
- SQL> SELECT ENAME, EMPNO, MGR, JOB
 - 2 FROM EMP
 - 3 CONNECT BY PRIOR EMPNO=MGR;

ENAME	EMPNO	MGR	JOB
SCOTT	7788	7566	ANALYST
ADAMS	7876	7788	CLERK
FORD	7902	7566	ANALYST
SMITH	7369	7902	CLERK
ALLEN	7499	7698	SALESMAN
JAMES	7900	7698	CLERK
TURNER	7844	7698	SALESMAN
MARTIN	7654	7698	SALESMAN
WARD	7521	7698	SALESMAN
MILLER	7934	7782	CLERK
ADAMS	7876	7788	CLERK
ENAME	EMPNO	MGR	JOB
JONES	7566	7839	
SCOTT	7788	7566	
ADAMS	7876		CLERK
FORD	7902	7566	
SMITH	7369		CLERK
CLARK	7782	7839	
MILLER	7934		CLERK
BLAKE	7698	7839	
ALLEN	7499		SALESMAN
JAMES	7900	7698	
TURNER	7844	7698	SALESMAN
ENAME	EMPNO	MGR	JOB
MARTIN	7654	7609	SALESMAN
WARD	7521	7698	SALESMAN
SMITH	7369	7902	
KING	7839	1902	PRESIDENT
JONES	7566	7839	
SCOTT	7788	7566	
ADAMS	7876		CLERK
FORD	7902		ANALYST
SMITH	7369		CLERK
CLARK	7782		MANAGER
MILLER			CLERK
ENAME	EMPNO	MGR	JOB
BLAKE	7698	7839	MANAGER
ALLEN	7499		SALESMAN
JAMES	7900		CLERK
TURNER			SALESMAN
MARTIN			SALESMAN
WARD	7521		SALESMAN

39 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB

- 2 FROM EMP
- 3 CONNECT BY EMPNO=MGR;

ENAME	EMPNO	MGR	JOB
SMITH	7369	7902	CLERK
ALLEN	7499	7698	SALESMAN
WARD	7521	7698	SALESMAN
JONES	7566	7839	MANAGER
MARTIN	7654	7698	SALESMAN
BLAKE	7698	7839	MANAGER
CLARK	7782	7839	MANAGER
SCOTT	7788	7566	ANALYST
KING	7839		PRESIDENT
TURNER	7844	7698	SALESMAN
ADAMS	7876	7788	CLERK
ENAME	EMPNO	MGR	JOB
JAMES	7900	7698	CLERK
FORD	7902	7566	ANALYST
MILLER	7934	7782	CLERK

14 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB

- 2 FROM EMP
- 3 START WITH JOB = 'PRESIDENT'
- 4 CONNECT BY PRIOR EMPNO=MGR;

ENAME	EMPNO	MGR	JOB
KING	7839		PRESIDENT
JONES	7566	7839	MANAGER
SCOTT	7788	7566	ANALYST
ADAMS	7876	7788	CLERK
FORD	7902	7566	ANALYST
SMITH	7369	7902	CLERK
BLAKE	7698	7839	MANAGER
ALLEN	7499	7698	SALESMAN
WARD	7521	7698	SALESMAN
MARTIN	7654	7698	SALESMAN
TURNER	7844	7698	SALESMAN
ENAME	EMPNO	MGR	JOB
JAMES	7900	7698	CLERK
CLARK	7782	7839	MANAGER
MILLER	7934	7782	CLERK
CLARK	7782	7839	MANAGER

14 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH SAL=
- 4
- 5 SELECT MAX(SAL)
- 6 FROM EMP
- 7)
- 8 CONNECT BY PRIOR EMPNO = MGR;

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
SCOTT	7788	7566	ANALYST	3000
ADAMS	7876	7788	CLERK	1100
FORD	7902	7566	ANALYST	3000
SMITH	7369	7902	CLERK	800
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
ENAME	EMPNO	MGR	JOB	SAL
JAMES	7900	7698	CLERK	950
CLARK	7782	7839	MANAGER	2450
MILLER	7934	7782	CLERK	1300

14 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME='JONES'
- 4 CONNECT BY PRIOR EMPNO=MGR;

ENAME	EMPNO	MGR	JOB	SAL
JONES	7566	7839	MANAGER	2975
SCOTT	7788	7566	ANALYST	3000
ADAMS	7876	7788	CLERK	1100
FORD	7902	7566	ANALYST	3000
SMITH	7369	7902	CLERK	800

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR;

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000

JONES	7566	7839	MANAGER	2975
SCOTT	7788	7566	ANALYST	3000
ADAMS	7876	7788	CLERK	1100
FORD	7902	7566	ANALYST	3000
SMITH	7369	7902	CLERK	800
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
ENAME	EMPNO	MGR	JOB	SAL
JAMES	7900	7698	CLERK	950
CLARK	7782	7839	MANAGER	2450
MILLER	7934	7782	CLERK	1300

14 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB='MANAGER';

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
BLAKE	7698	7839	MANAGER	2850
CLARK	7782	7839	MANAGER	2450

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR

5 AND JOB='SALESMAN';

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB='MANAGER' AND JOB='SALESMAN';

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

2 FROM EMP

- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB='MANAGER' OR JOB='SALESMAN';

ERROR:

ORA-01436: CONNECT BY loop in user data

no rows selected

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND (JOB='MANAGER' OR JOB='SALESMAN');

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
CLARK	7782	7839	MANAGER	2450

8 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB IN('MANAGER', 'SALESMAN');

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
CLARK	7782	7839	MANAGER	2450

⁸ rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB <>'SALESMAN';

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
SCOTT	7788	7566	ANALYST	3000
ADAMS	7876	7788	CLERK	1100
FORD	7902	7566	ANALYST	3000
SMITH	7369	7902	CLERK	800
BLAKE	7698	7839	MANAGER	2850
JAMES	7900	7698	CLERK	950
CLARK	7782	7839	MANAGER	2450
MILLER	7934	7782	CLERK	1300

10 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB <>'CLERK';

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
SCOTT	7788	7566	ANALYST	3000
FORD	7902	7566	ANALYST	3000
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
CLARK	7782	7839	MANAGER	2450

10 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 START WITH ENAME = 'KING'
- 4 CONNECT BY PRIOR EMPNO = MGR
- 5 AND JOB <>'ANALYST';

J AI	400 UV	ANALISI	,	
ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
JAMES	7900	7698	CLERK	950
CLARK	7782	7839	MANAGER	2450
MILLER	7934	7782	CLERK	1300

10 rows selected.

SQL> SELECT ENAME, EMPNO, MGR, JOB, SAL

- 2 FROM EMP
- 3 WHERE JOB <>'ANALYST'
- 4 START WITH ENAME='KING'
- 5 CONNECT BY PRIOR EMPNO=MGR;

ENAME	EMPNO	MGR	JOB	SAL
KING	7839		PRESIDENT	5000
JONES	7566	7839	MANAGER	2975
ADAMS	7876	7788	CLERK	1100
SMITH	7369	7902	CLERK	800
BLAKE	7698	7839	MANAGER	2850
ALLEN	7499	7698	SALESMAN	1600
WARD	7521	7698	SALESMAN	1250
MARTIN	7654	7698	SALESMAN	1250
TURNER	7844	7698	SALESMAN	1500
JAMES	7900	7698	CLERK	950
CLARK	7782	7839	MANAGER	2450
ENAME	EMPNO	MGR	JOB	SAL
MILLER	7934	7782	CLERK	1300

12 rows selected.

SQL> SELECT ENAME NAME,

- 2 CONNECT BY ROOT ENAME BOSS
- 3 FROM EMP
- 4 START WITH EMPNO=7839
- 5 CONNECT BY PRIOR EMPNO=MGR;

NAME	BOSS
KING	KING
JONES	KING
SCOTT	KING
ADAMS	KING
FORD	KING
SMITH	KING
BLAKE	KING
ALLEN	KING
WARD	KING
MARTIN	KING
TURNER	KING
NAME	BOSS
JAMES	KING
CLARK	KING
MILLER	KING

.....

14 rows selected.

SQL> SELECT ENAME NAME,

- 2 CONNECT BY ROOT ENAME BOSS,
- 3 CONNECT BY ROOT JOB BOSSJOB
- 4 FROM EMP
- 5 START WITH JOB='ANALYST'
- 6 CONNECT BY PRIOR EMPNO=MGR;

NAME	BOSS	BOSSJOB
SCOTT	SCOTT	ANALYST
ADAMS	SCOTT	ANALYST
FORD	FORD	ANALYST
SMITH	FORD	ANALYST

SQL> SELECT ENAME NAME,

- 2 CONNECT BY ROOT ENAME BOSS,
- 3 CONNECT BY ROOT JOB BOSSJOB,
- 4 CONNECT BY ROOT HIREDATE BOSSHIRE,
- 5 ROUND (CONNECT BY ROOT HIREDATE-HIREDATE) DAYS
- 6 FROM EMP
- 7 WHERE SIGN (CONNECT BY ROOT HIREDATE-HIREDATE) = -1
- 8 START WITH JOB='PRESIDENT'
- 9 CONNECT BY PRIOR EMPNO=MGR;

NAME	BOSS	BOSSJOB	BOSSHIRE	DAYS
SCOTT	KING	PRESIDENT	17-NOV-81	-1979
ADAMS	KING	PRESIDENT	17-NOV-81	-2013
FORD	KING	PRESIDENT	17-NOV-81	-16
JAMES	KING	PRESIDENT	17-NOV-81	-16
MILLER	KING	PRESIDENT	17-NOV-81	-67

SQL> COL PATH FORMAT A35

- SQL> SELECT ENAME,
 - 2 SYS_CONNECT_BY_PATH (ENAME,'/') "PATH"
 - 3 FROM EMP
 - 4 START WITH ENAME='KING'
 - 5 CONNECT BY PRIOR EMPNO=MGR;

ENAME	PATH
KING	/KING
JONES	/KING/JONES
SCOTT	/KING/JONES/SCOTT
ADAMS	/KING/JONES/SCOTT/ADAMS
FORD	/KING/JONES/FORD
SMITH	/KING/JONES/FORD/SMITH
BLAKE	/KING/BLAKE
ALLEN	/KING/BLAKE/ALLEN
WARD	/KING/BLAKE/WARD
MARTIN	/KING/BLAKE/MARTIN

TURNER /KING/BLAKE/TURNER ENAME PATH _____ JAMES /KING/BLAKE/JAMES CLARK /KING/CLARK MILLER /KING/CLARK/MILLER 14 rows selected. SQL> SELECT ENAME,

- 2 SYS_CONNECT_BY_PATH (JOB,'/') "PATH"
- 3 FROM EMP
- 4 START WITH ENAME='KING'
- 5 CONNECT BY PRIOR EMPNO=MGR;

ENAME	PATH
KING JONES SCOTT ADAMS FORD SMITH BLAKE ALLEN WARD MARTIN	/PRESIDENT /PRESIDENT/MANAGER /PRESIDENT/MANAGER/ANALYST /PRESIDENT/MANAGER/ANALYST/CLERK /PRESIDENT/MANAGER/ANALYST /PRESIDENT/MANAGER/ANALYST/CLERK /PRESIDENT/MANAGER /PRESIDENT/MANAGER /PRESIDENT/MANAGER/SALESMAN /PRESIDENT/MANAGER/SALESMAN /PRESIDENT/MANAGER/SALESMAN
TURNER	/PRESIDENT/MANAGER/SALESMAN
ENAME	PATH
JAMES CLARK MILLER	/PRESIDENT/MANAGER/CLERK /PRESIDENT/MANAGER /PRESIDENT/MANAGER/CLERK

14 rows selected.

SQL> SELECT

- 2 Ename Name,
- CONNECT_BY_ROOT Ename RootProp01,
- 4 CONNECT_BY_ROOT Job RootProp02,
- 5 CONNECT BY ROOT Sal RootProp03,
- CONNECT_BY_ROOT HireDate RootProp04, CONNECT_BY_ROOT Deptno RootProp05 6
- 7
- 8 FROM Emp
- 9 START WITH Job = 'PRESIDENT'
- 10 CONNECT BY PRIOR Empno = MGR;

NAME	ROOTPROP01	ROOTPROP0	ROOTPROP03	ROOTPROP0	ROOTPROP05
KING	KING	PRESIDENT	5000	17-NOV-81	10
JONES	KING	PRESIDENT	5000	17-NOV-81	10
SCOTT	KING	PRESIDENT	5000	17-NOV-81	10

ADAMS	KING	PRESIDENT	5000	17-NOV-81	10
FORD	KING	PRESIDENT	5000	17-NOV-81	10
SMITH	KING	PRESIDENT	5000	17-NOV-81	10
BLAKE	KING	PRESIDENT	5000	17-NOV-81	10
ALLEN	KING	PRESIDENT	5000	17-NOV-81	10
WARD	KING	PRESIDENT	5000	17-NOV-81	10
MARTIN	KING	PRESIDENT	5000	17-NOV-81	10
TURNER	KING	PRESIDENT	5000	17-NOV-81	10
NAME	ROOTPROP01	ROOTPROP0	ROOTPROP03	ROOTPROP0	ROOTPROP05
JAMES	KING	PRESIDENT	5000	17-NOV-81	10
CLARK	KING	PRESIDENT	5000	17-NOV-81	10
MILLER	KING	PRESIDENT	5000	17-NOV-81	10

14 rows selected.

SQL> SELECT

- 2 Ename Name,
- 3 Sal EmpSal,
- 4 CONNECT_BY_ROOT Sal RoolSal,
 5 ROUND(CONNECT_BY_ROOT Sal Sal) DistDays
- 6 FROM Emp
- 7 WHERE SIGN(ROUND(CONNECT BY ROOT Sal Sal)) = -1
- 8 START WITH Job = 'PRESIDENT'
- 9 CONNECT BY PRIOR Empno = MGR;

no rows selected

SQL> SELECT

- 2 Ename Name,
- 3 Dname,
- Loc,
- CONNECT BY ROOT Ename Boss, 5
- 6 CONNECT BY ROOT D.Loc BossLoc
- 7 FROM Emp E, Dept D
- 8 WHERE E.Deptno = D.Deptno
- 9 START WITH Job = 'PRESIDENT'
- 10 CONNECT BY PRIOR Empno = MGR;

NAME	DNAME	LOC	BOSS	BOSSLOC
KING	ACCOUNTING	NEW YORK	KING	NEW YORK
JONES	RESEARCH	DALLAS	KING	NEW YORK
SCOTT	RESEARCH	DALLAS	KING	NEW YORK
ADAMS	RESEARCH	DALLAS	KING	NEW YORK
FORD	RESEARCH	DALLAS	KING	NEW YORK
SMITH	RESEARCH	DALLAS	KING	NEW YORK
BLAKE	SALES	CHICAGO	KING	NEW YORK
ALLEN	SALES	CHICAGO	KING	NEW YORK
WARD	SALES	CHICAGO	KING	NEW YORK
MARTIN	SALES	CHICAGO	KING	NEW YORK
TURNER	SALES	CHICAGO	KING	NEW YORK

NAME	DNAME	LOC	BOSS	BOSSLOC
JAMES CLARK	SALES ACCOUNTING	CHICAGO NEW YORK	KING KING	NEW YORK NEW YORK
MILLER	ACCOUNTING	NEW YORK	KING	NEW YORK

14 rows selected.

SQL> SELECT EMPNO, ENAME, MGR, SAL

- 2 FROM EMP
- 3 START WITH ENAME='KING'
- 4 CONNECT BY PRIOR EMPNO=MGR
- 5 ORDER BY SAL;

EMPNO	ENAME	MGR	SAL
7369	SMITH	7902	800
7900	JAMES	7698	950
7876	ADAMS	7788	1100
7654	MARTIN	7698	1250
7521	WARD	7698	1250
7934	MILLER	7782	1300
7844	TURNER	7698	1500
7499	ALLEN	7698	1600
7782	CLARK	7839	2450
7698	BLAKE	7839	2850
7566	JONES	7839	2975
EMPNO	ENAME	MGR	SAL
7788	SCOTT	7566	3000
7902			
7839	FORD KING	7566	3000
1039	VING		5000

14 rows selected.

SQL> ED

Wrote file afiedt.buf

- 1 SELECT
- 2 Ename,
- 3 Empno,
- 4 MGR,
- 5 Job,
- 6 Sal,
- 7 Deptno
- 8 FROM Emp
- 9 START WITH Job = 'PRESIDENT'
- 10 CONNECT BY NOCYCLE PRIOR Empno = MGR
- 11 ORDER SIBLINGS BY Sal

SQL> /

ENAME	EMPNO	MGR	JOB	SAL	DEPTNO
KING	7839		PRESIDENT	5000	10
CLARK	7782	7839	MANAGER	2450	10
MILLER	7934	7782	CLERK	1300	10
BLAKE	7698	7839	MANAGER	2850	30
JAMES	7900	7698	CLERK	950	30
WARD	7521	7698	SALESMAN	1250	30
MARTIN	7654	7698	SALESMAN	1250	30
TURNER	7844	7698	SALESMAN	1500	30
ALLEN	7499	7698	SALESMAN	1600	30
JONES	7566	7839	MANAGER	2975	20
SCOTT	7788	7566	ANALYST	3000	20
ENAME	EMPNO	MGR	JOB	SAL	DEPTNO
ADAMS	7876	7788	CLERK	1100	20
FORD	7902	7566	ANALYST	3000	20
SMITH	7369	7902	CLERK	800	20

14 rows selected.

SQL> SELECT EMPNO, ENAME, MGR, SAL

- 2 FROM EMP
- 3 START WITH ENAME='KING'
- 4 CONNECT BY PRIOR EMPNO=MGR
- 5 ORDER SIBLINGS BY SAL;

EMPNO	ENAME	MGR	SAL
7839	KING		5000
7782	CLARK	7839	2450
7934	MILLER	7782	1300
7698	BLAKE	7839	2850
7900	JAMES	7698	950
7521	WARD	7698	1250
7654	MARTIN	7698	1250
7844	TURNER	7698	1500
7499	ALLEN	7698	1600
7566	JONES	7839	2975
7788	SCOTT	7566	3000
		J '	
EMPNO	ENAME	MGR	SAL
7876	ADAMS	7788	1100
7902	FORD	7566	3000
7369	SMITH	7902	800

14 rows selected.

SQL> UPDATE EMP

- 2 SET MGR =7698
- 3 WHERE ENAME = 'KING';

1 row updated.

SQL> SELECT EMPNO, ENAME, MGR, SAL

- 2 FROM EMP
- 3 START WITH ENAME='KING'
- 4 CONNECT BY PRIOR EMPNO=MGR;

ERROR:

ORA-01436: CONNECT BY loop in user data

no rows selected

SQL> SELECT EMPNO, ENAME, MGR, SAL

- 2 FROM EMP
- 3 START WITH ENAME='KING'
- 4 CONNECT BY NOCYCLE PRIOR EMPNO=MGR;

EMPNO	ENAME	MGR	SAL
7839	KING	7698	5000
7566	JONES	7839	2975
7788	SCOTT	7566	3000
7876	ADAMS	7788	1100
7902	FORD	7566	3000
7369	SMITH	7902	800
7698	BLAKE	7839	2850
7499	ALLEN	7698	1600
7521	WARD	7698	1250
7654	MARTIN	7698	1250
7844	TURNER	7698	1500
EMPNO	ENAME	MGR	SAL
7900	JAMES	7698	950
7782	CLARK	7839	2450
7934	MILLER	7782	1300

14 rows selected.

SQL> ROLLBACK;

Rollback complete.

SQL> SPOOL OFF;