Exp-7 Join Queries

Aim: To perform manipulate records of table using nested queries in SQL.

Joins - used to combine data spread across table

Syntax

SELECT table1.column, table2.column
FROM table1, table2
WHERE table1.column1 = table2.column2;

→ A Join basically involves more than one Table to interact with.
→ Where Clause specifies the JOIN ~~Connection~~. Condition.
→ Ambiguous Column names are identified by Table name.
→ If Join condition is omitted, then a Cartesian product is formed. This is all rows in the first table are joined to all rows in second table.

Types of joins →

→ Inner Join (simple Join) : retrives rows from 2 tables having common column.
  - Equi Join : A join condition with relationship =
  - Non equi Join : A join condition with relationship other than =

→ Self Join : Joining table to itself
→ Outer Join : Returns all rows returned by simple join as well as those rows from one table that do not match any row from the other table. Represented by '+'.

Apply all types of Join in table student & courses.

SQL> select * from student, courses where student.roll_no = courses.roll_no;

SQL> SELECT * FROM student
INNER JOIN courses ON student.roll_no = course.roll_no;

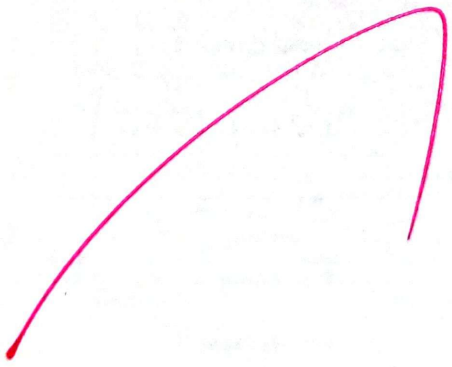
student.roll_no, course_id, name, age

SQL> SELECT * FROM student
LEFT JOIN Courses. ON student.roll_no = course.roll_no;

Q1) List empno, ename, deptno from emp and dept tables.

SELECT emp.empno, emp.ename, dept.deptno FROM dept JOIN emp ON
emp.deptno = dept.deptno;

Q2) List ename, sal and salegrad of all employees.



roll_no	name	address	age	course_id	roll_no
1	Ram	Delhi	18	1	1
2	Ramesh	Gurgaon	18	2	2
3	Sujit	Rothak	20	2	3
4	Suresh	Delhi	18	3	4

roll_no	course-id	name	age
1	1	Ram	18
2	2	Ramesh	18
3	2	sujit	20
4	3	Suresh	18

empno	name	deptno
7369	Smith	20
7499	Allen	30
7521	Ward	30
7566	Jones	20
7654	Martin	30
7698	Blake	
7782	Clark	10
7788	Scott	20
7839	King	10
7844	Turner	30
7876	Adams	20
7900	James	30
7902	Ford	20
7934	Miller	

Q3) List ename, deptno and deptname from emp and dept tables including rows of emp table that does not match with any of rows in dept table.

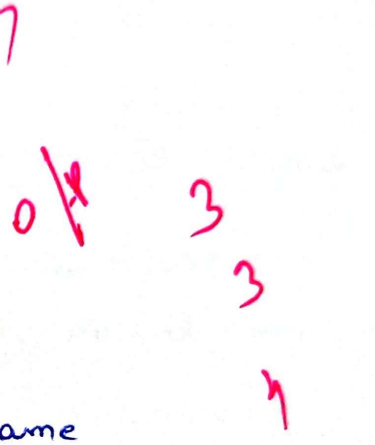
SQL> SELECT empno, ename, emp.deptno FROM emp
LEFT JOIN dept ON emp.deptno = dept.deptno;

Q4) List ename, deptno & deptname from emp & dept tables including the rows of dept table that does not match with any of the rows in emp table.

SQL> select empno, ename, dept.deptno, dname FROM dept
LEFT JOIN emp ON emp.deptno = dept.deptno;

Q5) List the name of employees with name of his/her manager from emp table.

empno	name	deptno
7369	Smith	20
7499	Allen	30
7521	ward	30
7566	Jones	20
7654	Martin	30
7698	Blake	30
7782	Clark	10
7788	Scott	20
7839	King	10
7844	Turner	30
7876	Addams	20
7900	James	30
7902	Ford	20
7934	Miller	10



empno	name	deptno	dname
7934	Miller	10	Accounting
7839	King	10	Accounting
7782	Clark	10	Accounting
7902	Ford	20	Research
7876	Adams	20	Research
7788	Scott	20	Research
7566	Jones	20	Research
7369	Smith	30	Sales
7900	James	30	Sales
7844	Turner	30	Sales
7698	Blake	30	Sales
7654	Martin	30	Sales
7521	Ward	30	Sales
7499	Allen	30	Sales
NULL	NULL	40	Operations

SQL> SELECT e1.ename AS employee_name, e2.ename AS manager_name

FROM emp e1

LEFT OUTER JOIN emp e2

ON e1.mgr = e2.empno and

e2.job = 'manager';

Exp no	7	Date:	15/3/2023
Exp name	Join Queries		
Understanding the concept: (3)		3	
SQL query identification (3)		3	
VIVA (4)		4	
Total (10)		(10)	
Verified by			
Signature			