

STUDENT NAME:- RAJ RAMINDRAKADAM

# **INSTITUTE DATABASE MANAGEMENT SYSTEM**



**GLOBAL**  
Institute of IT and Management

## AIM OF PROJECT

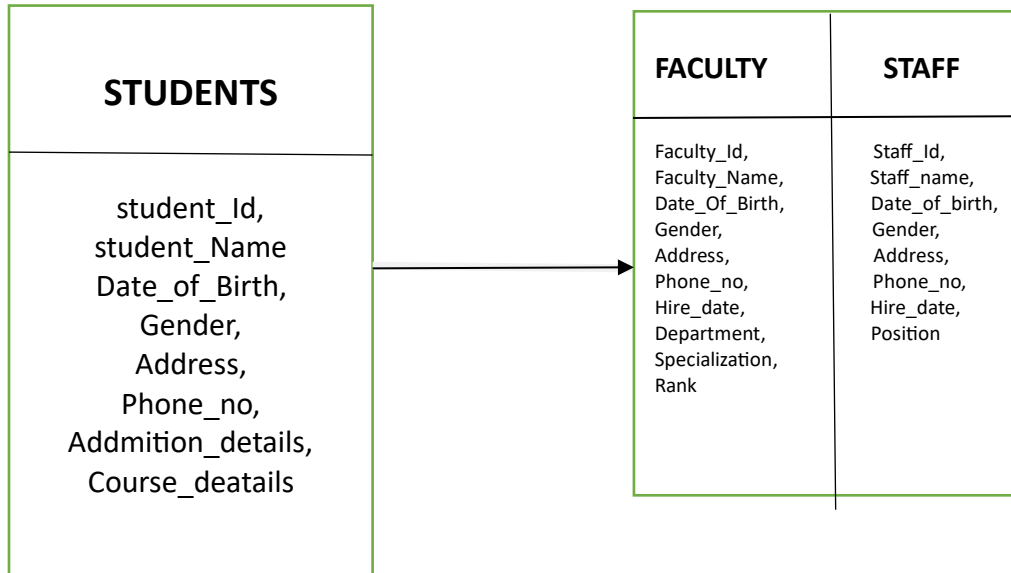
When managing a Database Management System (DBMS) or SQL project within an institute, the aims revolve around efficiently storing, retrieving, and managing data related to the institute's various operations. Here are some specific aims for such a project:

- **Data Organization and Storage:** Create a well-structured database schema to organize and store information regarding students, faculty, courses, academic records, administrative data, and other relevant aspects of the institute.
- **Data Integrity and Security:** Ensure data integrity by implementing constraints, validations, and proper normalization techniques to prevent anomalies. Implement robust security measures to protect sensitive information from unauthorized access or modifications.
- **Efficient Data Retrieval:** Design and optimize SQL queries, views, and stored procedures to facilitate quick and accurate retrieval of information for reporting, analysis, and day-to-day operations.
- **Automation of Processes:** Develop automated routines using SQL triggers or scheduled jobs to perform regular tasks such as backups, data updates, notifications, or generating reports, reducing manual effort and minimizing errors.

- **User-Friendly Interfaces:** Develop intuitive and user-friendly interfaces for administrators, faculty, and students to interact with the database system, facilitating easy data entry, retrieval, and manipulation.
- **Continuous Improvement:** Establish a framework for ongoing monitoring, maintenance, and periodic optimization of the database system to adapt to evolving needs, technological advancements, and changing institute requirements.

By focusing on these aims, institute management using a DBMS and SQL project can enhance data-driven decision-making, improve operational efficiency, and contribute to the overall effectiveness of the institute's management processes.

## ER DIAGRAM



# TABLE DESCRIPTION

## STUDENT

|   | Field                  | Type         | Null | Key | Default | Extra |
|---|------------------------|--------------|------|-----|---------|-------|
| ▶ | student_Id             | int(11)      | NO   | PRI | NULL    |       |
|   | student_Name           | varchar(50)  | YES  |     | NULL    |       |
|   | Date_of_Birth          | date         | YES  |     | NULL    |       |
|   | Gender                 | varchar(50)  | YES  |     | NULL    |       |
|   | Address                | varchar(100) | YES  |     | NULL    |       |
|   | Phone_no               | varchar(50)  | YES  |     | NULL    |       |
|   | Addmition_details_date | varchar(50)  | YES  |     | NULL    |       |
|   | Course_deatails        | int(11)      | YES  |     | NULL    |       |

## FACULTY

|   | Field          | Type         | Null | Key | Default | Extra |
|---|----------------|--------------|------|-----|---------|-------|
| ▶ | Faculty_Id     | int(11)      | NO   | PRI | NULL    |       |
|   | Faculty_Name   | varchar(50)  | YES  |     | NULL    |       |
|   | Date_Of_Birth  | date         | YES  |     | NULL    |       |
|   | Gender         | varchar(50)  | YES  |     | NULL    |       |
|   | Address        | varchar(200) | YES  |     | NULL    |       |
|   | Phone_no       | varchar(50)  | YES  |     | NULL    |       |
|   | Hire_date      | date         | YES  |     | NULL    |       |
|   | Department     | varchar(50)  | YES  |     | NULL    |       |
|   | Specialization | varchar(50)  | YES  |     | NULL    |       |
|   | Rank_          | varchar(50)  | YES  |     | NULL    |       |

## STAFF

|   | Field         | Type        | Null | Key | Default | Extra |
|---|---------------|-------------|------|-----|---------|-------|
| ▶ | Staff_Id      | int(11)     | NO   | PRI | NULL    |       |
|   | Staff_name    | varchar(50) | YES  |     | NULL    |       |
|   | Date_of_birth | date        | YES  |     | NULL    |       |
|   | Gender        | varchar(50) | YES  |     | NULL    |       |
|   | Address       | varchar(50) | YES  |     | NULL    |       |
|   | Phone_no      | varchar(50) | YES  |     | NULL    |       |
|   | Hire_date     | date        | YES  |     | NULL    |       |
|   | Position      | varchar(50) | YES  |     | NULL    |       |

# COMMAND TO CREATE TABLE

## Create Database:

```
create database itvedant_dbms;  
use itvedant_dbms;
```

## Create Table Student:

```
create table student(  
student_Id int primary key,  
student_Name Varchar(50),  
Date_of_Birth date,  
Gender Varchar(50),  
Address Varchar(100),  
Phone_no Varchar(50),  
Addmition_details_date Varchar(50),  
Course_deatails int);  
desc student_Id;
```

## Create Table Faculty:

```
create table faculty_Id(  
Faculty_Id int primary key,  
Faculty_Name Varchar(50),  
Date_Of_Birth date,  
Gender Varchar(50),  
Address Varchar(200),  
Phone_no Varchar(50),
```

```
Hire_date date,  
Department Varchar(50),  
Specialization Varchar(50),  
Rank_ Varchar(50));  
desc faculty_Id;
```

### Create Table Staff:

```
create table staff_Id(  
Staff_Id int primary key,  
Staff_name Varchar(50),  
Date_of_birth date,  
Gender Varchar(50),  
Address Varchar(50),  
Phone_no Varchar(50),  
Hire_date date,  
Position Varchar(50));  
desc staff_Id;
```

# COMMANDS TO INSERT VALUES IN TABLE

## Table Student:

INSERT INTO student Values

(1, 'Alice Johnson', '1998-05-20', 'Female', '123 Oak St, City', '555-1234', '2022-09-01', 101),

(2, 'Bob Smith', '1997-11-12', 'Male', '456 Maple St, Town', '555-5678', '2022-08-15', 102),

(3, 'Charlie Davis', '1999-02-28', 'Male', '789 Pine St, Village', '555-9101', '2022-09-05', 103),

(4, 'Diana Wilson', '1996-08-05', 'Female', '987 Birch St, Hamlet', '555-1122', '2022-08-20', 104),

(5, 'Edward Lee', '1995-03-15', 'Male', '654 Cedar St, County', '555-1314', '2022-09-10', 105),

(6, 'Fiona Brown', '1994-09-22', 'Female', '321 Elm St, State', '555-1516', '2022-08-25', 106),

(7, 'George Miller', '1993-12-07', 'Male', '987 Walnut St, Province', '555-1718', '2022-09-15', 107),

(8, 'Hannah Taylor', '1992-06-18', 'Female', '543 Pine St, Country', '555-1920', '2022-08-30', 108),

(9, 'Isaac Harris', '1991-04-10', 'Male', '876 Oak St, City', '555-2022', '2022-09-01', 109),

(10, 'Jessica Moore', '1990-10-31', 'Female', '234 Maple St, Town', '555-2224', '2022-08-15', 110),

(11, 'Kevin White', '1989-07-15', 'Male', '567 Pine St, Village', '555-2426', '2022-09-05', 111),

(12, 'Laura Hall', '1988-02-28', 'Female', '789 Birch St, Hamlet', '555-2628', '2022-08-20', 112),



(13, 'Michael Clark', '1987-08-05', 'Male', '321 Cedar St, County', '555-2830', '2022-09-10', 113),

(14, 'Natalie Adams', '1986-01-22', 'Female', '654 Elm St, State', '555-3032', '2022-08-25', 114),

(15, 'Oscar Turner', '1985-06-12', 'Male', '876 Walnut St, Province', '555-3234', '2022-09-15', 115),

(16, 'Penelope Robinson', '1984-03-20', 'Female', '543 Oak St, City', '555-3436', '2022-09-01', 116),

(17, 'Quentin Turner', '1983-11-12', 'Male', '765 Maple St, Town', '555-3638', '2022-08-15', 117),

(18, 'Rachel Foster', '1982-02-28', 'Female', '987 Pine St, Village', '555-3840', '2022-09-05', 118),

(19, 'Samuel Greene', '1981-08-05', 'Male', '234 Birch St, Hamlet', '555-4042', '2022-08-20', 119),

(20, 'Tina Watson', '1980-03-15', 'Female', '876 Cedar St, County', '555-4244', '2022-09-10', 120),

(21, 'Ulysses Patterson', '1979-09-22', 'Male', '987 Elm St, State', '555-4446', '2022-08-25', 121),

(22, 'Victoria Lopez', '1978-12-07', 'Female', '321 Walnut St, Province', '555-4648', '2022-09-15', 122),

(23, 'Walter Martinez', '1977-06-18', 'Male', '543 Oak St, Country', '555-4850', '2022-08-30', 123),

(24, 'Xavier Simmons', '1976-04-10', 'Male', '765 Maple St, City', '555-5052', '2022-09-01', 124),

(25, 'Yvonne Sanders', '1975-10-31', 'Female', '987 Pine St, Town', '555-5254', '2022-08-15', 125),

(26, 'Zachary Reed', '1974-07-15', 'Male', '234 Birch St, Village', '555-5456', '2022-09-05', 126),

(27, 'Abigail Fisher', '1973-02-28', 'Female', '876 Cedar St, Hamlet', '555-5658', '2022-08-20', 127),

(28, 'Benjamin Hughes', '1972-08-05', 'Male', '987 Elm St, County', '555-5860', '2022-09-10', 128),

(29, 'Catherine Carter', '1971-01-22', 'Female', '321 Walnut St, State', '555-6062', '2022-08-25', 129),

(30, 'David Morris', '1970-06-12', 'Male', '543 Oak St, Province', '555-6264', '2022-09-15', 130);

select \* from student;

### Table Faculty:

INSERT INTO faculty Values

(101, 'John Doe', '1980-05-15', 'Male', '123 Main St, Cityville', '555-1234', '2020-02-10', 'Computer Science', 'Software Engineering', 'Assistant Professor'),

(102, 'Jane Smith', '1975-08-22', 'Female', '456 Oak St, Townburg', '555-5678', '2018-07-20', 'Electrical Engineering', 'Power Systems', 'Associate Professor'),

(103, 'Bob Johnson', '1982-11-30', 'Male', '789 Pine St, Villagetown', '555-9012', '2015-03-05', 'Mechanical Engineering', 'Mechatronics', 'Professor'),

(104, 'Alice Brown', '1978-04-12', 'Female', '101 Cedar St, Hamletville', '555-3456', '2019-11-15', 'Chemistry', 'Organic Chemistry', 'Assistant Professor'),

(105, 'David White', '1985-07-25', 'Male', '202 Elm St, Suburbia', '555-7890', '2017-05-02', 'Physics', 'Quantum Mechanics', 'Associate Professor'),

(106, 'Emily Green', '1988-02-18', 'Female', '303 Maple St, Riverside', '555-2345', '2016-09-08', 'Mathematics', 'Statistics', 'Professor'),

(107, 'Charlie Black', '1970-09-05', 'Male', '404 Walnut St, Lakeside', '555-6789', '2021-01-12', 'Computer Science', 'Data Science', 'Associate Professor'),

(108, 'Eva Grey', '1983-12-10', 'Female', '505 Birch St, Mountainside', '555-0123', '2014-04-25', 'Electrical Engineering', 'Communication Systems', 'Professor'),

(109, 'Frank Red', '1972-06-28', 'Male', '606 Spruce St, Hilltop', '555-4567', '2018-12-30', 'Mechanical Engineering', 'Thermodynamics', 'Assistant Professor'),

(110, 'Grace Orange', '1987-03-17', 'Female', '707 Pineapple St, Beachtown', '555-8901', '2019-06-18', 'Chemistry', 'Inorganic Chemistry', 'Professor'),

(111, 'Harry Yellow', '1976-10-08', 'Male', '808 Mango St, Groveside', '555-2345', '2016-03-22', 'Physics', 'Astrophysics', 'Associate Professor'),

(112, 'Ivy Blue', '1984-05-03', 'Female', '909 Cherry St, Orchidville', '555-6789', '2017-08-14', 'Mathematics', 'Algebra', 'Assistant Professor'),

(113, 'Jack Pink', '1979-08-20', 'Male', '101 Lemon St, Citrusville', '555-0123', '2020-04-05', 'Computer Science', 'Artificial Intelligence', 'Professor'),

(114, 'Karen Brown', '1981-02-15', 'Female', '202 Grape St, Winetown', '555-4567', '2015-09-10', 'Electrical Engineering', 'Control Systems', 'Associate Professor'),

(115, 'Leo Green', '1974-07-28', 'Male', '303 Olive St, Gardenburg', '555-8901', '2018-11-25', 'Mechanical Engineering', 'Fluid Mechanics', 'Professor'),

(116, 'Laura Rodriguez', '1991-08-20', 'Female', '777 Oak St', '555-9876', '2020-07-15', 'Chemical Engineering', 'Materials Science', 'Professor'),

(117, 'Carlos Lopez', '1989-04-05', 'Male', '888 Pine St', '555-4321', '2018-02-10', 'Business Administration', 'Marketing', 'Associate Professor'),

(118, 'Maria Garcia', '1977-11-28', 'Female', '999 Cedar St', '555-8765', '2015-09-22', 'Health Sciences', 'Nutrition', 'Assistant Professor'),

(119, 'Juan Ramirez', '1986-02-15', 'Male', '444 Birch St', '555-1234', '2017-12-08', 'Education', 'Curriculum Development', 'Professor'),

(120, 'Isabel Torres', '1994-06-10', 'Female', '555 Elm St', '555-5678', '2022-04-05', 'Physics', 'Astrophysics', 'Associate Professor'),

(121, 'Miguel Hernandez', '1980-09-03', 'Male', '111 Maple St', '555-2345', '2019-10-18', 'Computer Science', 'Database Systems', 'Professor'),

(122, 'Elena Navarro', '1983-03-17', 'Female', '222 Oak St', '555-8765', '2016-06-30', 'Political Science', 'Comparative Politics', 'Assistant Professor'),

(123, 'Alejandro Martinez', '1997-01-08', 'Male', '333 Cedar St', '555-5432', '2014-08-12', 'Economics', 'Microeconomics', 'Professor'),  
(124, 'Ana Castillo', '1985-07-25', 'Female', '555 Walnut St', '555-9876', '2011-05-20', 'History', 'European History', 'Associate Professor'),  
(125, 'Javier Diaz', '1982-12-01', 'Male', '666 Pine St', '555-4321', '2013-11-02', 'Psychology', 'Social Psychology', 'Assistant Professor'),  
(126, 'Monica Flores', '1990-04-18', 'Female', '777 Cedar St', '555-8765', '2015-02-28', 'Sociology', 'Criminology', 'Professor'),  
(127, 'Roberto Gomez', '1978-10-05', 'Male', '888 Oak St', '555-1234', '2018-09-15', 'Mathematics', 'Calculus', 'Associate Professor'),  
(128, 'Carmen Jimenez', '1993-05-22', 'Female', '999 Elm St', '555-5678', '2016-12-10', 'Chemistry', 'Inorganic Chemistry', 'Assistant Professor'),  
(129, 'Hector Vega', '1987-08-12', 'Male', '444 Birch St', '555-2345', '2019-03-25', 'Engineering', 'Civil Engineering', 'Professor'),  
(130, 'Rosa Mendoza', '1995-03-30', 'Female', '555 Maple St', '555-8765', '2017-01-12', 'Communications', 'Journalism', 'Associate Professor');  
select \* from faculty;

### Table Staff:

INSERT INTO staff Values

(11, 'John Doe', '1990-01-01', 'Male', '123 Main St', '555-1234', '2020-05-15', 'Manager'),  
(12, 'Jane Smith', '1985-07-15', 'Female', '456 Oak Ave', '555-5678', '2019-08-20', 'Salesperson'),  
(13, 'Bob Johnson', '1988-03-22', 'Male', '789 Elm Rd', '555-9876', '2021-02-10', 'Engineer'),  
(14, 'Alice Williams', '1992-11-05', 'Female', '321 Pine Ln', '555-4321', '2018-11-30', 'Analyst'),

(15, 'Charlie Brown', '1980-09-10', 'Male', '654 Birch St', '555-8765', '2017-07-25', 'Supervisor'),

(16, 'Eva Davis', '1995-04-18', 'Female', '987 Cedar Ave', '555-2109', '2016-09-15', 'Coordinator'),

(17, 'Frank Miller', '1983-06-28', 'Male', '234 Maple Dr', '555-6789', '2019-04-05', 'Specialist'),

(18, 'Grace Taylor', '1998-12-12', 'Female', '876 Walnut Rd', '555-1098', '2022-03-12', 'Technician'),

(19, 'Harry Lee', '1987-08-08', 'Male', '543 Spruce Blvd', '555-8765', '2018-08-08', 'Assistant'),

(20, 'Ivy Rodriguez', '1993-05-25', 'Female', '210 Oakwood Ln', '555-5432', '2020-10-20', 'Coordinator'),

(21, 'Jack Anderson', '1991-09-14', 'Male', '876 Pine Ave', '555-7890', '2017-12-03', 'Analyst'),

(22, 'Karen White', '1986-02-28', 'Female', '543 Cedar Ln', '555-2109', '2022-01-08', 'Manager'),

(23, 'Leo Martinez', '1994-07-03', 'Male', '321 Elm Dr', '555-6543', '2019-06-18', 'Engineer'),

(24, 'Mia Garcia', '1989-11-20', 'Female', '789 Oak Rd', '555-9876', '2018-04-22', 'Salesperson'),

(25, 'Nathan Taylor', '1982-04-05', 'Male', '234 Birch St', '555-4321', '2021-09-30', 'Supervisor'),

(26, 'Olivia Adams', '1996-01-15', 'Female', '654 Maple Ave', '555-8765', '2016-11-12', 'Technician'),

(27, 'Paul Brown', '1984-08-25', 'Male', '987 Walnut Blvd', '555-1098', '2020-02-05', 'Specialist'),

(28, 'Quinn Miller', '1999-03-10', 'Female', '210 Spruce Ln', '555-8765', '2017-10-10', 'Coordinator'),

(29, 'Ryan Lee', '1986-12-18', 'Male', '876 Oakwood Dr', '555-5432', '2018-08-18',  
'Assistant'),

(30, 'Sofia Rodriguez', '1992-06-30', 'Female', '543 Cedar Blvd', '555-2109', '2019-  
11-25', 'Coordinator');

select \* from staff;

#Retrieve the details of employees hired after '2020-01-01':

```
select * from staff
```

```
where Hire_date > '2020-01-01';
```

| Staff_Id | Staff_name    | Date_of_birth | Gender | Address         | Phone_no | Hire_date  | Position    |
|----------|---------------|---------------|--------|-----------------|----------|------------|-------------|
| 11       | John Doe      | 1/1/1990      | Male   | 123 Main St     | 555-1234 | 5/15/2020  | Manager     |
| 13       | Bob Johnson   | 3/22/1988     | Male   | 789 Elm Rd      | 555-9876 | 2/10/2021  | Engineer    |
| 18       | Grace Taylor  | 12/12/1998    | Female | 876 Walnut Rd   | 555-1098 | 3/12/2022  | Technician  |
| 20       | Ivy Rodriguez | 5/25/1993     | Female | 210 Oakwood Ln  | 555-5432 | 10/20/2020 | Coordinator |
| 22       | Karen White   | 2/28/1986     | Female | 543 Cedar Ln    | 555-2109 | 1/8/2022   | Manager     |
| 25       | Nathan Taylor | 4/5/1982      | Male   | 234 Birch St    | 555-4321 | 9/30/2021  | Supervisor  |
| 27       | Paul Brown    | 8/25/1984     | Male   | 987 Walnut Blvd | 555-1098 | 2/5/2020   | Specialist  |

|   | Staff_Id | Staff_name    | Date_of_birth | Gender | Address         | Phone_no | Hire_date  | Position    |
|---|----------|---------------|---------------|--------|-----------------|----------|------------|-------------|
| ▶ | 11       | John Doe      | 1990-01-01    | Male   | 123 Main St     | 555-1234 | 2020-05-15 | Manager     |
|   | 13       | Bob Johnson   | 1988-03-22    | Male   | 789 Elm Rd      | 555-9876 | 2021-02-10 | Engineer    |
|   | 18       | Grace Taylor  | 1998-12-12    | Female | 876 Walnut Rd   | 555-1098 | 2022-03-12 | Technician  |
|   | 20       | Ivy Rodriguez | 1993-05-25    | Female | 210 Oakwood Ln  | 555-5432 | 2020-10-20 | Coordinator |
|   | 22       | Karen White   | 1986-02-28    | Female | 543 Cedar Ln    | 555-2109 | 2022-01-08 | Manager     |
|   | 25       | Nathan Taylor | 1982-04-05    | Male   | 234 Birch St    | 555-4321 | 2021-09-30 | Supervisor  |
|   | 27       | Paul Brown    | 1984-08-25    | Male   | 987 Walnut Blvd | 555-1098 | 2020-02-05 | Specialist  |
| * | NULL     | NULL          | NULL          | NULL   | NULL            | NULL     | NULL       | NULL        |

#Display male employees hired before '2019-01-01':

```
select * from staff
```

```
where Hire_date < '2019-01-01' and Gender = 'Male';
```





### #Retrieve employees whose names start with 'J':

```
select * from staff
```

```
where Staff_name like 'J%';
```

| Staff_Id | Staff_name    | Date_of_birth | Gender | Address      | Phone_no | Hire_date | Position    |
|----------|---------------|---------------|--------|--------------|----------|-----------|-------------|
| 11       | John Doe      | 1/1/1990      | Male   | 123 Main St  | 555-1234 | 5/15/2020 | Manager     |
| 12       | Jane Smith    | 7/15/1985     | Female | 456 Oak Ave  | 555-5678 | 8/20/2019 | Salesperson |
| 21       | Jack Anderson | 9/14/1991     | Male   | 876 Pine Ave | 555-7890 | 12/3/2017 | Analyst     |

[illegible]

### #Display employees hired before '2023-01-01' and working as Supervisors:

```
select * from staff
```

```
where Hire_date < '2023-01-01' and Position = 'manager';
```

| Staff_Id | Staff_name  | Date_of_birth | Gender | Address      | Phone_no | Hire_date | Position |
|----------|-------------|---------------|--------|--------------|----------|-----------|----------|
| 11       | John Doe    | 1/1/1990      | Male   | 123 Main St  | 555-1234 | 5/15/2020 | Manager  |
| 22       | Karen White | 2/28/1986     | Female | 543 Cedar Ln | 555-2109 | 1/8/2022  | Manager  |

[illegible]

```
where Hire_date > '2019-01-01' and Position = 'Coordinator';
```

| Staff_Id | Staff_name      | Date_of_birth | Gender | Address        | Phone_no | Hire_date  | Position    |
|----------|-----------------|---------------|--------|----------------|----------|------------|-------------|
| 20       | Ivy Rodriguez   | 5/25/1993     | Female | 210 Oakwood Ln | 555-5432 | 10/20/2020 | Coordinator |
| 30       | Sofia Rodriguez | 6/30/1992     | Female | 543 Cedar Blvd | 555-2109 | 11/25/2019 | Coordinator |

[illegible]

where Position = 'Engineer' and Gender = 'Male';

| Staff_Id | Staff_name   | Date_of_birth | Gender | Address    | Phone_no | Hire_date | Position |
|----------|--------------|---------------|--------|------------|----------|-----------|----------|
| 13       | Bob Johnson  | 3/22/1988     | Male   | 789 Elm Rd | 555-9876 | 2/10/2021 | Engineer |
| 23       | Leo Martinez | 7/3/1994      | Male   | 321 Elm Dr | 555-6543 | 6/18/2019 | Engineer |

[illegible]

#Display the details of employees hired in 2022:

```
select * from staff
```

```
where year(Hire_date) = 2022;
```

| Staff_Id | Staff_name   | Date_of_birth | Gender | Address       | Phone_no | Hire_date | Position   |
|----------|--------------|---------------|--------|---------------|----------|-----------|------------|
| 18       | Grace Taylor | 12/12/1998    | Female | 876 Walnut Rd | 555-1098 | 3/12/2022 | Technician |
| 22       | Karen White  | 2/28/1986     | Female | 543 Cedar Ln  | 555-2109 | 1/8/2022  | Manager    |

|   | Staff_Id | Staff_name   | Date_of_birth | Gender | Address       | Phone_no | Hire_date  | Position   |
|---|----------|--------------|---------------|--------|---------------|----------|------------|------------|
|   | 18       | Grace Taylor | 1998-12-12    | Female | 876 Walnut Rd | 555-1098 | 2022-03-12 | Technician |
|   | 22       | Karen White  | 1986-02-28    | Female | 543 Cedar Ln  | 555-2109 | 2022-01-08 | Manager    |
| ▶ | NULL     | 22           | NULL          | NULL   | NULL          | NULL     | NULL       | NULL       |

#Inner Join between Student and Course details:

```
select student.student_Name, student.Gender, student.Address, student.Phone_no,
student.Date_of_Birth, student.Course_deatils
```

```
from student inner join faculty on student.Course_deatils = faculty.Faculty_Id;
```

| student_Name      | Gender | Address                 | Phone_no | Date_of_Birth | Course_deatils |
|-------------------|--------|-------------------------|----------|---------------|----------------|
| Alice Johnson     | Female | 123 Oak St, City        | 555-1234 | 5/20/1998     | 101            |
| Bob Smith         | Male   | 456 Maple St, Town      | 555-5678 | 11/12/1997    | 102            |
| Charlie Davis     | Male   | 789 Pine St, Village    | 555-9101 | 2/28/1999     | 103            |
| Diana Wilson      | Female | 987 Birch St, Hamlet    | 555-1122 | 8/5/1996      | 104            |
| Edward Lee        | Male   | 654 Cedar St, County    | 555-1314 | 3/15/1995     | 105            |
| Fiona Brown       | Female | 321 Elm St, State       | 555-1516 | 9/22/1994     | 106            |
| George Miller     | Male   | 987 Walnut St, Province | 555-1718 | 12/7/1993     | 107            |
| Hannah Taylor     | Female | 543 Pine St, Country    | 555-1920 | 6/18/1992     | 108            |
| Isaac Harris      | Male   | 876 Oak St, City        | 555-2022 | 4/10/1991     | 109            |
| Jessica Moore     | Female | 234 Maple St, Town      | 555-2224 | 10/31/1990    | 110            |
| Kevin White       | Male   | 567 Pine St, Village    | 555-2426 | 7/15/1989     | 111            |
| Laura Hall        | Female | 789 Birch St, Hamlet    | 555-2628 | 2/28/1988     | 112            |
| Michael Clark     | Male   | 321 Cedar St, County    | 555-2830 | 8/5/1987      | 113            |
| Natalie Adams     | Female | 654 Elm St, State       | 555-3032 | 1/22/1986     | 114            |
| Oscar Turner      | Male   | 876 Walnut St, Province | 555-3234 | 6/12/1985     | 115            |
| Penelope Robinson | Female | 543 Oak St, City        | 555-3436 | 3/20/1984     | 116            |
| Quentin Turner    | Male   | 765 Maple St, Town      | 555-3638 | 11/12/1983    | 117            |

|                   |        |                         |          |            |     |
|-------------------|--------|-------------------------|----------|------------|-----|
| Rachel Foster     | Female | 987 Pine St, Village    | 555-3840 | 2/28/1982  | 118 |
| Samuel Greene     | Male   | 234 Birch St, Hamlet    | 555-4042 | 8/5/1981   | 119 |
| Tina Watson       | Female | 876 Cedar St, County    | 555-4244 | 3/15/1980  | 120 |
| Ulysses Patterson | Male   | 987 Elm St, State       | 555-4446 | 9/22/1979  | 121 |
| Victoria Lopez    | Female | 321 Walnut St, Province | 555-4648 | 12/7/1978  | 122 |
| Walter Martinez   | Male   | 543 Oak St, Country     | 555-4850 | 6/18/1977  | 123 |
| Xavier Simmons    | Male   | 765 Maple St, City      | 555-5052 | 4/10/1976  | 124 |
| Yvonne Sanders    | Female | 987 Pine St, Town       | 555-5254 | 10/31/1975 | 125 |
| Zachary Reed      | Male   | 234 Birch St, Village   | 555-5456 | 7/15/1974  | 126 |
| Abigail Fisher    | Female | 876 Cedar St, Hamlet    | 555-5658 | 2/28/1973  | 127 |
| Benjamin Hughes   | Male   | 987 Elm St, County      | 555-5860 | 8/5/1972   | 128 |
| Catherine Carter  | Female | 321 Walnut St, State    | 555-6062 | 1/22/1971  | 129 |
| David Morris      | Male   | 543 Oak St, Province    | 555-6264 | 6/12/1970  | 130 |

|   | student_Name     | Gender | Address                 | Phone_no | Date_of_Birth | Course_deatails |
|---|------------------|--------|-------------------------|----------|---------------|-----------------|
| ▶ | Alice Johnson    | Female | 123 Oak St, City        | 555-1234 | 1998-05-20    | 101             |
|   | Bob Smith        | Male   | 456 Maple St, Town      | 555-5678 | 1997-11-12    | 102             |
|   | Charlie Davis    | Male   | 789 Pine St, Village    | 555-9101 | 1999-02-28    | 103             |
|   | Diana Wilson     | Female | 987 Birch St, Hamlet    | 555-1122 | 1996-08-05    | 104             |
|   | Edward Lee       | Male   | 654 Cedar St, County    | 555-1314 | 1995-03-15    | 105             |
|   | Fiona Brown      | Female | 321 Elm St, State       | 555-1516 | 1994-09-22    | 106             |
|   | George Miller    | Male   | 987 Walnut St, Province | 555-1718 | 1993-12-07    | 107             |
|   | Hannah Taylor    | Female | 543 Pine St, Country    | 555-1920 | 1992-06-18    | 108             |
|   | Isaac Harris     | Male   | 876 Oak St, City        | 555-2022 | 1991-04-10    | 109             |
|   | Jessica Moore    | Female | 234 Maple St, Town      | 555-2224 | 1990-10-31    | 110             |
|   | Kevin White      | Male   | 567 Pine St, Village    | 555-2426 | 1989-07-15    | 111             |
|   | Laura Hall       | Female | 789 Birch St, Hamlet    | 555-2628 | 1988-02-28    | 112             |
|   | Michael Clark    | Male   | 321 Cedar St, County    | 555-2830 | 1987-08-05    | 113             |
|   | Natalie Adams    | Female | 654 Elm St, State       | 555-3032 | 1986-01-22    | 114             |
|   | Oscar Turner     | Male   | 876 Walnut St, Province | 555-3234 | 1985-06-12    | 115             |
|   | Penelope Rob...  | Female | 543 Oak St, City        | 555-3436 | 1984-03-20    | 116             |
|   | Quentin Turner   | Male   | 765 Maple St, Town      | 555-3638 | 1983-11-12    | 117             |
|   | Rachel Foster    | Female | 987 Pine St, Village    | 555-3840 | 1982-02-28    | 118             |
|   | Samuel Greene    | Male   | 234 Birch St, Hamlet    | 555-4042 | 1981-08-05    | 119             |
|   | Tina Watson      | Female | 876 Cedar St, County    | 555-4244 | 1980-03-15    | 120             |
|   | Ulysses Patte... | Male   | 987 Elm St, State       | 555-4446 | 1979-09-22    | 121             |
|   | Victoria Lopez   | Female | 321 Walnut St, Province | 555-4648 | 1978-12-07    | 122             |
|   | Walter Martinez  | Male   | 543 Oak St, Country     | 555-4850 | 1977-06-18    | 123             |
|   | Xavier Simmons   | Male   | 765 Maple St, City      | 555-5052 | 1976-04-10    | 124             |
|   | Yvonne Sanders   | Female | 987 Pine St, Town       | 555-5254 | 1975-10-31    | 125             |

|                  |        |                       |          |            |     |
|------------------|--------|-----------------------|----------|------------|-----|
| Zachary Reed     | Male   | 234 Birch St, Village | 555-5456 | 1974-07-15 | 126 |
| Abigail Fisher   | Female | 876 Cedar St, Hamlet  | 555-5658 | 1973-02-28 | 127 |
| Benjamin Hug...  | Male   | 987 Elm St, County    | 555-5860 | 1972-08-05 | 128 |
| Catherine Car... | Female | 321 Walnut St, State  | 555-6062 | 1971-01-22 | 129 |
| David Morris     | Male   | 543 Oak St, Province  | 555-6264 | 1970-06-12 | 130 |

#Left Join between Faculty and Department:

select faculty.Faculty\_Name, faculty.Department, faculty.Specialization, staff.Position from faculty

left join staff on faculty.Faculty\_id = staff.Staff\_Id;

|   | Faculty_Name    | Department              | Specialization          | Position |
|---|-----------------|-------------------------|-------------------------|----------|
| ▶ | John Doe        | Computer Science        | Software Engineering    | NULL     |
|   | Jane Smith      | Electrical Engineering  | Power Systems           | NULL     |
|   | Bob Johnson     | Mechanical Engineering  | Mechatronics            | NULL     |
|   | Alice Brown     | Chemistry               | Organic Chemistry       | NULL     |
|   | David White     | Physics                 | Quantum Mechanics       | NULL     |
|   | Emily Green     | Mathematics             | Statistics              | NULL     |
|   | Charlie Black   | Computer Science        | Data Science            | NULL     |
|   | Eva Grey        | Electrical Engineering  | Communication Systems   | NULL     |
|   | Frank Red       | Mechanical Engineering  | Thermodynamics          | NULL     |
|   | Grace Orange    | Chemistry               | Inorganic Chemistry     | NULL     |
|   | Harry Yellow    | Physics                 | Astrophysics            | NULL     |
|   | Ivy Blue        | Mathematics             | Algebra                 | NULL     |
|   | Jack Pink       | Computer Science        | Artificial Intelligence | NULL     |
|   | Karen Brown     | Electrical Engineering  | Control Systems         | NULL     |
|   | Leo Green       | Mechanical Engineering  | Fluid Mechanics         | NULL     |
|   | Laura Rodrig... | Chemical Engineering    | Materials Science       | NULL     |
|   | Carlos Lopez    | Business Administration | Marketing               | NULL     |
|   | Maria Garcia    | Health Sciences         | Nutrition               | NULL     |
|   | Juan Ramirez    | Education               | Curriculum Development  | NULL     |
|   | Isabel Torres   | Physics                 | Astrophysics            | NULL     |
|   | Miguel Herna... | Computer Science        | Database Systems        | NULL     |
|   | Elena Navarro   | Political Science       | Comparative Politics    | NULL     |
|   | Alejandro Ma... | Economics               | Microeconomics          | NULL     |
|   | Ana Castillo    | History                 | European History        | NULL     |
|   | Javier Diaz     | Psychology              | Social Psychology       | NULL     |
|   | Monica Flores   | Sociology               | Criminology             | NULL     |
|   | Roberto Gome    | Monica Flores           | Calculus                | NULL     |
|   | Carmen Jime...  | Chemistry               | Inorganic Chemistry     | NULL     |
|   | Hector Vega     | Engineering             | Civil Engineering       | NULL     |
|   | Rosa Mendoza    | Communications          | Journalism              | NULL     |

| Faculty_Name       | Department              | Specialization          | Position |
|--------------------|-------------------------|-------------------------|----------|
| John Doe           | Computer Science        | Software Engineering    | NULL     |
| Jane Smith         | Electrical Engineering  | Power Systems           | NULL     |
| Bob Johnson        | Mechanical Engineering  | Mechatronics            | NULL     |
| Alice Brown        | Chemistry               | Organic Chemistry       | NULL     |
| David White        | Physics                 | Quantum Mechanics       | NULL     |
| Emily Green        | Mathematics             | Statistics              | NULL     |
| Charlie Black      | Computer Science        | Data Science            | NULL     |
| Eva Grey           | Electrical Engineering  | Communication Systems   | NULL     |
| Frank Red          | Mechanical Engineering  | Thermodynamics          | NULL     |
| Grace Orange       | Chemistry               | Inorganic Chemistry     | NULL     |
| Harry Yellow       | Physics                 | Astrophysics            | NULL     |
| Ivy Blue           | Mathematics             | Algebra                 | NULL     |
| Jack Pink          | Computer Science        | Artificial Intelligence | NULL     |
| Karen Brown        | Electrical Engineering  | Control Systems         | NULL     |
| Leo Green          | Mechanical Engineering  | Fluid Mechanics         | NULL     |
| Laura Rodriguez    | Chemical Engineering    | Materials Science       | NULL     |
| Carlos Lopez       | Business Administration | Marketing               | NULL     |
| Maria Garcia       | Health Sciences         | Nutrition               | NULL     |
| Juan Ramirez       | Education               | Curriculum Development  | NULL     |
| Isabel Torres      | Physics                 | Astrophysics            | NULL     |
| Miguel Hernandez   | Computer Science        | Database Systems        | NULL     |
| Elena Navarro      | Political Science       | Comparative Politics    | NULL     |
| Alejandro Martinez | Economics               | Microeconomics          | NULL     |
| Ana Castillo       | History                 | European History        | NULL     |
| Javier Diaz        | Psychology              | Social Psychology       | NULL     |
| Monica Flores      | Sociology               | Criminology             | NULL     |
| Roberto Gomez      | Mathematics             | Calculus                | NULL     |
| Carmen Jimenez     | Chemistry               | Inorganic Chemistry     | NULL     |
| Hector Vega        | Engineering             | Civil Engineering       | NULL     |
| Rosa Mendoza       | Communications          | Journalism              | NULL     |



#### #Left Join between Student and Admission Details:

```
select student.student_Name, student.Gender, student.Address, student.Phone_no,  
student.Date_of_Birth, student.Addmition_details_date
```

```
from student left join staff on student.student_Id = staff.Staff_Id;
```

| student_Name         | Gender | Address                    | Phone_no | Date_of_Birth | Addmition_details_date |
|----------------------|--------|----------------------------|----------|---------------|------------------------|
| Alice Johnson        | Female | 123 Oak St, City           | 555-1234 | 5/20/1998     | 9/1/2022               |
| Bob Smith            | Male   | 456 Maple St, Town         | 555-5678 | 11/12/1997    | 8/15/2022              |
| Charlie Davis        | Male   | 789 Pine St, Village       | 555-9101 | 2/28/1999     | 9/5/2022               |
| Diana Wilson         | Female | 987 Birch St, Hamlet       | 555-1122 | 8/5/1996      | 8/20/2022              |
| Edward Lee           | Male   | 654 Cedar St, County       | 555-1314 | 3/15/1995     | 9/10/2022              |
| Fiona Brown          | Female | 321 Elm St, State          | 555-1516 | 9/22/1994     | 8/25/2022              |
| George Miller        | Male   | 987 Walnut St,<br>Province | 555-1718 | 12/7/1993     | 9/15/2022              |
| Hannah Taylor        | Female | 543 Pine St, Country       | 555-1920 | 6/18/1992     | 8/30/2022              |
| Isaac Harris         | Male   | 876 Oak St, City           | 555-2022 | 4/10/1991     | 9/1/2022               |
| Jessica Moore        | Female | 234 Maple St, Town         | 555-2224 | 10/31/1990    | 8/15/2022              |
| Kevin White          | Male   | 567 Pine St, Village       | 555-2426 | 7/15/1989     | 9/5/2022               |
| Laura Hall           | Female | 789 Birch St, Hamlet       | 555-2628 | 2/28/1988     | 8/20/2022              |
| Michael Clark        | Male   | 321 Cedar St, County       | 555-2830 | 8/5/1987      | 9/10/2022              |
| Natalie Adams        | Female | 654 Elm St, State          | 555-3032 | 1/22/1986     | 8/25/2022              |
| Oscar Turner         | Male   | 876 Walnut St,<br>Province | 555-3234 | 6/12/1985     | 9/15/2022              |
| Penelope<br>Robinson | Female | 543 Oak St, City           | 555-3436 | 3/20/1984     | 9/1/2022               |
| Quentin Turner       | Male   | 765 Maple St, Town         | 555-3638 | 11/12/1983    | 8/15/2022              |
| Rachel Foster        | Female | 987 Pine St, Village       | 555-3840 | 2/28/1982     | 9/5/2022               |
| Samuel Greene        | Male   | 234 Birch St, Hamlet       | 555-4042 | 8/5/1981      | 8/20/2022              |
| Tina Watson          | Female | 876 Cedar St, County       | 555-4244 | 3/15/1980     | 9/10/2022              |
| Ulysses<br>Patterson | Male   | 987 Elm St, State          | 555-4446 | 9/22/1979     | 8/25/2022              |
| Victoria Lopez       | Female | 321 Walnut St,<br>Province | 555-4648 | 12/7/1978     | 9/15/2022              |
| Walter Martinez      | Male   | 543 Oak St, Country        | 555-4850 | 6/18/1977     | 8/30/2022              |
| Xavier Simmons       | Male   | 765 Maple St, City         | 555-5052 | 4/10/1976     | 9/1/2022               |
| Yvonne Sanders       | Female | 987 Pine St, Town          | 555-5254 | 10/31/1975    | 8/15/2022              |
| Zachary Reed         | Male   | 234 Birch St, Village      | 555-5456 | 7/15/1974     | 9/5/2022               |
| Abigail Fisher       | Female | 876 Cedar St, Hamlet       | 555-5658 | 2/28/1973     | 8/20/2022              |
| Benjamin<br>Hughes   | Male   | 987 Elm St, County         | 555-5860 | 8/5/1972      | 9/10/2022              |
| Catherine Carter     | Female | 321 Walnut St, State       | 555-6062 | 1/22/1971     | 8/25/2022              |
| David Morris         | Male   | 543 Oak St, Province       | 555-6264 | 6/12/1970     | 9/15/2022              |

|   | student_Name     | Gender | Address                 | Phone_no | Date_of_Birth | Addmition_details_date |
|---|------------------|--------|-------------------------|----------|---------------|------------------------|
| ▶ | Alice Johnson    | Female | 123 Oak St, City        | 555-1234 | 1998-05-20    | 2022-09-01             |
|   | Bob Smith        | Male   | 456 Maple St, Town      | 555-5678 | 1997-11-12    | 2022-08-15             |
|   | Charlie Davis    | Male   | 789 Pine St, Village    | 555-9101 | 1999-02-28    | 2022-09-05             |
|   | Diana Wilson     | Female | 987 Birch St, Hamlet    | 555-1122 | 1996-08-05    | 2022-08-20             |
|   | Edward Lee       | Male   | 654 Cedar St, County    | 555-1314 | 1995-03-15    | 2022-09-10             |
|   | Fiona Brown      | Female | 321 Elm St, State       | 555-1516 | 1994-09-22    | 2022-08-25             |
|   | George Miller    | Male   | 987 Walnut St, Province | 555-1718 | 1993-12-07    | 2022-09-15             |
|   | Hannah Taylor    | Female | 543 Pine St, Country    | 555-1920 | 1992-06-18    | 2022-08-30             |
|   | Isaac Harris     | Male   | 876 Oak St, City        | 555-2022 | 1991-04-10    | 2022-09-01             |
|   | Jessica Moore    | Female | 234 Maple St, Town      | 555-2224 | 1990-10-31    | 2022-08-15             |
|   | Kevin White      | Male   | 567 Pine St, Village    | 555-2426 | 1989-07-15    | 2022-09-05             |
|   | Laura Hall       | Female | 789 Birch St, Hamlet    | 555-2628 | 1988-02-28    | 2022-08-20             |
|   | Michael Clark    | Male   | 321 Cedar St, County    | 555-2830 | 1987-08-05    | 2022-09-10             |
|   | Natalie Adams    | Female | 654 Elm St, State       | 555-3032 | 1986-01-22    | 2022-08-25             |
|   | Oscar Turner     | Male   | 876 Walnut St, Province | 555-3234 | 1985-06-12    | 2022-09-15             |
|   | Penelope Rob...  | Female | 543 Oak St, City        | 555-3436 | 1984-03-20    | 2022-09-01             |
|   | Quentin Turner   | Male   | 765 Maple St, Town      | 555-3638 | 1983-11-12    | 2022-08-15             |
|   | Rachel Foster    | Female | 987 Pine St, Village    | 555-3840 | 1982-02-28    | 2022-09-05             |
|   | Samuel Greene    | Male   | 234 Birch St, Hamlet    | 555-4042 | 1981-08-05    | 2022-08-20             |
|   | Tina Watson      | Female | 876 Cedar St, County    | 555-4244 | 1980-03-15    | 2022-09-10             |
|   | Ulysses Patte... | Male   | 987 Elm St, State       | 555-4446 | 1979-09-22    | 2022-08-25             |
|   | Victoria Lopez   | Female | 321 Walnut St, Province | 555-4648 | 1978-12-07    | 2022-09-15             |
|   | Walter Martinez  | Male   | 543 Oak St, Country     | 555-4850 | 1977-06-18    | 2022-08-30             |
|   | Xavier Simmons   | Male   | 765 Maple St, City      | 555-5052 | 1976-04-10    | 2022-09-01             |
|   | Yvonne Sanders   | Female | 987 Pine St, Town       | 555-5254 | 1975-10-31    | 2022-08-15             |
|   | Zachary Reed     | Male   | 234 Birch St, Village   | 555-5456 | 1974-07-15    | 2022-09-05             |
|   | Abigail Fisher   | Female | 876 Cedar St, Hamlet    | 555-5658 | 1973-02-28    | 2022-08-20             |
|   | Benjamin Hug...  | Male   | 987 Elm St, County      | 555-5860 | 1972-08-05    | 2022-09-10             |
|   | Catherine Car... | Female | 321 Walnut St, State    | 555-6062 | 1971-01-22    | 2022-08-25             |
|   | David Morris     | Male   | 543 Oak St, Province    | 555-6264 | 1970-06-12    | 2022-09-15             |



#Inner Join between Student and Faculty by Course Details:

```
select student.student_Name, faculty.Faculty_Name, faculty.Department from student
```

```
inner join faculty on student.Course_deatails = faculty.Faculty_Id;
```

| student_Name      | Faculty_Name       | Department              |
|-------------------|--------------------|-------------------------|
| Alice Johnson     | John Doe           | Computer Science        |
| Bob Smith         | Jane Smith         | Electrical Engineering  |
| Charlie Davis     | Bob Johnson        | Mechanical Engineering  |
| Diana Wilson      | Alice Brown        | Chemistry               |
| Edward Lee        | David White        | Physics                 |
| Fiona Brown       | Emily Green        | Mathematics             |
| George Miller     | Charlie Black      | Computer Science        |
| Hannah Taylor     | Eva Grey           | Electrical Engineering  |
| Isaac Harris      | Frank Red          | Mechanical Engineering  |
| Jessica Moore     | Grace Orange       | Chemistry               |
| Kevin White       | Harry Yellow       | Physics                 |
| Laura Hall        | Ivy Blue           | Mathematics             |
| Michael Clark     | Jack Pink          | Computer Science        |
| Natalie Adams     | Karen Brown        | Electrical Engineering  |
| Oscar Turner      | Leo Green          | Mechanical Engineering  |
| Penelope Robinson | Laura Rodriguez    | Chemical Engineering    |
| Quentin Turner    | Carlos Lopez       | Business Administration |
| Rachel Foster     | Maria Garcia       | Health Sciences         |
| Samuel Greene     | Juan Ramirez       | Education               |
| Tina Watson       | Isabel Torres      | Physics                 |
| Ulysses Patterson | Miguel Hernandez   | Computer Science        |
| Victoria Lopez    | Elena Navarro      | Political Science       |
| Walter Martinez   | Alejandro Martinez | Economics               |
| Xavier Simmons    | Ana Castillo       | History                 |
| Yvonne Sanders    | Javier Diaz        | Psychology              |
| Zachary Reed      | Monica Flores      | Sociology               |
| Abigail Fisher    | Roberto Gomez      | Mathematics             |
| Benjamin Hughes   | Carmen Jimenez     | Chemistry               |
| Catherine Carter  | Hector Vega        | Engineering             |
| David Morris      | Rosa Mendoza       | Communications          |

|   | student_Name             | Faculty_Name    | Department              |
|---|--------------------------|-----------------|-------------------------|
| ▶ | Alice Johnson            | John Doe        | Computer Science        |
|   | Bob Smith                | Jane Smith      | Electrical Engineering  |
|   | Charlie D. Charlie Davis | Johnson         | Mechanical Engineering  |
|   | Diana Wilson             | Alice Brown     | Chemistry               |
|   | Edward Lee               | David White     | Physics                 |
|   | Fiona Brown              | Emily Green     | Mathematics             |
|   | George Miller            | Charlie Black   | Computer Science        |
|   | Hannah Taylor            | Eva Grey        | Electrical Engineering  |
|   | Isaac Harris             | Frank Red       | Mechanical Engineering  |
|   | Jessica Moore            | Grace Orange    | Chemistry               |
|   | Kevin White              | Harry Yellow    | Physics                 |
|   | Laura Hall               | Ivy Blue        | Mathematics             |
|   | Michael Clark            | Jack Pink       | Computer Science        |
|   | Natalie Adams            | Karen Brown     | Electrical Engineering  |
|   | Oscar Turner             | Leo Green       | Mechanical Engineering  |
|   | Penelope Rob...          | Laura Rodrig... | Chemical Engineering    |
|   | Quentin Turner           | Carlos Lopez    | Business Administration |
|   | Rachel Foster            | Maria Garcia    | Health Sciences         |
|   | Samuel Greene            | Juan Ramirez    | Education               |
|   | Tina Watson              | Isabel Torres   | Physics                 |
|   | Ulysses Patte...         | Miguel Herna... | Computer Science        |
|   | Victoria Lopez           | Elena Navarro   | Political Science       |
|   | Walter Martinez          | Alejandro Ma... | Economics               |
|   | Xavier Simmons           | Ana Castillo    | History                 |
|   | Yvonne Sanders           | Javier Diaz     | Psychology              |
|   | Zachary Reed             | Monica Flores   | Sociology               |
|   | Abigail Fisher           | Roberto Gomez   | Mathematics             |
|   | Benjamin Hug...          | Carmen Jime...  | Chemistry               |
|   | Catherine Car...         | Hector Vega     | Engineering             |
|   | David Morris             | Rosa Mendoza    | Communications          |

#Left Join between Student and Faculty by Course Details:

```
select student.student_Name, faculty.Faculty_Name, faculty.Department from student
```

```
left join faculty on student.Course_deatails = faculty.Faculty_Id;
```

| student_Name  | Faculty_Name  | Department             |
|---------------|---------------|------------------------|
| Alice Johnson | John Doe      | Computer Science       |
| Bob Smith     | Jane Smith    | Electrical Engineering |
| Charlie Davis | Bob Johnson   | Mechanical Engineering |
| Diana Wilson  | Alice Brown   | Chemistry              |
| Edward Lee    | David White   | Physics                |
| Fiona Brown   | Emily Green   | Mathematics            |
| George Miller | Charlie Black | Computer Science       |

|                   |                    |                         |
|-------------------|--------------------|-------------------------|
| Hannah Taylor     | Eva Grey           | Electrical Engineering  |
| Isaac Harris      | Frank Red          | Mechanical Engineering  |
| Jessica Moore     | Grace Orange       | Chemistry               |
| Kevin White       | Harry Yellow       | Physics                 |
| Laura Hall        | Ivy Blue           | Mathematics             |
| Michael Clark     | Jack Pink          | Computer Science        |
| Natalie Adams     | Karen Brown        | Electrical Engineering  |
| Oscar Turner      | Leo Green          | Mechanical Engineering  |
| Penelope Robinson | Laura Rodriguez    | Chemical Engineering    |
| Quentin Turner    | Carlos Lopez       | Business Administration |
| Rachel Foster     | Maria Garcia       | Health Sciences         |
| Samuel Greene     | Juan Ramirez       | Education               |
| Tina Watson       | Isabel Torres      | Physics                 |
| Ulysses Patterson | Miguel Hernandez   | Computer Science        |
| Victoria Lopez    | Elena Navarro      | Political Science       |
| Walter Martinez   | Alejandro Martinez | Economics               |
| Xavier Simmons    | Ana Castillo       | History                 |
| Yvonne Sanders    | Javier Diaz        | Psychology              |
| Zachary Reed      | Monica Flores      | Sociology               |
| Abigail Fisher    | Roberto Gomez      | Mathematics             |
| Benjamin Hughes   | Carmen Jimenez     | Chemistry               |
| Catherine Carter  | Hector Vega        | Engineering             |
| David Morris      | Rosa Mendoza       | Communications          |

|   | student_Name     | Faculty_Name    | Department              |
|---|------------------|-----------------|-------------------------|
| ▶ | Alice Johnson    | John Doe        | Computer Science        |
|   | Bob Smith        | Jane Smith      | Electrical Engineering  |
|   | Charlie Davis    | Bob Johnson     | Mechanical Engineering  |
|   | Diana Wilson     | Alice Brown     | Chemistry               |
|   | Edward Lee       | David White     | Physics                 |
|   | Fiona Brown      | Emily Green     | Mathematics             |
|   | George Miller    | Charlie Black   | Computer Science        |
|   | Hannah Taylor    | Eva Grey        | Electrical Engineering  |
|   | Isaac Harris     | Frank Red       | Mechanical Engineering  |
|   | Jessica Moore    | Grace Orange    | Chemistry               |
|   | Kevin White      | Harry Yellow    | Physics                 |
|   | Laura Hall       | Ivy Blue        | Mathematics             |
|   | Michael Clark    | Jack Pink       | Computer Science        |
|   | Natalie Adams    | Karen Brown     | Electrical Engineering  |
|   | Oscar Turner     | Leo Green       | Mechanical Engineering  |
|   | Penelope Rob...  | Laura Rodrig... | Chemical Engineering    |
|   | Quentin Turner   | Carlos Lopez    | Business Administration |
|   | Rachel Foster    | Maria Garcia    | Health Sciences         |
|   | Samuel Greene    | Juan Ramirez    | Education               |
|   | Tina Watson      | Isabel Torres   | Physics                 |
|   | Ulysses Patte... | Miguel Herna... | Computer Science        |
|   | Victoria Lopez   | Elena Navarro   | Political Science       |
|   | Walter Martinez  | Alejandro Ma... | Economics               |
|   | Xavier Simmons   | Ana Castillo    | History                 |
|   | Yvonne Sanders   | Javier Diaz     | Psychology              |
|   | Zachary Reed     | Monica Flores   | Sociology               |
|   | Abigail Fisher   | Roberto Gomez   | Mathematics             |
|   | Benjamin Hug...  | Carmen Jime...  | Chemistry               |
|   | Catherine Car... | Hector Vega     | Engineering             |
|   | David Morris     | Rosa Mendoza    | Communications          |

SELECT faculty\_id, faculty\_Name FROM faculty WHERE Faculty\_id IN

(SELECT Course\_deatails FROM student GROUP BY Course\_deatails HAVING COUNT(\*) <25);

| faculty_id | faculty_Name  |
|------------|---------------|
| 101        | John Doe      |
| 102        | Jane Smith    |
| 103        | Bob Johnson   |
| 104        | Alice Brown   |
| 105        | David White   |
| 106        | Emily Green   |
| 107        | Charlie Black |
| 108        | Eva Grey      |
| 109        | Frank Red     |
| 110        | Grace Orange  |

|     |                    |
|-----|--------------------|
| 111 | Harry Yellow       |
| 112 | Ivy Blue           |
| 113 | Jack Pink          |
| 114 | Karen Brown        |
| 115 | Leo Green          |
| 116 | Laura Rodriguez    |
| 117 | Carlos Lopez       |
| 118 | Maria Garcia       |
| 119 | Juan Ramirez       |
| 120 | Isabel Torres      |
| 121 | Miguel Hernandez   |
| 122 | Elena Navarro      |
| 123 | Alejandro Martinez |
| 124 | Ana Castillo       |
| 125 | Javier Diaz        |
| 126 | Monica Flores      |
| 127 | Roberto Gomez      |
| 128 | Carmen Jimenez     |
| 129 | Hector Vega        |
| 130 | Rosa Mendoza       |

|   | faculty_id | faculty_Name    |
|---|------------|-----------------|
| ▶ | 101        | John D Refresh  |
|   | 102        | Jane Smith      |
|   | 103        | Bob Johnson     |
|   | 104        | Alice Brown     |
|   | 105        | David White     |
|   | 106        | Emily Green     |
|   | 107        | Charlie Black   |
|   | 108        | Eva Grey        |
|   | 109        | Frank Red       |
|   | 110        | Grace Orange    |
|   | 111        | Harry Yellow    |
|   | 112        | Ivy Blue        |
|   | 113        | Jack Pink       |
|   | 114        | Karen Brown     |
|   | 115        | Leo Green       |
|   | 116        | Laura Rodrig... |
|   | 117        | Carlos Lopez    |
|   | 118        | Maria Garcia    |
|   | 119        | Juan Ramirez    |
|   | 120        | Isabel Torres   |
|   | 121        | Miguel Herna... |
|   | 122        | Elena Navarro   |
|   | 123        | Alejandro Ma... |
|   | 124        | Ana Castillo    |

### #Students with the Youngest Age:

```
select * from student where Date_of_Birth in (select MIN(Date_of_Birth)from student);
```

| student_Id | student_Name | Date_of_Birth | Gender | Address              | Phone_no | Addmition_details_date | Course_deatails |
|------------|--------------|---------------|--------|----------------------|----------|------------------------|-----------------|
| 30         | David Morris | 6/12/1970     | Male   | 543 Oak St, Province | 555-6264 | 9/15/2022              | 130             |

|   | student_Id | student_Name | Date_of_Birth | Gender | Address              | Phone_no | Addmition_details_date | Course_deatails |
|---|------------|--------------|---------------|--------|----------------------|----------|------------------------|-----------------|
| ▶ | 30         | David Morris | 1970-06-12    | Male   | 543 Oak St, Province | 555-6264 | 2022-09-15             | 130             |
| * | NULL       | NULL         | NULL          | NULL   | NULL                 | NULL     | NULL                   | NULL            |

### #Students with Faculty Members in the Same Department:

```
SELECT * FROM student WHERE Course_deatails IN
```

```
(SELECT DISTINCT Faculty_id FROM faculty WHERE Department = (SELECT Department FROM faculty WHERE Faculty_id = student.Course_deatails));
```

| Student_Id | Student_Name  | Date_of_Birth | Gender | Address                 | Phone_no | Addmition_details_date | Course_deatails |
|------------|---------------|---------------|--------|-------------------------|----------|------------------------|-----------------|
| 1          | Alice Johnson | 5/20/1998     | Female | 123 Oak St, City        | 555-1234 | 9/1/2022               | 101             |
| 2          | Bob Smith     | 11/12/1997    | Male   | 456 Maple St, Town      | 555-5678 | 8/15/2022              | 102             |
| 3          | Charlie Davis | 2/28/1999     | Male   | 789 Pine St, Village    | 555-9101 | 9/5/2022               | 103             |
| 4          | Diana Wilson  | 8/5/1996      | Female | 987 Birch St, Hamlet    | 555-1122 | 8/20/2022              | 104             |
| 5          | Edward Lee    | 3/15/1995     | Male   | 654 Cedar St, County    | 555-1314 | 9/10/2022              | 105             |
| 6          | Fiona Brown   | 9/22/1994     | Female | 321 Elm St, State       | 555-1516 | 8/25/2022              | 106             |
| 7          | George Miller | 12/7/1993     | Male   | 987 Walnut St, Province | 555-1718 | 9/15/2022              | 107             |
| 8          | Hannah Taylor | 6/18/1992     | Female | 543 Pine St, Country    | 555-1920 | 8/30/2022              | 108             |
| 9          | Isaac Harris  | 4/10/1991     | Male   | 876 Oak St, City        | 555-2022 | 9/1/2022               | 109             |
| 10         | Jessica Moore | 10/31/1990    | Female | 234 Maple St, Town      | 555-2224 | 8/15/2022              | 110             |
| 11         | Kevin White   | 7/15/1989     | Male   | 567 Pine St, Village    | 555-2426 | 9/5/2022               | 111             |
| 12         | Laura Hall    | 2/28/1988     | Female | 789 Birch St, Hamlet    | 555-2628 | 8/20/2022              | 112             |
| 13         | Michael Clark | 8/5/1987      | Male   | 321 Cedar St, County    | 555-2830 | 9/10/2022              | 113             |
| 14         | Natalie Adams | 1/22/1986     | Female | 654 Elm St, State       | 555-3032 | 8/25/2022              | 114             |

|    |                      |            |        |                            |          |           |     |
|----|----------------------|------------|--------|----------------------------|----------|-----------|-----|
| 15 | Oscar Turner         | 6/12/1985  | Male   | 876 Walnut St,<br>Province | 555-3234 | 9/15/2022 | 115 |
| 16 | Penelope<br>Robinson | 3/20/1984  | Female | 543 Oak St, City           | 555-3436 | 9/1/2022  | 116 |
| 17 | Quentin<br>Turner    | 11/12/1983 | Male   | 765 Maple St, Town         | 555-3638 | 8/15/2022 | 117 |
| 18 | Rachel Foster        | 2/28/1982  | Female | 987 Pine St, Village       | 555-3840 | 9/5/2022  | 118 |
| 19 | Samuel<br>Greene     | 8/5/1981   | Male   | 234 Birch St, Hamlet       | 555-4042 | 8/20/2022 | 119 |
| 20 | Tina Watson          | 3/15/1980  | Female | 876 Cedar St,<br>County    | 555-4244 | 9/10/2022 | 120 |
| 21 | Ulysses<br>Patterson | 9/22/1979  | Male   | 987 Elm St, State          | 555-4446 | 8/25/2022 | 121 |
| 22 | Victoria Lopez       | 12/7/1978  | Female | 321 Walnut St,<br>Province | 555-4648 | 9/15/2022 | 122 |
| 23 | Walter<br>Martinez   | 6/18/1977  | Male   | 543 Oak St, Country        | 555-4850 | 8/30/2022 | 123 |
| 24 | Xavier<br>Simmons    | 4/10/1976  | Male   | 765 Maple St, City         | 555-5052 | 9/1/2022  | 124 |
| 25 | Yvonne<br>Sanders    | 10/31/1975 | Female | 987 Pine St, Town          | 555-5254 | 8/15/2022 | 125 |
| 26 | Zachary Reed         | 7/15/1974  | Male   | 234 Birch St, Village      | 555-5456 | 9/5/2022  | 126 |
| 27 | Abigail Fisher       | 2/28/1973  | Female | 876 Cedar St,<br>Hamlet    | 555-5658 | 8/20/2022 | 127 |
| 28 | Benjamin<br>Hughes   | 8/5/1972   | Male   | 987 Elm St, County         | 555-5860 | 9/10/2022 | 128 |
| 29 | Catherine<br>Carter  | 1/22/1971  | Female | 321 Walnut St,<br>State    | 555-6062 | 8/25/2022 | 129 |
| 30 | David Morris         | 6/12/1970  | Male   | 543 Oak St,<br>Province    | 555-6264 | 9/15/2022 | 130 |



|   | student_Id | student_Name     | Date_of_Birth | Gender | Address                 | Phone_no | Addmition_details_date | Course_deatails |
|---|------------|------------------|---------------|--------|-------------------------|----------|------------------------|-----------------|
| ▶ | 1          | Alice Johnson    | 1998-05-20    | Female | 123 Oak St, City        | 555-1234 | 2022-09-01             | 101             |
|   | 2          | Bob Smith        | 1997-11-12    | Male   | 456 Maple St, Town      | 555-5678 | 2022-08-15             | 102             |
|   | 3          | Charlie Davis    | 1999-02-28    | Male   | 789 Pine St, Village    | 555-9101 | 2022-09-05             | 103             |
|   | 4          | Diana Wilson     | 1996-08-05    | Female | 987 Birch St, Hamlet    | 555-1122 | 2022-08-20             | 104             |
|   | 5          | Edward Lee       | 1995-03-15    | Male   | 654 Cedar St, County    | 555-1314 | 2022-09-10             | 105             |
|   | 6          | Fiona Brown      | 1994-09-22    | Female | 321 Elm St, State       | 555-1516 | 2022-08-25             | 106             |
|   | 7          | George Miller    | 1993-12-07    | Male   | 987 Walnut St, Province | 555-1718 | 2022-09-15             | 107             |
|   | 8          | Hannah Taylor    | 1992-06-18    | Female | 543 Pine St, Country    | 555-1920 | 2022-08-30             | 108             |
|   | 9          | Isaac Harris     | 1991-04-10    | Male   | 876 Oak St, City        | 555-2022 | 2022-09-01             | 109             |
|   | 10         | Jessica Moore    | 1990-10-31    | Female | 234 Maple St, Town      | 555-2224 | 2022-08-15             | 110             |
|   | 11         | Kevin White      | 1989-07-15    | Male   | 567 Pine St, Village    | 555-2426 | 2022-09-05             | 111             |
|   | 12         | Laura Hall       | 1988-02-28    | Female | 789 Birch St, Hamlet    | 555-2628 | 2022-08-20             | 112             |
|   | 13         | Michael Clark    | 1987-08-05    | Male   | 321 Cedar St, County    | 555-2830 | 2022-09-10             | 113             |
|   | 14         | Natalie Adams    | 1986-01-22    | Female | 654 Elm St, State       | 555-3032 | 2022-08-25             | 114             |
|   | 15         | Oscar Turner     | 1985-06-12    | Male   | 876 Walnut St, Province | 555-3234 | 2022-09-15             | 115             |
|   | 16         | Penelope Rob...  | 1984-03-20    | Female | 543 Oak St, City        | 555-3436 | 2022-09-01             | 116             |
|   | 17         | Quentin Turner   | 1983-11-12    | Male   | 765 Maple St, Town      | 555-3638 | 2022-08-15             | 117             |
|   | 18         | Rachel Foster    | 1982-02-28    | Female | 987 Pine St, Village    | 555-3840 | 2022-09-05             | 118             |
|   | 19         | Samuel Greene    | 1981-08-05    | Male   | 234 Birch St, Hamlet    | 555-4042 | 2022-08-20             | 119             |
|   | 20         | Tina Watson      | 1980-03-15    | Female | 876 Cedar St, County    | 555-4244 | 2022-09-10             | 120             |
|   | 21         | Ulysses Patte... | 1979-09-22    | Male   | 987 Elm St, State       | 555-4446 | 2022-08-25             | 121             |
|   | 22         | Victoria Lopez   | 1978-12-07    | Female | 321 Walnut St, Province | 555-4648 | 2022-09-15             | 122             |
|   | 23         | Walter Martinez  | 1977-06-18    | Male   | 543 Oak St, Country     | 555-4850 | 2022-08-30             | 123             |
|   | 24         | Xavier Simmons   | 1976-04-10    | Male   | 765 Maple St, City      | 555-5052 | 2022-09-01             | 124             |
|   | 25         | Yvonne Sanders   | 1975-10-31    | Female | 987 Pine St, Town       | 555-5254 | 2022-08-15             | 125             |
|   | 26         | Zachary Reed     | 1974-07-15    | Male   | 234 Birch St, Village   | 555-5456 | 2022-09-05             | 126             |
|   | 27         | Abigail Fisher   | 1973-02-28    | Female | 876 Cedar St, Hamlet    | 555-5658 | 2022-08-20             | 127             |
|   | 28         | Benjamin Hug...  | 1972-08-05    | Male   | 987 Elm St, County      | 555-5860 | 2022-09-10             | 128             |
|   | 29         | Catherine Car... | 1971-01-22    | Female | 321 Walnut St, State    | 555-6062 | 2022-08-25             | 129             |
|   | 30         | David Morris     | 1970-06-12    | Male   | 543 Oak St, Province    | 555-6264 | 2022-09-15             | 130             |
| * | NULL       | NULL             | NULL          | NULL   | NULL                    | NULL     | NULL                   | NULL            |

#Students Enrolled in Courses Taught by Female Faculty:

SELECT \* FROM student WHERE Course\_deatails = (SELECT Faculty\_id FROM faculty WHERE Gender = 'Female');

| Faculty_Id | Faculty_Name  | Date_Of_Birth | Gender | Address                   | Phone_no | Hire_date  | Department             |
|------------|---------------|---------------|--------|---------------------------|----------|------------|------------------------|
| 101        | John Doe      | 5/15/1980     | Male   | 123 Main St, Cityville    | 555-1234 | 2/10/2020  | Computer Science       |
| 102        | Jane Smith    | 8/22/1975     | Female | 456 Oak St, Townburg      | 555-5678 | 7/20/2018  | Electrical Engineering |
| 104        | Alice Brown   | 4/12/1978     | Female | 101 Cedar St, Hamletville | 555-3456 | 11/15/2019 | Chemistry              |
| 105        | David White   | 7/25/1985     | Male   | 202 Elm St, Suburbia      | 555-7890 | 5/2/2017   | Physics                |
| 107        | Charlie Black | 9/5/1970      | Male   | 404 Walnut St, Lakeside   | 555-6789 | 1/12/2021  | Computer Science       |
| 109        | Frank Red     | 6/28/1972     | Male   | 606 Spruce St, Hilltop    | 555-4567 | 12/30/2018 | Mechanical Engineering |





#Faculty Hired After the Earliest Staff Hiring Date:

SELECT \* FROM faculty WHERE YEAR(Hire\_date) > (SELECT MIN(YEAR(Hire\_date))FROM staff);

| Faculty_Name     | Date_Of_Birth | Gender | Address                     | Phone_no | Hire_date  | Department              | Specialization          | Rank_               |
|------------------|---------------|--------|-----------------------------|----------|------------|-------------------------|-------------------------|---------------------|
| John Doe         | 5/15/1980     | Male   | 123 Main St, Cityville      | 555-1234 | 2/10/2020  | Computer Science        | Software Engineering    | Assistant Professor |
| Jane Smith       | 8/22/1975     | Female | 456 Oak St, Townburg        | 555-5678 | 7/20/2018  | Electrical Engineering  | Power Systems           | Associate Professor |
| Alice Brown      | 4/12/1978     | Female | 101 Cedar St, Hamletville   | 555-3456 | 11/15/2019 | Chemistry               | Organic Chemistry       | Assistant Professor |
| David White      | 7/25/1985     | Male   | 202 Elm St, Suburbia        | 555-7890 | 5/2/2017   | Physics                 | Quantum Mechanics       | Associate Professor |
| Charlie Black    | 9/5/1970      | Male   | 404 Walnut St, Lakeside     | 555-6789 | 1/12/2021  | Computer Science        | Data Science            | Associate Professor |
| Frank Red        | 6/28/1972     | Male   | 606 Spruce St, Hilltop      | 555-4567 | 12/30/2018 | Mechanical Engineering  | Thermodynamics          | Assistant Professor |
| Grace Orange     | 3/17/1987     | Female | 707 Pineapple St, Beachtown | 555-8901 | 6/18/2019  | Chemistry               | Inorganic Chemistry     | Professor           |
| Ivy Blue         | 5/3/1984      | Female | 909 Cherry St, Orchidville  | 555-6789 | 8/14/2017  | Mathematics             | Algebra                 | Assistant Professor |
| Jack Pink        | 8/20/1979     | Male   | 101 Lemon St, Citrusville   | 555-0123 | 4/5/2020   | Computer Science        | Artificial Intelligence | Professor           |
| Leo Green        | 7/28/1974     | Male   | 303 Olive St, Gardenburg    | 555-8901 | 11/25/2018 | Mechanical Engineering  | Fluid Mechanics         | Professor           |
| Laura Rodriguez  | 8/20/1991     | Female | 777 Oak St                  | 555-9876 | 7/15/2020  | Chemical Engineering    | Materials Science       | Professor           |
| Carlos Lopez     | 4/5/1989      | Male   | 888 Pine St                 | 555-4321 | 2/10/2018  | Business Administration | Marketing               | Associate Professor |
| Juan Ramirez     | 2/15/1986     | Male   | 444 Birch St                | 555-1234 | 12/8/2017  | Education               | Curriculum Development  | Professor           |
| Isabel Torres    | 6/10/1994     | Female | 555 Elm St                  | 555-5678 | 4/5/2022   | Physics                 | Astrophysics            | Associate Professor |
| Miguel Hernandez | 9/3/1980      | Male   | 111 Maple St                | 555-2345 | 10/18/2019 | Computer Science        | Database Systems        | Professor           |
| Roberto Gomez    | 10/5/1978     | Male   | 888 Oak St                  | 555-1234 | 9/15/2018  | Mathematics             | Calculus                | Associate Professor |
| Hector Vega      | 8/12/1987     | Male   | 444 Birch St                | 555-2345 | 3/25/2019  | Engineering             | Civil Engineering       | Professor           |
| Rosa Mendoza     | 3/30/1995     | Female | 555 Maple St                | 555-8765 | 1/12/2017  | Communications          | Journalism              | Associate Professor |

|   | Faculty_id | Faculty_Name    | Date_Of_Birth | Gender | Address                     | Phone_no | Hire_date  | Department              | Specialization          | Rank_               |
|---|------------|-----------------|---------------|--------|-----------------------------|----------|------------|-------------------------|-------------------------|---------------------|
| ▶ | 101        | John Doe        | 1980-05-15    | Male   | 123 Main St, Cityville      | 555-1234 | 2020-02-10 | Computer Science        | Software Engineering    | Assistant Professor |
|   | 102        | Jane Smith      | 1975-08-22    | Female | 456 Oak St, Townburg        | 555-5678 | 2018-07-20 | Electrical Engineering  | Power Systems           | Associate Professor |
|   | 104        | Alice Brown     | 1978-04-12    | Female | 101 Cedar St, Hamletville   | 555-3456 | 2019-11-15 | Chemistry               | Organic Chemistry       | Assistant Professor |
|   | 105        | David White     | 1985-07-25    | Male   | 202 Elm St, Suburbia        | 555-7890 | 2017-05-02 | Physics                 | Quantum Mechanics       | Associate Professor |
|   | 107        | Charlie Black   | 1970-09-05    | Male   | 404 Walnut St, Lakeside     | 555-6789 | 2021-01-12 | Computer Science        | Data Science            | Associate Professor |
|   | 109        | Frank Red       | 1972-06-28    | Male   | 606 Spruce St, Hilltop      | 555-4567 | 2018-12-30 | Mechanical Engineering  | Thermodynamics          | Assistant Professor |
|   | 110        | Grace Orange    | 1987-03-17    | Female | 707 Pineapple St, Beachtown | 555-8901 | 2019-06-18 | Chemistry               | Inorganic Chemistry     | Professor           |
|   | 112        | Ivy Blue        | 1984-05-03    | Female | 909 Cherry St, Orchidville  | 555-6789 | 2017-08-14 | Mathematics             | Algebra                 | Assistant Professor |
|   | 113        | Jack Pink       | 1979-08-20    | Male   | 101 Lemon St, Citrusville   | 555-0123 | 2020-04-05 | Computer Science        | Artificial Intelligence | Professor           |
|   | 115        | Leo Green       | 1974-07-28    | Male   | 303 Olive St, Gardenburg    | 555-8901 | 2018-11-25 | Mechanical Engineering  | Fluid Mechanics         | Professor           |
|   | 116        | Laura Rodrig... | 1991-08-20    | Female | 777 Oak St                  | 555-9876 | 2020-07-15 | Chemical Engineering    | Materials Science       | Professor           |
|   | 117        | Carlos Lopez    | 1989-04-05    | Male   | 888 Pine St                 | 555-4321 | 2018-02-10 | Business Administration | Marketing               | Associate Professor |
|   | 119        | Juan Ramirez    | 1986-02-15    | Male   | 444 Birch St                | 555-1234 | 2017-12-08 | Education               | Curriculum Developm...  | Professor           |
|   | 120        | Isabel Torres   | 1994-06-10    | Female | 555 Elm St                  | 555-5678 | 2022-04-05 | Physics                 | Astrophysics            | Associate Professor |
|   | 121        | Miguel Herna... | 1980-09-03    | Male   | 111 Maple St                | 555-2345 | 2019-10-18 | Computer Science        | Database Systems        | Professor           |
|   | 127        | Roberto Gomez   | 1978-10-05    | Male   | 888 Oak St                  | 555-1234 | 2018-09-15 | Mathematics             | Calculus                | Associate Professor |
|   | 129        | Hector Vega     | 1987-08-12    | Male   | 444 Birch St                | 555-2345 | 2019-03-25 | Engineering             | Civil Engineering       | Professor           |
|   |            |                 |               |        |                             |          |            |                         |                         |                     |
| * | 130        | Rosa Mendoza    | 1995-03-30    | Female | 555 Maple St                | 555-8765 | 2017-01-12 | Communications          | Journalism              | Associate Professor |

### #Staff Members with the Most Recent Hiring Date:

```
SELECT * FROM staff WHERE Hire_date = (SELECT MAX(Hire_date)FROM staff);
```

| Staff_Id | Staff_name   | Date_of_birth | Gender | Address       | Phone_no | Hire_date | Position   |
|----------|--------------|---------------|--------|---------------|----------|-----------|------------|
| 18       | Grace Taylor | 12/12/1998    | Female | 876 Walnut Rd | 555-1098 | 3/12/2022 | Technician |

[illegible]

## CONCLUSION

Creating a conclusion for a project like an Institute Management System using SQL involves summarizing the key aspects, achievements, and implications of the project. Here's a sample conclusion:

"In conclusion, the development of the Institute Management System using SQL has been a comprehensive and rewarding endeavor. Through the implementation of a robust database structure, efficient query handling, and thoughtful data management, this project aimed to streamline administrative tasks, enhance record-keeping, and improve overall efficiency within the institute.

The system successfully addressed various key functionalities such as student management, course registration, faculty records, and administrative tasks. The relational database design allowed for smooth data retrieval, modification, and organization, contributing to a user-friendly interface and efficient data processing.

Furthermore, the project facilitated better decision-making processes by providing timely and accurate information to the institute's stakeholders. It also offered scalability, allowing for potential expansions and modifications to adapt to future requirements.

While the system met numerous objectives, there are areas for potential enhancement. Future iterations could focus on incorporating additional features such as advanced reporting tools, integration with other systems, or implementing data analytics for deeper insights into student performance and administrative trends.

Overall, this Institute Management System serves as a strong foundation for managing institute resources effectively, fostering a more organized environment, and facilitating informed decision-making processes."

Feel free to tailor the conclusion based on the specific accomplishments and unique aspects of your Institute Management System SQL project.

THANK  
YOU