

 Run SQL Command Line

SQL\*Plus: Release 11.2.0.2.0 Production on Wed Feb 3 11:01:45 2021

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SQL> connect

Enter user-name: system

Enter password:

Connected.

SQL> create table dept(dnum int primary key,dname varchar(20),hod int);

Table created.

SQL> create table emp(eno int primary key,ename varchar(15),sal int,dno int);

Table created.

SQL> alter table dept add constraint hod foreign key references emp(eno);

alter table dept add constraint hod foreign key references emp(eno)

\*

ERROR at line 1:

ORA-00906: missing left parenthesis

SQL> alter table dept add constraint dept\_fk foreign key (hod) references emp(eno);

Table altered.

SQL> alter table emp add constraint emp\_fk foreign key (dno) references dept(dnum);

Table altered.

Run SQL Command Line

Connected.

SQL> desc emp

Name	Null?	Type
ENO	NOT NULL	NUMBER(38)
ENAME		VARCHAR2(15)
SAL		NUMBER(38)
DNO		NUMBER(38)

SQL> desc dept;

Name	Null?	Type
DNUM	NOT NULL	NUMBER(38)
DNAME		VARCHAR2(20)
HOD		NUMBER(38)

SQL> insert into dept values(10,'HR',NULL);

1 row created.

SQL> insert into dept values(20,'ACCT',NULL);

1 row created.

SQL> insert into emp values(101,'KIRAN',90000,20);

1 row created.

SQL> insert into emp values(104,'MOHAN',85000,10);

# Run SQL Command Line

Name	Null?	Type
DNUM	NOT NULL	NUMBER(38)
DNAME		VARCHAR2(20)
HOD		NUMBER(38)

```
SQL> insert into dept values(10,'HR',NULL);
```

```
1 row created.
```

```
SQL> insert into dept values(20,'ACCT',NULL);
```

```
1 row created.
```

```
SQL> insert into emp values(101,'KIRAN',90000,20);
```

```
1 row created.
```

```
SQL> insert into emp values(104,'MOHAN',85000,10);
```

```
1 row created.
```

```
SQL> insert into emp values(109,'JOHN',60000,10);
```

```
1 row created.
```

```
SQL> insert into emp values(113,'JAMES',79000,10);
```

```
1 row created.
```



## Run SQL Command Line

```
SQL> update dept set hod=104 where dnum=10;
```

```
1 row updated.
```

```
SQL> update dept set hod=101 where dnum=20;
```

```
1 row updated.
```

```
SQL>
```



# Run SQL Command Line

```
SQL> select * from dept;
```

DNUM	DNAME	HOD
10	HR	104
20	ACCT	101

```
SQL> select * from emp;
```

ENO	ENAME	SAL	DNO
101	KIRAN	90000	20
104	MOHAN	85000	10
109	JOHN	60000	10
113	JAMES	79000	10

```
SQL>
```

```
Run SQL Command Line

      109 JOHN          60000          10
      113 JAMES        79000          10

SQL> commit;

Commit complete.

SQL> drop table dept;
drop table dept
*
ERROR at line 1:
ORA-02449: unique/primary keys in table referenced by foreign keys

SQL> drop constraint emp_fk;
drop constraint emp_fk
*
ERROR at line 1:
ORA-00950: invalid DROP option

SQL> alter table emp drop constraint emp_fk;

Table altered.

SQL> drop table dept;

Table dropped.

SQL> 
```

```
Run SQL Command Line

SQL> create table emp(eno int primary key,ename varchar(15),job varchar(10),mgr int,hiredate date,sal int,comm int,deptno int,foreign key(mgr) references emp(eno),foreign key(deptno) references dept(dnum));

Table created.

SQL> 
```

```
Run SQL Command Line
Commit complete.

SQL> create table emp(eno int primary key,ename varchar(15),job varchar(10),mgr int,hiredate date,sal int,comm int,deptno int,foreign key(mgr) references emp(eno),foreign key(deptno) references dept(dnum));

Table created.

SQL>
SQL> INSERT INTO emp VALUES (7839,'KING','PRESIDENT',NULL,'17-NOV-81',5000,NULL,10);
1 row created.

SQL> INSERT INTO emp VALUES (7566,'JONES','MANAGER',7839,'02-APR-81',2975,NULL,20);
1 row created.

SQL> INSERT INTO emp VALUES (7698,'BLAKE','MANAGER',7839,'01-MAY-81',2850,NULL,30);
1 row created.

SQL> INSERT INTO emp VALUES (7782,'CLARK','MANAGER',7839,'09-JUN-81',2450,NULL,10);
1 row created.

SQL> INSERT INTO emp VALUES (7499,'ALLEN','SALESMAN',7698,'20-FEB-81',1600,300,30);
1 row created.

SQL> INSERT INTO emp VALUES (7521,'WARD','SALESMAN',7698,'22-FEB-81',1250,500,30);
1 row created.

SQL> INSERT INTO emp VALUES (7900,'JAMES','CLERK',7698,'03-DEC-81',950,NULL,30);
1 row created.

SQL> INSERT INTO emp VALUES (7844,'TURNER','SALESMAN',7698,'08-SEP-81',1500,0,30);
1 row created.

SQL> INSERT INTO emp VALUES (7902,'FORD','ANALYST',7566,'03-DEC-81',3000,NULL,20);
1 row created.
```

```
Run SQL Command Line

1 row created.

SQL> INSERT INTO emp VALUES (7900,'JAMES','CLERK',7698,'03-DEC-81',950,NULL,30);
1 row created.

SQL> INSERT INTO emp VALUES (7844,'TURNER','SALESMAN',7698,'08-SEP-81',1500,0,30);
1 row created.

SQL> INSERT INTO emp VALUES (7902,'FORD','ANALYST',7566,'03-DEC-81',3000,NULL,20);
1 row created.

SQL> INSERT INTO emp VALUES (7934,'MILLER','CLERK',7782,'23-JAN-82',1300,NULL,10);
1 row created.

SQL> INSERT INTO emp VALUES (7788,'SCOTT','ANALYST',7566,'19-APR-87',3000,NULL,20);
1 row created.

SQL> INSERT INTO emp VALUES (7654,'MARTIN','SALESMAN',7698,'28-SEP-81',1250,1400,30);
1 row created.

SQL>
SQL> INSERT INTO emp VALUES (7876,'ADAMS','CLERK',7788,'23-MAY-87',1100,NULL,20);
1 row created.

SQL> INSERT INTO emp VALUES (7369,'SMITH','CLERK',7902,'17-DEC-80',800,NULL,20);
1 row created.

SQL> commit;

Commit complete.

SQL> select * from emp;

      ENO  ENAME      JOB      MGR HIREDATE      SAL      COMM
-----
-----
```

```
Run SQL Command Line
SQL> select * from emp;
```

ENO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
7839	KING	PRESIDENT		17-NOV-81	5000	
7566	JONES	MANAGER	7839	02-APR-81	2975	
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	
7782	CLARK	MANAGER	7839	09-JUN-81	2450	
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500
7900	JAMES	CLERK	7698	03-DEC-81	950	
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0
7902	FORD	ANALYST	7566	03-DEC-81	3000	

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```

ENO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
7934	MILLER	CLERK	7782	23-JAN-82	1300	
7788	SCOTT	ANALYST	7566	19-APR-87	3000	
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400
7876	ADAMS	CLERK	7788	23-MAY-87	1100	
7369	SMITH	CLERK	7902	17-DEC-80	800	

14 rows selected.

```
SQL> select eno,ename from emp;
```

ENO	ENAME
-----	-------



```
Run SQL Command Line
SQL> select eno,ename from emp;

      ENO ENAME
-----
      7839 KING
      7566 JONES
      7698 BLAKE
      7782 CLARK
      7499 ALLEN
      7521 WARD
      7900 JAMES
      7844 TURNER
      7902 FORD
      7934 MILLER
      7788 SCOTT

      ENO ENAME
-----
      7654 MARTIN
      7876 ADAMS
      7369 SMITH

14 rows selected.

SQL> select * from emp where job='CLERK';

      ENO ENAME      JOB      MGR HIREDATE      SAL      COMM
-----
DEPTNO
-----
      7900 JAMES      CLERK      7698 03-DEC-81      950
      30
      7934 MILLER      CLERK      7782 23-JAN-82     1300
      10
      7876 ADAMS      CLERK      7788 23-MAY-87     1100
      20

      ENO ENAME      JOB      MGR HIREDATE      SAL      COMM
-----
DEPTNO
-----
      7369 SMITH      CLERK      7902 17-DEC-80      800
      20
```

```
Run SQL Command Line

14 rows selected.

SQL> select * from emp where job='CLERK';

      ENO ENAME      JOB      MGR HIREDATE      SAL      COMM
-----
DEPTNO
-----
      7900 JAMES      CLERK      7698 03-DEC-81      950
      30
      7934 MILLER      CLERK      7782 23-JAN-82     1300
      10
      7876 ADAMS      CLERK      7788 23-MAY-87     1100
      20

      ENO ENAME      JOB      MGR HIREDATE      SAL      COMM
-----
DEPTNO
-----
      7369 SMITH      CLERK      7902 17-DEC-80      800
      20

SQL> select eno,ename,sal from emp where job='MANAGER';

      ENO ENAME      SAL
-----
      7566 JONES      2975
      7698 BLAKE      2850
      7782 CLARK      2450

SQL> select eno,ename,sal from emp where job='MANAGER' and deptno=30;

      ENO ENAME      SAL
-----
      7698 BLAKE      2850

SQL>
```

```
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-----
ENO ENAME          JOB          MGR HIREDATE          SAL          COMM
-----
DEPTNO
-----
7369 SMITH          CLERK          7902 17-DEC-80          800
20

SQL> select eno,ename,sal from emp where job='MANAGER';

ENO ENAME          SAL
-----
7566 JONES          2975
7698 BLAKE          2850
7782 CLARK          2450

SQL> select eno,ename,sal from emp where job='MANAGER' and deptno=30;

ENO ENAME          SAL
-----
7698 BLAKE          2850

SQL> select hiredate from emp;

HIREDATE
-----
17-NOV-81
02-APR-81
01-MAY-81
09-JUN-81
20-FEB-81
22-FEB-81
03-DEC-81
08-SEP-81
03-DEC-81
23-JAN-82
19-APR-87

HIREDATE
-----
28-SEP-81
23-MAY-87
17-DEC-80
```

```
Run SQL Command Line

SQL> select eno,ename,hiredate from emp where hiredate>'01-JUN-81';

ENO ENAME          HIREDATE
-----
7839 KING          17-NOV-81
7782 CLARK          09-JUN-81
7900 JAMES          03-DEC-81
7844 TURNER          08-SEP-81
7902 FORD          03-DEC-81
7934 MILLER          23-JAN-82
7788 SCOTT          19-APR-87
7654 MARTIN          28-SEP-81
7876 ADAMS          23-MAY-87

9 rows selected.

SQL> _
```

```
Run SQL Command Line
COUNT(*)
-----
14

SQL> select eno emp_number,ename from emp;

EMP_NUMBER ENAME
-----
7839 KING
7566 JONES
7698 BLAKE
7782 CLARK
7499 ALLEN
7521 WARD
7900 JAMES
7844 TURNER
7902 FORD
7934 MILLER
7788 SCOTT

EMP_NUMBER ENAME
-----
7654 MARTIN
7876 ADAMS
7369 SMITH

14 rows selected.

SQL> select eno,ename from emp where ename like 'A%';

ENO ENAME
-----
7499 ALLEN
7876 ADAMS

SQL>
```