area1'),

(2, 'LVD College', 'Area2'),

(3, 'Nitti College', 'Area3'),

(4, 'RV College', 'Area4'),

(5, 'Reva College', 'Area5'),

(6, 'Vevakananda College', 'Area6'),

(7, 'SLN College', 'Area7'),

(8, 'Govt College', 'Area8'),

(9, 'RIMS College', 'Area9'),

(10, 'Ramaya College', 'Area10');

CREATE TABLE Department\_Table (

Dept\_ID INT,

Dept\_Name VARCHAR(25),

Dept\_Facility VARCHAR(25),

FOREIGN KEY (Dept\_ID) REFERENCES College\_Table(College\_ID)

);

INSERT INTO Department\_Table (Dept\_ID, Dept\_Name, Dept\_Facility) VALUES

(1, 'Computer Science', 'Innovation Hub'),

(2, 'Mechanical Engineering', 'Workshop'),

(3, 'Electrical Engineering', 'Power Systems Lab'),

(4, 'Civil Engineering', 'Surveying Lab'),

(5, 'Biology', 'Research Greenhouse'),

(6, 'Chemistry', 'Analytical Lab'),

(7, 'Physics', 'Optics Lab'),

(8, 'Mathematics', 'Problem-Solving Room'),

(9, 'Business Administration', 'Business Incubator'),

(10, 'Psychology', 'Counseling Center');

Create Table Professor\_Table(Professor\_ID Int Primary Key,Professor\_Name Varchar(25),Professor\_Subject varchar(25))

INSERT INTO Professor\_Table (Professor\_ID, Professor\_Name, Professor\_Subject) VALUES

(1, 'John Smith', 'Computer Science'),

(2, 'Jane Doe', 'Mechanical Engineering'),

(3, 'David Johnson', 'Electrical Engineering'),

(4, 'Emily Wilson', 'Civil Engineering'),

(5, 'Michael Brown', 'Biology'),

(6, 'Sarah Taylor', 'Chemistry'),

(7, 'Christopher Lee', 'Physics'),

(8, 'Jennifer Clark', 'Mathematics'),

(9, 'Daniel Martinez', 'Business Administration'),

(10, 'Jessica White', 'Psychology');

CREATE TABLE Student\_Table (

Student\_ID INT PRIMARY KEY,

Professor\_ID INT,

Student\_Name VARCHAR(25),

Student\_Stream VARCHAR(25),

FOREIGN KEY (Professor\_ID) REFERENCES Professor\_Table(Professor\_ID))

INSERT INTO Student\_Table (Student\_ID, Professor\_ID, Student\_Name, Student\_Stream) VALUES

(1, 1, 'Alice', 'Computer Science'),

(2, 2, 'Bob', 'Mechanical Engineering'),

(3, 3, 'Charlie', 'Electrical Engineering'),

(4, 4, 'Diana', 'Civil Engineering'),

(5, 5, 'Eve', 'Biology'),

(6, 6, 'Frank', 'Chemistry'),

(7, 7, 'Grace', 'Physics'),

(8, 8, 'Henry', 'Mathematics'),

(9, 9, 'Ivy', 'Business Administration'),

(10, 10, 'Jack', 'Psychology');

**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 top 5 \* from Student\_Table

--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 Professor\_Name,Upper(Professor\_Name) as Capital\_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 Salary Decimal(10,2)

Select \*from Professor\_Table

UPDATE Professor\_Table

SET Salary =

CASE Professor\_ID

WHEN 1 THEN 100000.00

WHEN 2 THEN 200000.00

WHEN 3 THEN 300000.00

WHEN 4 THEN 400000.00

WHEN 5 THEN 500000.00

WHEN 6 THEN 600000.00

WHEN 7 THEN 700000.00

WHEN 8 THEN 800000.00

WHEN 9 THEN 900000.00

WHEN 10 THEN 1000000.00

END

--8. Add one Contact Column in Student\_table

Alter Table Student\_table

Add Contact Int

Select \* from Student\_Table

--9. Find the total Salary of Professor

Select Sum(Salary) Total\_Salary from Professor\_Table

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

Alter Table College\_Table

Alter Column College\_Name Char(25)

**Task 3:-**

--1. Show first 5 records from Students table and Professor table Combine

Select Top 5 \* from Student\_Table Inner Join

Professor\_Table ON

Student\_Table.Student\_ID=Professor\_Table.Professor\_ID

--2. Apply Inner join on all 4 tables together

SELECT \*

FROM College\_Table AS Col

INNER JOIN Department\_Table AS Dept ON Col.College\_ID = Dept.Dept\_ID

INNER JOIN Professor\_Table AS Prof ON Dept.Dept\_ID = Prof.Professor\_ID

INNER JOIN Student\_Table AS Stu ON Prof.Professor\_ID = Stu.Professor\_ID

--3. Show Some null values from Department table and Professor table.

-- For Department\_Table

SELECT \*

FROM Department\_Table

WHERE Dept\_Name IS NULL

-- For Professor\_Table

SELECT \*

FROM Professor\_Table

WHERE Professor\_Name IS NULL

--4. Create a View from College Table and give those records whose college name starts with C

CREATE VIEW College\_C\_Records AS

SELECT \*

FROM College\_Table

WHERE College\_Name LIKE 'C%';

SELECT \* FROM College\_C\_Records;

--5. Create Stored Procedure of Professor table whatever customer ID will be given by user it should show whole records of it.

CREATE PROCEDURE GetProfessorByID

@ProfessorID INT

AS

BEGIN

SELECT \*

FROM Professor\_Table

WHERE Professor\_ID = @ProfessorID;

END;

EXEC GetProfessorByID @ProfessorID = 5;

Select \* from Professor\_Table

--6. Rename the College\_Table to College\_Tables\_Data .

EXEC sp\_rename 'College\_Table', 'College\_Tables\_Data';

Select \* From College\_Tables\_Data