

```
mysql> CREATE TABLE emp4 (  
-> empno decimal(4,0) NOT NULL,  
-> ename varchar(10) default NULL,  
-> job varchar(9) default NULL,  
-> mgr decimal(4,0) default NULL,  
-> hiredate date default NULL,  
-> sal decimal(7,2) default NULL,  
-> comm decimal(7,2) default NULL,  
-> deptno decimal(2,0) default NULL  
-> );
```

Query OK, 0 rows affected (0.06 sec)

```
mysql> INSERT INTO emp4(empno,ename,job,mgr,hiredate,sal,comm,deptno) VALUES  
(  
'7369','SMITH','CLERK','7902','1980-12-17','800.00',NULL,'20'),  
-> ('7499','ALLEN','SALESMAN','7698','1981-02-20','1600.00','300.00','30'),  
-> ('7521','WARD','SALESMAN','7698','1981-02-22','1250.00','500.00','30'),  
-> ('7566','JONES','MANAGER','7839','1981-04-02','2975.00',NULL,'20'),  
-> ('7654','MARTIN','SALESMAN','7698','1981-09-28','1250.00','1400.00','30'),  
-> ('7698','BLAKE','MANAGER','7839','1981-05-01','2850.00',NULL,'30'),  
-> ('7782','CLARK','MANAGER','7839','1981-06-09','2450.00',NULL,'10'),  
-> ('7788','SCOTT','ANALYST','7566','1982-12-09','3000.00',NULL,'20'),  
-> ('7839','KING','PRESIDENT',NULL,'1981-11-17','5000.00',NULL,'10'),  
-> ('7844','TURNER','SALESMAN','7698','1981-09-08','1500.00','0.00','30'),  
-> ('7876','ADAMS','CLERK','7788','1983-01-12','1100.00',NULL,'20'),  
-> ('7900','JAMES','CLERK','7698','1981-12-03','950.00',NULL,'30'),  
-> ('7902','FORD','ANALYST','7566','1981-12-03','3000.00',NULL,'20'),  
-> ('7934','MILLER','CLERK','7782','1982-01-23','1300.00',NULL,'10');
```

Query OK, 14 rows affected (0.01 sec)

Records: 14 Duplicates: 0 Warnings: 0

```
mysql> CREATE TABLE dept (  
-> deptno decimal(2,0) default NULL,  
-> dname varchar(14) default NULL,  
-> loc varchar(13) default NULL  
-> );
```

Query OK, 0 rows affected (0.02 sec)

```
mysql> INSERT INTO dept(deptno,dname,loc) VALUES ('10','ACCOUNTING','NEW YORK'),  
-> ('20','RESEARCH','DALLAS'),  
-> ('30','SALES','CHICAGO'),  
-> ('40','OPERATIONS','BOSTON');
```

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

```
mysql> select * from emp4;
```

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

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

```
mysql> select * from dept;
```

deptno	dname	loc
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

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

```
mysql> CREATE TABLE ProductSales (  
-> ProductID INT PRIMARY KEY,  
-> ProductName VARCHAR(50),  
-> SalesValue DECIMAL(10, 2),  
-> Region VARCHAR(10),  
-> City VARCHAR(50),  
-> State VARCHAR(50)  
-> );
```

```
Query OK, 0 rows affected (0.03 sec)
```

```
mysql> INSERT INTO ProductSales (ProductID, ProductName, SalesValue, Region, City, State)
-> VALUES
```

```
-> (1, 'Widget A', 15000.00, 'USA', 'New York', 'New York'),
-> (2, 'Widget B', 22000.00, 'USA', 'Los Angeles', 'California'),
-> (3, 'Widget C', 18000.00, 'USA', 'Chicago', 'Illinois'),
-> (4, 'Widget D', 21000.00, 'USA', 'Houston', 'Texas'),
-> (5, 'Widget E', 25000.00, 'USA', 'Phoenix', 'Arizona'),
-> (6, 'Widget F', 12000.00, 'USA', 'Philadelphia', 'Pennsylvania'),
-> (7, 'Widget G', 19500.00, 'USA', 'San Antonio', 'Texas'),
-> (8, 'Widget H', 14000.00, 'USA', 'San Diego', 'California'),
-> (9, 'Gadget A', 16500.00, 'USA', 'Dallas', 'Texas'),
-> (10, 'Gadget B', 23000.00, 'USA', 'San Jose', 'California'),
-> (11, 'Gadget C', 17500.00, 'USA', 'Austin', 'Texas'),
-> (12, 'Gadget D', 20000.00, 'USA', 'Jacksonville', 'Florida'),
-> (13, 'Gadget E', 26000.00, 'USA', 'Fort Worth', 'Texas'),
-> (14, 'Gadget F', 15000.00, 'USA', 'Columbus', 'Ohio'),
-> (15, 'Gadget G', 19000.00, 'USA', 'Indianapolis', 'Indiana'),
-> (16, 'Widget X', 17000.00, 'USA', 'Charlotte', 'North Carolina'),
-> (17, 'Widget Y', 20500.00, 'USA', 'San Francisco', 'California'),
-> (18, 'Gadget H', 22500.00, 'UK', 'London', 'England'),
-> (19, 'Gadget I', 18500.00, 'UK', 'Manchester', 'England'),
-> (20, 'Gadget J', 21000.00, 'UK', 'Birmingham', 'England'),
-> (21, 'Widget Z', 24000.00, 'UK', 'Leeds', 'England'),
-> (22, 'Widget Q', 19500.00, 'UK', 'Glasgow', 'Scotland'),
-> (23, 'Widget R', 17500.00, 'UK', 'Edinburgh', 'Scotland'),
-> (24, 'Gadget K', 22000.00, 'UK', 'Bristol', 'England'),
-> (25, 'Gadget L', 16000.00, 'UK', 'Liverpool', 'England'),
-> (26, 'Gadget M', 14500.00, 'UK', 'Sheffield', 'England'),
-> (27, 'Gadget N', 23500.00, 'UK', 'Newcastle', 'England'),
-> (28, 'Widget S', 18000.00, 'UK', 'Cardiff', 'Wales'),
-> (29, 'Widget T', 20000.00, 'UK', 'Belfast', 'Northern Ireland'),
-> (30, 'Widget U', 21500.00, 'UK', 'Southampton', 'England');
```

Query OK, 30 rows affected (0.01 sec)

Records: 30 Duplicates: 0 Warnings: 0

```
mysql> select * from ProductSales;
```

ProductID	ProductName	SalesValue	Region	City	State
1	Widget A	15000.00	USA	New York	New York
2	Widget B	22000.00	USA	Los Angeles	California
3	Widget C	18000.00	USA	Chicago	Illinois
4	Widget D	21000.00	USA	Houston	Texas

5	Widget E	25000.00	USA	Phoenix	Arizona
6	Widget F	12000.00	USA	Philadelphia	Pennsylvania
7	Widget G	19500.00	USA	San Antonio	Texas
8	Widget H	14000.00	USA	San Diego	California
9	Gadget A	16500.00	USA	Dallas	Texas
10	Gadget B	23000.00	USA	San Jose	California
11	Gadget C	17500.00	USA	Austin	Texas
12	Gadget D	20000.00	USA	Jacksonville	Florida
13	Gadget E	26000.00	USA	Fort Worth	Texas
14	Gadget F	15000.00	USA	Columbus	Ohio
15	Gadget G	19000.00	USA	Indianapolis	Indiana
16	Widget X	17000.00	USA	Charlotte	North Carolina
17	Widget Y	20500.00	USA	San Francisco	California
18	Gadget H	22500.00	UK	London	England
19	Gadget I	18500.00	UK	Manchester	England
20	Gadget J	21000.00	UK	Birmingham	England
21	Widget Z	24000.00	UK	Leeds	England
22	Widget Q	19500.00	UK	Glasgow	Scotland
23	Widget R	17500.00	UK	Edinburgh	Scotland
24	Gadget K	22000.00	UK	Bristol	England
25	Gadget L	16000.00	UK	Liverpool	England
26	Gadget M	14500.00	UK	Sheffield	England
27	Gadget N	23500.00	UK	Newcastle	England
28	Widget S	18000.00	UK	Cardiff	Wales
29	Widget T	20000.00	UK	Belfast	Northern Ireland
30	Widget U	21500.00	UK	Southampton	England

+-----+-----+-----+-----+-----+-----+

30 rows in set (0.00 sec)

mysql> select \* from emp4;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30

7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

+-----+-----+-----+-----+-----+-----+-----+

14 rows in set (0.01 sec)

mysql> select ename, job, sal from emp4;

+-----+-----+-----+

ename	job	sal
-------	-----	-----

+-----+-----+-----+

SMITH	CLERK	800.00
ALLEN	SALESMAN	1600.00
WARD	SALESMAN	1250.00
JONES	MANAGER	2975.00
MARTIN	SALESMAN	1250.00
BLAKE	MANAGER	2850.00
CLARK	MANAGER	2450.00
SCOTT	ANALYST	3000.00
KING	PRESIDENT	5000.00
TURNER	SALESMAN	1500.00
ADAMS	CLERK	1100.00
JAMES	CLERK	950.00
FORD	ANALYST	3000.00
MILLER	CLERK	1300.00

+-----+-----+-----+

14 rows in set (0.00 sec)

mysql> select ename as "EmployeeName", job as "Designation", sal as "Salary" from emp4;

+-----+-----+-----+

EmployeeName	Designation	Salary
--------------	-------------	--------

+-----+-----+-----+

SMITH	CLERK	800.00
ALLEN	SALESMAN	1600.00
WARD	SALESMAN	1250.00
JONES	MANAGER	2975.00
MARTIN	SALESMAN	1250.00
BLAKE	MANAGER	2850.00
CLARK	MANAGER	2450.00
SCOTT	ANALYST	3000.00
KING	PRESIDENT	5000.00
TURNER	SALESMAN	1500.00
ADAMS	CLERK	1100.00

JAMES	CLERK	950.00
FORD	ANALYST	3000.00
MILLER	CLERK	1300.00

+-----+-----+-----+

14 rows in set (0.00 sec)

mysql> select \* from emp4;

empno	ename	job	mgr	hiredate	sal	comm	deptno
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

+-----+-----+-----+-----+-----+-----+-----+

14 rows in set (0.00 sec)

mysql> select ename, job, sal from emp4 where job="salesman";

ename	job	sal
ALLEN	SALESMAN	1600.00
WARD	SALESMAN	1250.00
MARTIN	SALESMAN	1250.00
TURNER	SALESMAN	1500.00

+-----+-----+-----+

4 rows in set (0.00 sec)

mysql> select ename, job, sal from emp4 where job="clerk";

ename	job	sal
SMITH	CLERK	800.00

ADAMS	CLERK	1100.00	
JAMES	CLERK	950.00	
MILLER	CLERK	1300.00	

+-----+-----+-----+

4 rows in set (0.00 sec)

mysql> select ename, job, sal from emp4 where job!="clerk";

+-----+-----+-----+

ename	job	sal	
-------	-----	-----	--

+-----+-----+-----+

ALLEN	SALESMAN	1600.00	
WARD	SALESMAN	1250.00	
JONES	MANAGER	2975.00	
MARTIN	SALESMAN	1250.00	
BLAKE	MANAGER	2850.00	
CLARK	MANAGER	2450.00	
SCOTT	ANALYST	3000.00	
KING	PRESIDENT	5000.00	
TURNER	SALESMAN	1500.00	
FORD	ANALYST	3000.00	

+-----+-----+-----+

10 rows in set (0.00 sec)

mysql> select ename, job, sal from emp4 where job<>"clerk";

+-----+-----+-----+

ename	job	sal	
-------	-----	-----	--

+-----+-----+-----+

ALLEN	SALESMAN	1600.00	
WARD	SALESMAN	1250.00	
JONES	MANAGER	2975.00	
MARTIN	SALESMAN	1250.00	
BLAKE	MANAGER	2850.00	
CLARK	MANAGER	2450.00	
SCOTT	ANALYST	3000.00	
KING	PRESIDENT	5000.00	
TURNER	SALESMAN	1500.00	
FORD	ANALYST	3000.00	

+-----+-----+-----+

10 rows in set (0.00 sec)

mysql> select \* from emp4;

+-----+-----+-----+-----+-----+-----+-----+

empno	ename	job	mgr	hiredate	sal	comm	deptno	
-------	-------	-----	-----	----------	-----	------	--------	--

empid	ename	job	empid	hiredate	salary	commission_pct	empid
7369	SMITH	CLERK	7902	1980-12-17	800.00	NULL	20
7499	ALLEN	SALESMAN	7698	1981-02-20	1600.00	300.00	30
7521	WARD	SALESMAN	7698	1981-02-22	1250.00	500.00	30
7566	JONES	MANAGER	7839	1981-04-02	2975.00	NULL	20
7654	MARTIN	SALESMAN	7698	1981-09-28	1250.00	1400.00	30
7698	BLAKE	MANAGER	7839	1981-05-01	2850.00	NULL	30
7782	CLARK	MANAGER	7839	1981-06-09	2450.00	NULL	10
7788	SCOTT	ANALYST	7566	1982-12-09	3000.00	NULL	20
7839	KING	PRESIDENT	NULL	1981-11-17	5000.00	NULL	10
7844	TURNER	SALESMAN	7698	1981-09-08	1500.00	0.00	30
7876	ADAMS	CLERK	7788	1983-01-12	1100.00	NULL	20
7900	JAMES	CLERK	7698	1981-12-03	950.00	NULL	30
7902	FORD	ANALYST	7566	1981-12-03	3000.00	NULL	20
7934	MILLER	CLERK	7782	1982-01-23	1300.00	NULL	10

14 rows in set (0.00 sec)

mysql> select ename, job, sal from emp4 where sal>2000;

ename	job	sal
JONES	MANAGER	2975.00
BLAKE	MANAGER	2850.00
CLARK	MANAGER	2450.00
SCOTT	ANALYST	3000.00
KING	PRESIDENT	5000.00
FORD	ANALYST	3000.00

6 rows in set (0.00 sec)

mysql> select ename, job, comm, sal from emp4 where comm is null;

ename	job	comm	sal
SMITH	CLERK	NULL	800.00
JONES	MANAGER	NULL	2975.00
BLAKE	MANAGER	NULL	2850.00
CLARK	MANAGER	NULL	2450.00
SCOTT	ANALYST	NULL	3000.00
KING	PRESIDENT	NULL	5000.00
ADAMS	CLERK	NULL	1100.00
JAMES	CLERK	NULL	950.00



FORD	ANALYST	NULL	3000.00
MILLER	CLERK	NULL	1300.00

10 rows in set (0.00 sec)

```
mysql> select ename, job, comm, sal from emp4 where comm is not null;
```

ename	job	comm	sal
ALLEN	SALESMAN	300.00	1600.00
WARD	SALESMAN	500.00	1250.00
MARTIN	SALESMAN	1400.00	1250.00
TURNER	SALESMAN	0.00	1500.00

4 rows in set (0.00 sec)

```
mysql> select ename, job, sal from emp4 where job="salesman" and sal<1500;
```

ename	job	sal
WARD	SALESMAN	1250.00
MARTIN	SALESMAN	1250.00

2 rows in set (0.00 sec)

```
mysql> select ename, job, sal from emp4 where job="salesman" and sal>1500;
```

ename	job	sal
ALLEN	SALESMAN	1600.00

1 row in set (0.00 sec)

```
mysql> select ename, job, sal from emp3 where job="president" and mgr is null;
```

ERROR 1146 (42S02): Table 'java4to5pm.emp3' doesn't exist

```
mysql> select ename, job, sal from emp4 where job="president" and mgr is null;
```

ename	job	sal
KING	PRESIDENT	5000.00

1 row in set (0.00 sec)

```
mysql> select ename, job, sal from emp4 where job="president" or mgr is not null;
```

```
+-----+-----+-----+
| ename | job   | sal   |
+-----+-----+-----+
| SMITH | CLERK  | 800.00 |
| ALLEN | SALESMAN | 1600.00 |
| WARD  | SALESMAN | 1250.00 |
| JONES | MANAGER | 2975.00 |
| MARTIN | SALESMAN | 1250.00 |
| BLAKE | MANAGER | 2850.00 |
| CLARK | MANAGER | 2450.00 |
| SCOTT | ANALYST | 3000.00 |
| KING  | PRESIDENT | 5000.00 |
| TURNER | SALESMAN | 1500.00 |
| ADAMS | CLERK   | 1100.00 |
| JAMES | CLERK   | 950.00 |
| FORD  | ANALYST | 3000.00 |
| MILLER | CLERK   | 1300.00 |
+-----+-----+-----+
14 rows in set (0.00 sec)
```

```
mysql> select ename, sal,job from emp4 where job in("salesman");
```

```
+-----+-----+-----+
| ename | sal   | job   |
+-----+-----+-----+
| ALLEN | 1600.00 | SALESMAN |
| WARD  | 1250.00 | SALESMAN |
| MARTIN | 1250.00 | SALESMAN |
| TURNER | 1500.00 | SALESMAN |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> select ename, sal,job from emp4 where job in("salesman","ceark");
```

```
+-----+-----+-----+
| ename | sal   | job   |
+-----+-----+-----+
| ALLEN | 1600.00 | SALESMAN |
| WARD  | 1250.00 | SALESMAN |
| MARTIN | 1250.00 | SALESMAN |
| TURNER | 1500.00 | SALESMAN |
+-----+-----+-----+
4 rows in set (0.00 sec)
```

```
mysql> select ename, sal,job from emp4 where job in("salesman","clerk");
```

```
+-----+-----+-----+
| ename | sal   | job   |
+-----+-----+-----+
| SMITH | 800.00 | CLERK |
| ALLEN | 1600.00 | SALESMAN |
| WARD  | 1250.00 | SALESMAN |
| MARTIN | 1250.00 | SALESMAN |
| TURNER | 1500.00 | SALESMAN |
| ADAMS | 1100.00 | CLERK |
| JAMES | 950.00 | CLERK |
| MILLER | 1300.00 | CLERK |
+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> select ename, sal,job from emp4 where job in("salesman","clerk","Manager");
```

```
+-----+-----+-----+
| ename | sal   | job   |
+-----+-----+-----+
| SMITH | 800.00 | CLERK |
| ALLEN | 1600.00 | SALESMAN |
| WARD  | 1250.00 | SALESMAN |
| JONES | 2975.00 | MANAGER |
| MARTIN | 1250.00 | SALESMAN |
| BLAKE | 2850.00 | MANAGER |
| CLARK | 2450.00 | MANAGER |
| TURNER | 1500.00 | SALESMAN |
| ADAMS | 1100.00 | CLERK |
| JAMES | 950.00 | CLERK |
| MILLER | 1300.00 | CLERK |
+-----+-----+-----+
11 rows in set (0.00 sec)
```

```
mysql> ^Aselect ename, sal,job from emp4 where job in("salesman","manager");a
```