

DBMS PRACTICAL LAB DAY 2

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Q.NO.1

1.Create Employee table for the following details

S.N o	Name	Designatio n	Branch
1	Suresh	Manager	Chennai
2	Ramesh	Supervisor	Madurai
3	Hari	Assistant	Trichy

Perform the following:

- Alter the table by adding a column **Salary**
- Alter the table by modifying the column **Name**
- Describe the table **employee**
- Rename table **employee** as **emp**
- Delete the Second row from the table
- Drop the table

```
MySQL 8.0 Command Line Cll x + v
mysql> use employee;
Database changed
mysql> DROP TABLE employee;
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE Employee (
-> S_No INT,
-> Name VARCHAR(255),
-> Designation VARCHAR(100),
-> Branch VARCHAR(100)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> INSERT INTO Employee (S_No, Name, Designation, Branch)
-> VALUES
-> (1, 'Suresh', 'Manager', 'Chennai'),
-> (2, 'Ramesh', 'Supervisor', 'Madurai'),
-> (3, 'Hari', 'Assistant', 'Trichy'),
-> (4, 'Seetha', 'Project Head', 'Pondycherry'),
-> (5, 'Haasini', 'General Manager', 'Pondycherry');
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE employee
-> ADD salary DECIMAL(10,2);
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE employee
-> CHANGE COLUMN Name Full_name VARCHAR(200);
```

```
MySQL 8.0 Command Line CLI x + v
Records: 5 Duplicates: 0 Warnings: 0

mysql> DESCRIBE employee;
+-----+-----+-----+-----+-----+-----+
| Field | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| S_No  | int           | YES  |     | NULL    |       |
| Full_name | varchar(200)  | YES  |     | NULL    |       |
| Designation | varchar(100) | YES  |     | NULL    |       |
| Branch | varchar(100)  | YES  |     | NULL    |       |
| salary | decimal(10,2) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> SELECT * FROM employee;
+-----+-----+-----+-----+-----+
| S_No | Full_name | Designation | Branch | salary |
+-----+-----+-----+-----+-----+
| 1    | Suresh   | Manager     | Chennai | NULL   |
| 2    | Ramesh   | Supervisor  | Madurai | NULL   |
| 3    | Hari     | Assistant   | Trichy  | NULL   |
| 4    | Seetha   | Project Head | Pondyerry | NULL  |
| 5    | Haasini  | General Manager | Pondyerry | NULL  |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> RENAME TABLE employee TO emp;
Query OK, 0 rows affected (0.03 sec)

mysql> DELETE FROM emp WHERE S_No=2;
Query OK, 1 row affected (0.01 sec)
```

```
MySQL 8.0 Command Line CLI x + v

+-----+-----+-----+-----+-----+
| 1 | Suresh | Manager | Chennai | NULL |
| 2 | Ramesh | Supervisor | Madurai | NULL |
| 3 | Hari | Assistant | Trichy | NULL |
| 4 | Seetha | Project Head | Pondyerry | NULL |
| 5 | Haasini | General Manager | Pondyerry | NULL |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> RENAME TABLE employee TO emp;
Query OK, 0 rows affected (0.03 sec)

mysql> DELETE FROM emp WHERE S_No=2;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM emp;
+-----+-----+-----+-----+-----+
| S_No | Full_name | Designation | Branch | salary |
+-----+-----+-----+-----+-----+
| 1    | Suresh   | Manager     | Chennai | NULL   |
| 3    | Hari     | Assistant   | Trichy  | NULL   |
| 4    | Seetha   | Project Head | Pondyerry | NULL  |
| 5    | Haasini  | General Manager | Pondyerry | NULL  |
+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> DROP TABLE emp;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM emp;
ERROR 1146 (42S02): Table 'employee.emp' doesn't exist
mysql>
```

Q.NO.2

2. Create a Table as **book** and the details are

S. No	B_Name	Author	Price	Publisher
1	DBMS	Seema Kedhar	250	Charulatha
2	TOC	John Martin	400	Tata McGraw Hill
3	C	Balagurusamy	300	Technical

Perform the following:

- Use **Select** keyword and display the table
- Display the book which is \Rightarrow 300
- Insert a row and add new book to the book table
- Drop Author column

```
MySQL 8.0 Command Line C
3 rows in set (0.00 sec)

mysql> SELECT * FROM book WHERE Price >= 300;
+-----+-----+-----+-----+-----+
| S_No | B_Name | Author | Price | Publisher |
+-----+-----+-----+-----+-----+
| 2 | TOC | John Martin | 400.00 | Tata McGraw Hill |
| 3 | C | Balagurusamy | 300.00 | Technical |
+-----+-----+-----+-----+-----+
2 rows in set (0.01 sec)

mysql> INSERT INTO book (S_No, B_Name, Author, Price, Publisher)
-> VALUES
-> (4, 'Algorithms', 'Thomas Cormen', 500.00, 'MIT Press');
Query OK, 1 row affected (0.00 sec)

mysql> ALTER TABLE book DROP COLUMN Author;
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM book;
+-----+-----+-----+-----+
| S_No | B_Name | Price | Publisher |
+-----+-----+-----+-----+
| 1 | DBMS | 250.00 | Charulatha |
| 2 | TOC | 400.00 | Tata McGraw Hill |
| 3 | C | 300.00 | Technical |
| 4 | Algorithms | 500.00 | MIT Press |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> |
```

```
MySQL 8.0 Command Line C
mysql> use book;
Database changed
mysql> CREATE TABLE book (
-> S_No INT PRIMARY KEY,
-> B_Name VARCHAR(255),
-> Author VARCHAR(255),
-> Price DECIMAL(10, 2),
-> Publisher VARCHAR(255)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO book (S_No, B_Name, Author, Price, Publisher)
-> VALUES
-> (1, 'DBMS', 'Seema Kedhar', 250.00, 'Charulatha'),
-> (2, 'TOC', 'John Martin', 400.00, 'Tata McGraw Hill'),
-> (3, 'C', 'Balagurusamy', 300.00, 'Technical');
Query OK, 3 rows affected (0.01 sec)
Records: 3 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM book;
+-----+-----+-----+-----+-----+
| S_No | B_Name | Author | Price | Publisher |
+-----+-----+-----+-----+-----+
| 1 | DBMS | Seema Kedhar | 250.00 | Charulatha |
| 2 | TOC | John Martin | 400.00 | Tata McGraw Hill |
| 3 | C | Balagurusamy | 300.00 | Technical |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM book WHERE Price >= 300;
```

Q.NO.3

3. Write the DDL Commands for the following.
Create a table name STUDENT with following structure.

Column	Description	Data Type
1) RegNo	Registration Number	NUMBER(3)
2) SName	Student Name	VARCHAR(15)
3) Gender	Gender of the student	CHAR(1)
4) DOB	Date of Birth	DATE
5) MobileNo	Mobile Number	NUMBER(10)

Create a table name FACULTY with following structure.

Column	Description	Data Type
1) FacNo	Faculty Identifier	VARCHAR(4)
2) FacName	Faculty Name	VARCHAR(15)
3) Gender	Gender of Faculty	CHAR(1)
4) DOB	Date of Birth	DATE
5) DOJ	Date of Join	DATE
6) MobileNo	Mobile Number	NUMBER(10)

Create a table name DEPARTMENT with following structure.

Column	Description	Data Type
1) DeptNo	Department Identifier	VARCHAR(4)
2) DeptName	Department Name	VARCHAR(15)
3) DeptHead	Department Head	VARCHAR(4)

```

mysql> USE STUDENT;
Database changed
mysql> CREATE TABLE STUDENT(
  -> RegNo INT,
  -> Name VARCHAR(50),
  -> Gender VARCHAR(7),
  -> DOB DATE,
  -> MobileNo INT,
  -> City VARCHAR(20)
  -> );
Query OK, 0 rows affected (0.03 sec)

mysql> USE FACULTY;
Database changed
mysql> CREATE TABLE FACULTY(
  -> FacNo VARCHAR(4),
  -> FacName VARCHAR(20),
  -> Gender VARCHAR(7),
  -> DOB DATE,
  -> DOJ DATE,
  -> MobileNo INT
  -> );
Query OK, 0 rows affected (0.03 sec)

mysql> USE DEPARTMENT;
Database changed
mysql> CREATE TABLE DEPARTMENT(
  -> DeptNo VARCHAR(4),
  -> DeptName VARCHAR(20),
  -> DeptHead VARCHAR(20)
  -> );
Query OK, 0 rows affected (0.03 sec)

```

Q.NO.4

4. Write the DDL Commands with Constraints for the following.

Alter the table STUDENT with following structure.

#	Column Name	Constraints
1	RegNo	PRIMARY KEY
2	MobileNo	NOT NULL

Alter the table name FACULTY with following structure. The DeptNo in this table refers the DeptNo in the DEPARTMENT table.

#	Column Name	Constraints
1	FacNo	PRIMARY KEY
2	Gender	CHECK ('M' or 'F')

After the FACULTY table is successfully created, test if you can add a constraint FOREIGN KEY to the DeptNo of this table.

```
mysql> USE STUDENT
Database changed
mysql> ALTER TABLE STUDENT
->     MODIFY RegNo INT PRIMARY KEY,
->     MODIFY MobileNo VARCHAR(20) NOT NULL;
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> USE FACULTY;
Database changed
mysql> ALTER TABLE FACULTY
->     MODIFY FacNo INT PRIMARY KEY,
->     MODIFY Gender ENUM('M', 'F') NOT NULL,
->     ADD CONSTRAINT chk_gender CHECK (Gender IN ('M', 'F'));
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

Q.NO.5

Draw the ER diagram and its related SQL queries for the case scenario to implementation for HRM database

```
MySQL 8.0 Command Line CLI
-> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> CREATE TABLE JobPosition (
->   job_id INT PRIMARY KEY,
->   title VARCHAR(255)
-> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> CREATE TABLE Skill (
->   skill_id INT PRIMARY KEY,
->   name VARCHAR(255)
-> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> CREATE TABLE Project (
->   proj_id INT PRIMARY KEY,
->   name VARCHAR(255)
-> );
Query OK, 0 rows affected (0.02 sec)

mysql>
mysql> CREATE TABLE EmployeeProject (
->   emp_id INT,
->   proj_id INT,
->   PRIMARY KEY (emp_id, proj_id),
->   FOREIGN KEY (emp_id) REFERENCES Employee(emp_id),
->   FOREIGN KEY (proj_id) REFERENCES Project(proj_id)
-> );
Query OK, 0 rows affected (0.04 sec)

MySQL 8.0 Command Line CLI
mysql> use Employee;
Database changed
mysql> use Department;
Database changed
mysql> use JobPosition;
Database changed
mysql> use Skill;
Database changed
mysql> use Project;
Database changed
mysql> use EmployeeProject;
Database changed
mysql> CREATE TABLE Employee (
->   emp_id INT PRIMARY KEY,
->   name VARCHAR(255),
->   email VARCHAR(255),
->   hire_date DATE,
->   salary DECIMAL(10, 2)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> CREATE TABLE Department (
->   dept_id INT PRIMARY KEY,
->   name VARCHAR(255),
->   manager_id INT,
->   FOREIGN KEY (manager_id) REFERENCES Employee(emp_id)
-> );
Query OK, 0 rows affected (0.03 sec)

mysql>
mysql> CREATE TABLE JobPosition (
```