

Name: Sanika Mahesh Sarang topic: SQL joins

```
MySQL 8.0 Command Line Cli x + v

mysql> show databases
-> ;
+-----+
| Database |
+-----+
| acpatildb |
| employee |
| information_schema |
| mysql |
| performance_schema |
| sakila |
| sys |
| world |
+-----+
8 rows in set (0.02 sec)

mysql> desc employee;
ERROR 1046 (3D000): No database selected
mysql> use employee;
Database changed
mysql> show tables;
+-----+
| Tables_in_employee |
+-----+
| employee |
+-----+
1 row in set (0.01 sec)

mysql> desc employee
-> ;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| empname | varchar(20) | YES | | NULL | |
| empid | int | YES | | NULL | |
| contact | bigint | YES | | NULL | |
+-----+

mysql> show tables;
+-----+
| Tables_in_employee |
+-----+
| employee |
+-----+
1 row in set (0.01 sec)

mysql> desc employee
-> ;
+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+
| empname | varchar(20) | YES | | NULL | |
| empid | int | YES | | NULL | |
| contact | bigint | YES | | NULL | |
| salary | varchar(10) | YES | | NULL | |
| city | varchar(20) | YES | | NULL | |
+-----+
5 rows in set (0.01 sec)

mysql> select * from employee;
+-----+
| empname | empid | contact | salary | city |
+-----+
| sanika | 410209 | 9867697092 | 12k | mumbai |
| ayushi | 410211 | 4327685892 | 11k | dombivli |
| shreya | 410301 | 5647356564 | 11k |thane |
| vishwaja | 410207 | 3245423467 | 9k | mumbai |
| ritesh | 412768 | 7867879865 | 8k | kolhapur |
| vishal | 412987 | 6734598765 | 8k | navimumbai |
| vicky | 418787 | 6734246438 | 7k | chennai |
| yash | 418243 | 6253446438 | 9k | mahabaleshwar |
| shubham | 123456 | 6235758438 | 5k | pune |
| keshar | 987654 | 6297753438 | 4k | nagpur |
+-----+
10 rows in set (0.01 sec)

mysql> create table employee1(
-> id int,
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mysql> create table employee1(
-> id int,
-> emp_name varchar(20),
-> salary int,
-> dept_id int,
-> manager_id int
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into employee1 values(1,"sanu", 234567,1,1),
-> (2,"ayu", 55435,1,1),
-> (3,"shreyu", 60435,2,2),
-> (4,"bisu", 45435,3,3),
-> (5,"bhidu", 50000,3,3);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from employee1;
+-----+-----+-----+-----+-----+
| id | emp_name | salary | dept_id | manager_id |
+-----+-----+-----+-----+-----+
| 1 | sanu | 234567 | 1 | 1 |
| 2 | ayu | 55435 | 1 | 1 |
| 3 | shreyu | 60435 | 2 | 2 |
| 4 | bisu | 45435 | 3 | 3 |
| 5 | bhidu | 50000 | 3 | 3 |
+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> create table department(
-> id int,
-> dept_name varchar(20)
-> );
Query OK, 0 rows affected (0.02 sec)

mysql> insert into department values(1,"engineering"),
-> (2,"marketing"),
-> (3,"sales"),
-> (4,"production");
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> select * from department;
+-----+-----+
| id | dept_name |
+-----+-----+
| 1 | engineering |
| 2 | marketing |
| 3 | sales |
| 4 | production |
+-----+-----+
4 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, deartment.dept_name
-> from employee1
-> inner join department on employee1.id=department.id;
ERROR 1054 (42S22): Unknown column 'deartment.dept_name' in 'field list'
mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> inner join department on employee1.id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu | 234567 | engineering |
+-----+-----+-----+
```

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-> from employee1
-> inner join department on employee1.id=department.id;
ERROR 1054 (42S22): Unknown column 'deartment.dept_name' in 'field list'
mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> inner join department on employee1.id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | marketing  |
| shreyu   | 60435  | sales      |
| bisu     | 45435  | production |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, deartment.dept_name
-> from employee1
-> left join department on employee1.id=department.id;
ERROR 1054 (42S22): Unknown column 'deartment.dept_name' in 'field list'
mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> left join department on employee1.id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | marketing  |
| shreyu   | 60435  | sales      |
| bisu     | 45435  | production |
| bhidu    | 50000  | NULL       |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> right join department on employee1.id=department.id;
```

```
MySQL 8.0 Command Line Cli x + v
mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> right join department on employee1.id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | marketing  |
| shreyu   | 60435  | sales      |
| bisu     | 45435  | production |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> right join department on employee1.dept_id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| ayu      | 55435  | engineering |
| sanu     | 234567 | engineering |
| shreyu   | 60435  | marketing  |
| bhidu    | 50000  | sales      |
| bisu     | 45435  | sales      |
| NULL     | NULL   | production |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> left join department on employee1.dept_id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | engineering |
+-----+-----+-----+
```

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-> from employee1
-> left join department on employee1.dept_id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | engineering |
| shreyu   | 60435  | marketing  |
| bisu     | 45435  | sales      |
| bhidu    | 50000  | sales      |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employee1.emp_name, employee1.salary, department.dept_name
-> from employee1
-> inner join department on employee1.dept_id=department.id;
+-----+-----+-----+
| emp_name | salary | dept_name |
+-----+-----+-----+
| sanu     | 234567 | engineering |
| ayu      | 55435  | engineering |
| shreyu   | 60435  | marketing  |
| bisu     | 45435  | sales      |
| bhidu    | 50000  | sales      |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> create table manager(
-> id int,
-> manager varchar(20),
-> dept_id int
-> );
Query OK, 0 rows affected (0.03 sec)

mysql> insert into manager values(1, "mahesh",1),
-> (2,"rajesh",2)
-> (3,"suresh",3)
mysql> insert into manager values(1, "mahesh",1),
-> (2,"rajesh",2),
-> (3,"suresh",3),
-> (4,"ramesh",4);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '(3,"suresh",3) (4,"ramesh",4)' at line 3
mysql> insert into manager values(1, "mahesh",1),
-> (2,"rajesh",2),
-> (3,"suresh",3),
-> (4,"ramesh",4);
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> select * from manager
-> ;
+-----+-----+-----+
| id | manager | dept_id |
+-----+-----+-----+
| 1 | mahesh | 1 |
| 2 | rajesh | 2 |
| 3 | suresh | 3 |
| 4 | ramesh | 4 |
+-----+-----+-----+
4 rows in set (0.00 sec)

mysql> create table project(
-> id int,
-> project_name varchar(20),
-> emp_id int
-> );
Query OK, 0 rows affected (0.03 sec)
```

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```
MySQL 8.0 Command Line Cli x + v

mysql> insert into project values(101,"powerbi",1),
-> (102,"chatgpt",2),
-> (103,"youtube",3),
-> (104,"summary",4),
-> (105,"blockchain",5);
Query OK, 5 rows affected (0.01 sec)
Records: 5 Duplicates: 0 Warnings: 0

mysql> select * from project;
+-----+-----+-----+
| id | project_name | emp_id |
+-----+-----+-----+
| 101 | powerbi      | 1      |
| 102 | chatgpt      | 2      |
| 103 | youtube      | 3      |
| 104 | summary      | 4      |
| 105 | blockchain   | 5      |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employees1.id,employees1.emp_name,project.project_name
-> from employees1
-> left join project on
-> employees1.id=project.emp_id;
ERROR 1146 (42S02): Table 'employee.employees1' doesn't exist
mysql> select employee1.id,employee1.emp_name,project.project_name
-> from employee1
-> left join project on
-> employee1.id=project.emp_id;
+-----+-----+-----+
| id | emp_name | project_name |
+-----+-----+-----+
| 1  | sanu     | powerbi      |
| 2  | ayu      | chatgpt      |
| 3  | shreyu   | youtube      |
| 4  | bisu     | summary      |
+-----+-----+-----+

MySQL 8.0 Command Line Cli x + v

+-----+-----+-----+
| id | emp_name | project_name |
+-----+-----+-----+
| 1  | sanu     | powerbi      |
| 2  | ayu      | chatgpt      |
| 3  | shreyu   | youtube      |
| 4  | bisu     | summary      |
| 5  | bhidu    | blockchain   |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employee1.id,employee1.emp_name,manager.manager
-> from employee1
-> inner join manager on
-> employee1.manager_id=manager.id;
+-----+-----+-----+
| id | emp_name | manager |
+-----+-----+-----+
| 1  | sanu     | mahesh   |
| 2  | ayu      | mahesh   |
| 3  | shreyu   | rajesh   |
| 4  | bisu     | suresh   |
| 5  | bhidu    | suresh   |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employee1.id,employee1.emp_name,manager.manager
-> from employee1
-> left join manager on
-> employee1.manager_id=manager.id;
+-----+-----+-----+
| id | emp_name | manager |
+-----+-----+-----+
| 1  | sanu     | mahesh   |
| 2  | ayu      | mahesh   |
| 3  | shreyu   | rajesh   |
| 4  | bisu     | suresh   |
+-----+-----+-----+
```

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```
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-> from employee1
-> left join manager on
-> employee1.manager_id=manager.id;
+-----+-----+-----+
| id | emp_name | manager |
+-----+-----+-----+
| 1 | sanu | mahesh |
| 2 | ayu | mahesh |
| 3 | shreyu | rajesh |
| 4 | bisu | suresh |
| 5 | bhidu | suresh |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select employee1.id,employee1.emp_name,manager.manager
-> from employee1
-> right join manager on
-> employee1.manager_id=manager.id;
+-----+-----+-----+
| id | emp_name | manager |
+-----+-----+-----+
| 2 | ayu | mahesh |
| 1 | sanu | mahesh |
| 3 | shreyu | rajesh |
| 5 | bhidu | suresh |
| 4 | bisu | suresh |
| NULL | NULL | ramesh |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select e.emp_name,d.dept_name,m.manager,p.project_name
-> from employee1 e
-> left join department d
-> on e.dept_id=d.id
-> left join manager m
-> on e.manager_id=m.id
-> left join project p
```

```
MySQL 8.0 Command Line Cli x + v
+-----+-----+-----+
| id | emp_name | manager |
+-----+-----+-----+
| 2 | ayu | mahesh |
| 1 | sanu | mahesh |
| 3 | shreyu | rajesh |
| 5 | bhidu | suresh |
| 4 | bisu | suresh |
| NULL | NULL | ramesh |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select e.emp_name,d.dept_name,m.manager,p.project_name
-> from employee1 e
-> left join department d
-> on e.dept_id=d.id
-> left join manager m
-> on e.manager_id=m.id
-> left join project p
-> on e.id=p.emp_id;
+-----+-----+-----+-----+
| emp_name | dept_name | manager | project_name |
+-----+-----+-----+-----+
| sanu | engineering | mahesh | powerbi |
| ayu | engineering | mahesh | chatgpt |
| shreyu | marketing | rajesh | youtube |
| bisu | sales | suresh | summary |
| bhidu | sales | suresh | blockchain |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> |
```