

SQL – Structured Query Language

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1 DROP TABLE DEPT CASCADE CONSTRAINTS;
2
3 CREATE TABLE DEPT
4   (DEPTNO NUMBER(2),
5    DNAME VARCHAR2(14) NOT NULL,
6    LOC VARCHAR2(13),
7    CONSTRAINT PK_DEPT PRIMARY KEY (DEPTNO)
8    CONSTRAINT UK_DEPT UNIQUE (DNAME));
9
10 INSERT INTO DEPT VALUES (10, 'ACCOUNTING', 'NEW YORK');
11 INSERT INTO DEPT VALUES (20, 'RESEARCH', 'DALLAS');
12 INSERT INTO DEPT VALUES (30, 'SALES', 'CHICAGO');
13 INSERT INTO DEPT VALUES (40, 'OPERATIONS', 'BOSTON');
14
15 DROP TABLE EMP;
16
17 CREATE TABLE EMP
18   (EMPNO NUMBER(4),
19    ENAME VARCHAR2(10) NOT NULL,
20    JOB VARCHAR2(9) NOT NULL,
21    MGR NUMBER(4),
22    HIREDATE DATE NOT NULL,
23    SAL NUMBER(7, 2) NOT NULL,
24    COMM NUMBER(7, 2),
25    DEPTNO NUMBER(2),
26    CONSTRAINT PK_EMPNO PRIMARY KEY (EMPNO),
27    CONSTRAINT FK_DEPT FOREIGN KEY (DEPTNO) REFERENCES DEPT(DEPTNO),
28    CONSTRAINT CHK_EMP_SALESMAN CHECK ((JOB='SALESMAN' AND COMM IS NOT NULL) OR (JOB<>'SALESMAN' AND
29    COMM IS NULL)));
30
31 INSERT INTO EMP VALUES(7369, 'SMITH', 'CLERK', 7902, TO_DATE('17-DEC-1980', 'DD-MON-YYYY'), 800, NULL, 20);
32 INSERT INTO EMP VALUES(7499, 'ALLEN', 'SALESMAN', 7698, TO_DATE('20-FEB-1981', 'DD-MON-YYYY'), 1600, 300, 30);
33 INSERT INTO EMP VALUES(7521, 'WARD', 'SALESMAN', 7698, TO_DATE('22-FEB-1981', 'DD-MON-YYYY'), 1250, 500, 30);
34 INSERT INTO EMP VALUES(7566, 'JONES', 'MANAGER', 7839, TO_DATE('2-APR-1981', 'DD-MON-YYYY'), 2975, NULL, 20);
35 INSERT INTO EMP VALUES(7654, 'MARTIN', 'SALESMAN', 7698, TO_DATE('28-SEP-1981', 'DD-MON-YYYY'), 1250, 1400, 30);
36 INSERT INTO EMP VALUES(7698, 'BLAKE', 'MANAGER', 7839, TO_DATE('1-MAY-1981', 'DD-MON-YYYY'), 2850, NULL, 30);
37 INSERT INTO EMP VALUES(7782, 'CLARK', 'MANAGER', 7839, TO_DATE('9-JUN-1981', 'DD-MON-YYYY'), 2450, NULL, 10);
38 INSERT INTO EMP VALUES(7788, 'SCOTT', 'ANALYST', 7566, TO_DATE('09-DEC-1982', 'DD-MON-YYYY'), 3000, NULL, 20);
39 INSERT INTO EMP VALUES(7839, 'KING', 'PRESIDENT', NULL, TO_DATE('17-NOV-1981', 'DD-MON-YYYY'), 5000, NULL, 10);
40 INSERT INTO EMP VALUES(7844, 'TURNER', 'SALESMAN', 7698, TO_DATE('8-SEP-1981', 'DD-MON-YYYY'), 1500, 0, 30);
41 INSERT INTO EMP VALUES(7876, 'ADAMS', 'CLERK', 7788, TO_DATE('12-JAN-1983', 'DD-MON-YYYY'), 1100, NULL, 20);
42 INSERT INTO EMP VALUES(7900, 'JAMES', 'CLERK', 7698, TO_DATE('3-DEC-1981', 'DD-MON-YYYY'), 950, NULL, 30);
43 INSERT INTO EMP VALUES(7902, 'FORD', 'ANALYST', 7566, TO_DATE('3-DEC-1981', 'DD-MON-YYYY'), 3000, NULL, 20);
44 INSERT INTO EMP VALUES(7934, 'MILLER', 'CLERK', 7782, TO_DATE('23-JAN-1982', 'DD-MON-YYYY'), 1300, NULL, 10);
45
46 DROP TABLE SALGRADE;
47
48 CREATE TABLE SALGRADE
49   (GRADE NUMBER,
50    LOSAL NUMBER,
51    HISAL NUMBER,
52    CONSTRAINT PK_GRADE PRIMARY KEY (GRADE));
53
54 INSERT INTO SALGRADE VALUES (1, 700, 1200);
55 INSERT INTO SALGRADE VALUES (2, 1201, 1400);
56 INSERT INTO SALGRADE VALUES (3, 1401, 2000);
57 INSERT INTO SALGRADE VALUES (4, 2001, 3000);
58 INSERT INTO SALGRADE VALUES (5, 3001, 9999);
59
60 COMMIT;
61
62 SELECT COUNT(*), COUNT(1) FROM EMP;
63 UPDATE EMP SET SAL = SAL * 1.10;
64 DELETE FROM EMP WHERE EMPNO = 7566;

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SELECT * FROM EMP;

| EMPNO | ENAME | JOB | MGR | HIREDATE | SAL | COMM | DEPTNO |
|-------|--------|-----------|------|-----------|------|------|--------|
| 7369 | SMITH | CLERK | 7902 | 17-Dec-80 | 800 | NULL | 20 |
| 7499 | ALLEN | SALESMAN | 7698 | 20-Feb-81 | 1600 | 300 | 30 |
| 7521 | WARD | SALESMAN | 7698 | 22-Feb-81 | 1250 | 500 | 30 |
| 7566 | JONES | MANAGER | 7839 | 02-Apr-81 | 2975 | NULL | 20 |
| 7654 | MARTIN | SALESMAN | 7698 | 28-Sep-81 | 1250 | 1400 | 30 |
| 7698 | BLAKE | MANAGER | 7839 | 01-May-81 | 2850 | NULL | 30 |
| 7782 | CLARK | MANAGER | 7839 | 09-Jun-81 | 2450 | NULL | 10 |
| 7788 | SCOTT | ANALYST | 7566 | 09-Dec-82 | 3000 | NULL | 20 |
| 7839 | KING | PRESIDENT | NULL | 17-Nov-81 | 5000 | NULL | 10 |
| 7844 | TURNER | SALESMAN | 7698 | 08-Sep-81 | 1500 | 0 | 30 |
| 7876 | ADAMS | CLERK | 7788 | 12-Jan-83 | 1100 | NULL | 20 |
| 7900 | JAMES | CLERK | 7698 | 03-Dec-81 | 950 | NULL | 30 |
| 7902 | FORD | ANALYST | 7566 | 03-Dec-81 | 3000 | NULL | 20 |
| 7934 | MILLER | CLERK | 7782 | 23-Jan-82 | 1300 | NULL | 10 |

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| SELECT * FROM DEPT; | SELECT * FROM SALGRADE; |
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SELECT e.EMPNO as 'EMPLOYEE_ID', e.ENAME as 'EMPLOYEE_NAME', e.JOB as 'JOB', D.DEPTNO, D.DNAME as DEPT
FROM EMP e, DEPT d
WHERE _____
AND _____;
```

```
SELECT e1.EMPNO as 'Employee_Id', e1.ENAME as 'Employee', e2.EMPNO as 'Manager_Id', e2.ENAME as 'Manager'
FROM EMP e1, EMP e2
WHERE _____
AND _____;
```

```
CREATE VIEW EMP_V
AS
SELECT EMPNO, ENAME, JOB, DEPTNO FROM EMP
WHERE JOB NOT IN ('PRESIDENT', 'MANAGER');

SELECT * FROM EMP_V;

COMMENT ON COLUMN EMP.COMM is 'Commission given to SALESMAN';

COMMENT ON TABLE DEPT is 'Master Table of Departments';
```