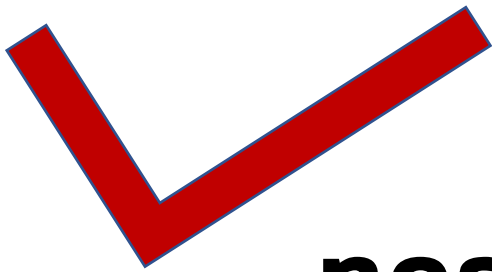


이럴때는



nested loop join 으로 유도하라 !

1. 조인문법과 조인방법

```
select e.ename, d.loc
from emp e, dept d
where e.deptno = d.deptno;
```

결과

ENAME	LOC
KING	NEW YORK
BLAKE	CHICAGO
CLARK	NEW YORK
JONES	DALLAS
MARTIN	CHICAGO
ALLEN	CHICAGO
TURNER	CHICAGO
JAMES	CHICAGO
WARD	CHICAGO
FORD	DALLAS
SMITH	DALLAS
SCOTT	DALLAS
ADAMS	DALLAS
MILLER	NEW YORK

조인 문법



오라클 조인 문법

1. equi join
2. non equi join
3. outer join
4. self join

1999 ansi 문법

1. on 절을 사용한 조인
2. using 절을 사용한 조인
3. left/right/full 아우터 조인
4. cross 조인

조인 방법



1. nested loop 조인
2. hash 조인
3. sort merge 조인

2.nested loop 조인이란?

```
select e.ename, d.loc
from emp e, dept d
where e.deptno = d.deptno;
```

먼저 선행 테이블의 처리 범위를 하나씩 액세스 하면서
그 추출된 테이블로 연결할 테이블을 조인하는 방식

emp 테이블

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		1981-11-17	5000		10
7698	BLAKE	MANAGER	7839	1981-05-01	2850		30
7782	CLARK	MANAGER	7839	1981-05-09	2450		10
7566	JONES	MANAGER	7839	1981-04-01	2975		20
7654	MARTIN	SALESMAN	7698	1981-09-10	1250	1400	30
7499	ALLEN	SALESMAN	7698	1981-02-11	1600	300	30
7844	TURNER	SALESMAN	7698	1981-08-21	1500	0	30
7900	JAMES	CLERK	7698	1981-12-11	950		30
7521	WARD	SALESMAN	7698	1981-02-23	1250	500	30
7902	FORD	ANALYST	7566	1981-12-11	3000		20
7369	SMITH	CLERK	7902	1980-12-09	800		20
7788	SCOTT	ANALYST	7566	1982-12-22	3000		20
7876	ADAMS	CLERK	7788	1983-01-15	1100		20
7934	MILLER	CLERK	7782	1982-01-11	1300		10

dept 테이블

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

결과

ENAME	LOC
KING	NEW YORK
BLAKE	CHICAGO
CLARK	NEW YORK
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ALLEN	CHICAGO
TURNER	CHICAGO
JAMES	CHICAGO
WARD	CHICAGO
FORD	DALLAS
SMITH	DALLAS
SCOTT	DALLAS
ADAMS	DALLAS
MILLER	NEW YORK

3. 조인하는 테이블 순서는?

```
select e.ename, d.loc
from emp e, dept d
where e.deptno = d.deptno;
```

① emp 테이블 → dept 테이블

② dept 테이블 → emp 테이블

emp 테이블

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
7839	KING	PRESIDENT		1981-11-17	5000		10
7698	BLAKE	MANAGER	7839	1981-05-01	2850		30
7782	CLARK	MANAGER	7839	1981-05-09	2450		10
7566	JONES	MANAGER	7839	1981-04-01	2975		20
7654	MARTIN	SALESMAN	7698	1981-09-10	1250	1400	30
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7844	TURNER	SALESMAN	7698	1981-08-21	1500	0	30
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7521	WARD	SALESMAN	7698	1981-02-23	1250	500	30
7902	FORD	ANALYST	7566	1981-12-11	3000		20
7369	SMITH	CLERK	7902	1980-12-09	800		20
7788	SCOTT	ANALYST	7566	1982-12-22	3000		20
7876	ADAMS	CLERK	7788	1983-01-15	1100		20
7934	MILLER	CLERK	7782	1982-01-11	1300		10

dept 테이블

DEPTNO	DNAME	LOC
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결과

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TURNER	CHICAGO
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SMITH	DALLAS
SCOTT	DALLAS
ADAMS	DALLAS
MILLER	NEW YORK

4. 조인하는 순서를 조정하는 힌트는?

```
select /*+ gather_plan_statistics leading(e d) use_nl(d) */ e.ename, d.loc  
from emp e, dept d  
where e.deptno = d.deptno;
```

emp 테이블 → dept 테이블



driving table

driven table

선행 테이블

연결할 테이블

5. 조건이 있었을 때의 테이블 조인 순서는?

```
select e.ename, d.loc
from emp e, dept d
where e.deptno = d.deptno and e.ename='SCOTT';
```

① emp 테이블 → dept 테이블

② dept 테이블 → emp 테이블

emp 테이블

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
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7369	SMITH	CLERK	7902	1980-12-09	800		20
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7876	ADAMS	CLERK	7788	1983-01-15	1100		20
7934	MILLER	CLERK	7782	1982-01-11	1300		10

dept 테이블

DEPTNO	DNAME	LOC
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결과

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