

**Institute of Engineering & Technology**  
**Devi Ahilya Vishwavidyalaya, Indore (M.P)**  
**Department of Computer Science & Engineering**



**DATABASE MANAGEMENT SYSTEM(CER4C4)**

**Lab Assignment-1**

**Submitted To:**

**Mrs. Jyoti Haveliya Mam**  
**CS-Dept**  
**IET-DAVV**

**Submitted By:**

**Tanishq Chauhan (21C4184)**  
**CS "B" 2<sup>nd</sup> Year**

# Lab Assignment-1

## 1. Create the SALECOMP database.

**Query:-** CREATE DATABASE SALECOMP;

```
mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| yashdb |
+-----+
5 rows in set (0.01 sec)

mysql> CREATE DATABASE SALECOMP;
Query OK, 1 row affected (0.02 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| salecomp |
| sys |
| yashdb |
+-----+
6 rows in set (0.00 sec)
```

## 2. Create an EMPLOYEE table within SALECOMP database having following structure:

**Query:- CREATE TABLE EMPLOYEE**

- ➔ (
- ➔ Emp\_num int NOT NULL,
- ➔ First\_Name varchar(15) NOT NULL,
- ➔ Last\_Name varchar(20),
- ➔ DOB Date,
- ➔ Salary Decimal(10,4),
- ➔ PRIMARY KEY(Emp\_num)
- ➔ );

```
mysql> USE SALECOMP;
Database changed
mysql> CREATE TABLE EMPLOYEE
-> (
-> Emp_num int NOT NULL,
-> First_Name varchar(15) NOT NULL,
-> Last_Name varchar(20),
-> DOB Date,
-> Salary Decimal(10,4),
-> PRIMARY KEY(Emp_num)
-> );
```

Query OK, 0 rows affected (0.08 sec)

```
mysql> DESC EMPLOYEE;
```

Field	Type	Null	Key	Default	Extra
Emp_num	int	NO	PRI	NULL	
First_Name	varchar(15)	NO		NULL	
Last_Name	varchar(20)	YES		NULL	
DOB	date	YES		NULL	
Salary	decimal(10,4)	YES		NULL	

5 rows in set (0.01 sec)

### 3. Populate the table with following records:

#### Query:- INSERT INTO EMPLOYEE

- ➔ (Emp\_num, First\_Name, Last\_Name, DOB, Salary)
- ➔ VALUES (101, 'Smith', 'Futterkiste', '1980-12-17', 12500.60),
- ➔ (102, 'Allen', NULL, '1982-05-12', 13000.80);

```
mysql> INSERT INTO EMPLOYEE(Emp_num, First_Name, Last_Name, DOB, Salary)
-> VALUES (101, 'Smith', 'Futterkiste', '1980-12-17', 12500.60),
-> (102, 'Allen', Null, '1982-05-12', 13000.80),
-> (103, 'Ward', 'Horn', '1981-07-15', 15000.50),
-> (104, 'Jones', 'Taqueria', '1990-08-19', 18000.60),
-> (105, 'Martin', 'Futterkiste', '1978-09-25', 10520.50),
-> (106, 'Blake', 'Horn', '1978-02-08', 14000.00),
-> (107, 'Clark', 'Taqueria', '1983-07-02', 19000.50),
-> (108, 'Scott', 'Horn', '1979-11-25', 17500.50),
-> (109, 'King', Null, '1983-04-18', 80000.30),
-> (110, 'Turner', 'Futterkiste', '1982-06-22', 65000.60);
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> SELECT * FROM EMPLOYEE;
+-----+-----+-----+-----+-----+
| Emp_num | First_Name | Last_Name | DOB      | Salary |
+-----+-----+-----+-----+-----+
| 101     | Smith      | Futterkiste | 1980-12-17 | 12500.6000 |
| 102     | Allen      | NULL        | 1982-05-12 | 13000.8000 |
| 103     | Ward       | Horn        | 1981-07-15 | 15000.5000 |
| 104     | Jones      | Taqueria    | 1990-08-19 | 18000.6000 |
| 105     | Martin     | Futterkiste | 1978-09-25 | 10520.5000 |
| 106     | Blake      | Horn        | 1978-02-08 | 14000.0000 |
| 107     | Clark      | Taqueria    | 1983-07-02 | 19000.5000 |
| 108     | Scott      | Horn        | 1979-11-25 | 17500.5000 |
| 109     | King       | NULL        | 1983-04-18 | 80000.3000 |
| 110     | Turner     | Futterkiste | 1982-06-22 | 65000.6000 |
+-----+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

#### 4. WAQ to change the field name First\_name with F\_Name and Last\_name with L\_name.

**Query:- ALTER TABLE EMPLOYEE**

- ➔ CHANGE First\_Name F\_Name varchar(15) NOT NULL,
- ➔ CHANGE Last\_name L\_name varchar(20);

```
mysql> ALTER TABLE EMPLOYEE
  -> CHANGE First_Name F_Name varchar(15) NOT NULL,
  -> CHANGE Last_name L_name varchar(20);
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	NULL	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	NULL	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

```
10 rows in set (0.00 sec)
```

## 5. WAQ to add a column Phone\_No before DoB column.

**Query:-** ALTER TABLE EMPLOYEE

➔ ADD COLUMN Phone\_No int AFTER L\_name;

```
mysql> ALTER TABLE EMPLOYEE ADD COLUMN Phone_No int AFTER L_name;
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	Phone_No	DOB	Salary
101	Smith	Futterkiste	NULL	1980-12-17	12500.6000
102	Allen	NULL	NULL	1982-05-12	13000.8000
103	Ward	Horn	NULL	1981-07-15	15000.5000
104	Jones	Taqueria	NULL	1990-08-19	18000.6000
105	Martin	Futterkiste	NULL	1978-09-25	10520.5000
106	Blake	Horn	NULL	1978-02-08	14000.0000
107	Clark	Taqueria	NULL	1983-07-02	19000.5000
108	Scott	Horn	NULL	1979-11-25	17500.5000
109	King	NULL	NULL	1983-04-18	80000.3000
110	Turner	Futterkiste	NULL	1982-06-22	65000.6000

```
10 rows in set (0.00 sec)
```

## 6. WAQ to add a column Emp\_id in the beginning of the table.

**Query:- ALTER TABLE EMPLOYEE**

**➔ ADD COLUMN Emp\_id int FIRST;**

```
mysql> ALTER TABLE EMPLOYEE ADD COLUMN Emp_id int FIRST;
Query OK, 0 rows affected (0.07 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
```

Emp_id	Emp_num	F_Name	L_name	Phone_No	DOB	Salary
NULL	101	Smith	Futterkiste	NULL	1980-12-17	12500.6000
NULL	102	Allen	NULL	NULL	1982-05-12	13000.8000
NULL	103	Ward	Horn	NULL	1981-07-15	15000.5000
NULL	104	Jones	Taqueria	NULL	1990-08-19	18000.6000
NULL	105	Martin	Futterkiste	NULL	1978-09-25	10520.5000
NULL	106	Blake	Horn	NULL	1978-02-08	14000.0000
NULL	107	Clark	Taqueria	NULL	1983-07-02	19000.5000
NULL	108	Scott	Horn	NULL	1979-11-25	17500.5000
NULL	109	King	NULL	NULL	1983-04-18	80000.3000
NULL	110	Turner	Futterkiste	NULL	1982-06-22	65000.6000

```
10 rows in set (0.00 sec)
```

## 7. WAQ to drop the Emp\_id and Phone\_No from the table.

**Query:- ALTER TABLE EMPLOYEE**

- ➔ DROP COLUMN Emp\_id,
- ➔ DROP COLUMN Phone\_No;

```
mysql> ALTER TABLE EMPLOYEE
-> DROP COLUMN Emp_id,
-> DROP COLUMN Phone_No;
Query OK, 0 rows affected (0.08 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	NULL	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	NULL	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

```
10 rows in set (0.00 sec)
```



## 8. WAQ to display the complete table.

**Query:-** SELECT \* FROM EMPLOYEE;

```
mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	NULL	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	NULL	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

10 rows in set (0.00 sec)

**9. WAQ to display only Employee number, First\_Name and Last\_name from the table.**

**Query:-** SELECT Emp\_num, F\_Name, L\_name FROM EMPLOYEE;

```
mysql> SELECT Emp_num, F_Name, L_name FROM EMPLOYEE;
+-----+-----+-----+
| Emp_num | F_Name | L_name |
+-----+-----+-----+
| 101 | Smith | Futterkiste |
| 102 | Allen | NULL |
| 103 | Ward | Horn |
| 104 | Jones | Taqueria |
| 105 | Martin | Futterkiste |
| 106 | Blake | Horn |
| 107 | Clark | Taqueria |
| 108 | Scott | Horn |
| 109 | King | NULL |
| 110 | Turner | Futterkiste |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

## 10. WAQ to find the record of all employees whom birth before 1980s.

**Query:-** SELECT \* FROM EMPLOYEE

➔ WHERE YEAR(DOB) <= 1980;

```
mysql> SELECT * FROM EMPLOYEE  
-> WHERE YEAR(DOB) <= 1980;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
108	Scott	Horn	1979-11-25	17500.5000

4 rows in set (0.00 sec)

**11. WAQ to find the record of those employees whose employee id is 104 and 108.**

**Query:-** SELECT \* FROM EMPLOYEE

**➔** WHERE Emp\_num = 104 OR Emp\_num = 108;

```
mysql> SELECT * FROM EMPLOYEE
-> WHERE Emp_num = 104 OR Emp_num = 108;
```

Emp_num	F_Name	L_name	DOB	Salary
104	Jones	Taqueria	1990-08-19	18000.6000
108	Scott	Horn	1979-11-25	17500.5000

2 rows in set (0.00 sec)

## 12. WAQ to set the last name as Hardy wherever the last name is null in the table.

**Query:- UPDATE EMPLOYEE**

➔ SET L\_name = 'Hardy'

➔ WHERE L\_name = 'NULL';

```
mysql> UPDATE EMPLOYEE
  -> SET L_name = 'Hardy'
  -> WHERE L_name = 'NULL';
Query OK, 2 rows affected (0.01 sec)
Rows matched: 2  Changed: 2  Warnings: 0

mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	Hardy	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	Hardy	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

```
10 rows in set (0.00 sec)
```

### 13. WAQ to delete the record of employees whose salary is less than 12000.00.

**Query:- DELETE FROM EMPLOYEE**

**➔ WHERE Salary < 12000.00;**

```
mysql> DELETE FROM EMPLOYEE
      -> WHERE Salary < 12000.00;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM EMPLOYEE;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	Hardy	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	Hardy	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

```
9 rows in set (0.00 sec)
```

**14. WAQ to display the record of those employees whose birth year is between 1978 to 1980.**

**Query:- SELECT \* FROM EMPLOYEE**

**➔ WHERE YEAR(DOB) BETWEEN 1978  
AND 1980;**

```
mysql> SELECT * FROM EMPLOYEE
-> WHERE YEAR(DOB) BETWEEN 1978 AND 1980;
```

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
108	Scott	Horn	1979-11-25	17500.5000

4 rows in set (0.00 sec)

**15. WAQ to display Employee number and first name of employee whose employee number is not 104 and 108.**

**Query:-** SELECT Emp\_num, F\_Name FROM EMPLOYEE  
→ WHERE Emp\_num NOT IN (104, 108);

```
mysql> SELECT Emp_num, F_Name FROM EMPLOYEE
-> WHERE Emp_num NOT IN (104, 108);
```

Emp_num	F_Name
101	Smith
102	Allen
103	Ward
105	Martin
106	Blake
107	Clark
109	King
110	Turner

```
8 rows in set (0.00 sec)
```



## 16. WAQ to assign a new name to the Employee table.

**Query:-**RENAME TABLE EMPLOYEE TO  
EMPLOYEE\_DETAILS;

```
mysql> RENAME TABLE EMPLOYEE TO EMPLOYEE_DETAILS;
Query OK, 0 rows affected (0.04 sec)

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

Emp_num	F_Name	L_name	DOB	Salary
101	Smith	Futterkiste	1980-12-17	12500.6000
102	Allen	Hardy	1982-05-12	13000.8000
103	Ward	Horn	1981-07-15	15000.5000
104	Jones	Taqueria	1990-08-19	18000.6000
105	Martin	Futterkiste	1978-09-25	10520.5000
106	Blake	Horn	1978-02-08	14000.0000
107	Clark	Taqueria	1983-07-02	19000.5000
108	Scott	Horn	1979-11-25	17500.5000
109	King	Hardy	1983-04-18	80000.3000
110	Turner	Futterkiste	1982-06-22	65000.6000

```
10 rows in set (0.01 sec)
```