**Multiple tables and subqueries**

**Problem 1:**

select \* from emp

where deptno in ( select deptno from emp where ename = 'JONES')

3 and ename != 'JONES';

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7902 FORD ANALYST 7566 03-DEC-81 3000

20

7876 ADAMS CLERK 7788 23-MAY-87 1100

20

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7369 SMITH CLERK 7902 17-DEC-80 800

20

**Problem #3:**

select \* from emp

where sal > any (select sal from emp where job in ( 'CLERK', 'SALESMAN'))

3 order by sal;

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7900 JAMES CLERK 7698 03-DEC-81 950

30

7876 ADAMS CLERK 7788 23-MAY-87 1100

20

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7521 WARD SALESMAN 7698 22-FEB-81 1250 500

30

7934 MILLER CLERK 7782 23-JAN-82 1300

10

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300

30

7782 CLARK MANAGER 7839 09-JUN-81 2450

10

7698 BLAKE MANAGER 7839 01-MAY-81 2850

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7566 JONES MANAGER 7839 02-APR-81 2975

20

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

7902 FORD ANALYST 7566 03-DEC-81 3000

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7839 KING PRESIDENT 17-NOV-81 5000

10

13 rows selected.

**Problem #4:**

select dept.deptno, emp.ename, dept.dname from emp, dept

2 where dept.deptno = emp.deptno;

DEPTNO ENAME DNAME

---------- ---------- --------------

10 CLARK ACCOUNTING

10 KING ACCOUNTING

10 MILLER ACCOUNTING

20 JONES RESEARCH

20 FORD RESEARCH

20 ADAMS RESEARCH

20 SMITH RESEARCH

20 SCOTT RESEARCH

30 WARD SALES

30 TURNER SALES

30 ALLEN SALES

DEPTNO ENAME DNAME

---------- ---------- --------------

30 JAMES SALES

30 BLAKE SALES

30 MARTIN SALES

14 rows selected.

**Explanation:**

In this query depno from both tables are compared to get the result.

**Problem #5**

select dept.deptno, emp.ename, dept.dname from emp, dept

2 where dept.deptno = emp.deptno(+);

DEPTNO ENAME DNAME

---------- ---------- --------------

10 CLARK ACCOUNTING

10 KING ACCOUNTING

10 MILLER ACCOUNTING

20 JONES RESEARCH

20 FORD RESEARCH

20 ADAMS RESEARCH

20 SMITH RESEARCH

20 SCOTT RESEARCH

30 WARD SALES

30 TURNER SALES

30 ALLEN SALES

DEPTNO ENAME DNAME

---------- ---------- --------------

30 JAMES SALES

30 BLAKE SALES

30 MARTIN SALES

40 OPERATIONS

15 rows selected.

**Explanation outer join:**

In the last query we used equijoin note that there is no record with deptno 40. Dept no 40 is in dept table but it is not used in emp table I used (+)outerjoin to show this record.

**Problem #8:**

select \* from emp

2 where sal > ( select avg(losal) from salgrade);

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7566 JONES MANAGER 7839 02-APR-81 2975

20

7698 BLAKE MANAGER 7839 01-MAY-81 2850

30

7782 CLARK MANAGER 7839 09-JUN-81 2450

10

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

7839 KING PRESIDENT 17-NOV-81 5000

10

7902 FORD ANALYST 7566 03-DEC-81 3000

20

6 rows selected.

**Problem #10:**

select deptno, ename, job from emp

2 where deptno = ( select deptno from dept where loc = 'NEW YORK');

DEPTNO ENAME JOB

---------- ---------- ---------

10 CLARK MANAGER

10 KING PRESIDENT

10 MILLER CLERK

**OIL TABLES QUERIES**

**Customer table**

SQL> describe customer;

Name Null? Type

----------------------------------------- -------- ----------------------------

CUSTID VARCHAR2(4)

CNAME VARCHAR2(20)

STREET VARCHAR2(15)

CITY VARCHAR2(15)

STATE CHAR(2)

ZIP CHAR(5)

TANKCAPACITY NUMBER(5)

HOUSETYPECODE VARCHAR2(10)

SQL> select \* from customer;

CUST CNAME STREET CITY ST ZIP TANKCAPACITY

---- -------------------- --------------- --------------- -- ----- ------------

HOUSETYPEC

----------

01 Stephen Jones 2 State Street Beantown MA 12345 235

ranch

02 Stacy Brown 4 High Street Newtown CA 21345 245

cape

03 John Smith 10 New Street Anytown MI 34567 285

colonial

CUST CNAME STREET CITY ST ZIP TANKCAPACITY

---- -------------------- --------------- --------------- -- ----- ------------

HOUSETYPEC

----------

05 Kimbell Jones 65 East Street Happytown CA 42345 245

cape

06 Charles Wood 34 State Street Beantown MA 12345 285

colonial

**Housetype table**

SQL> describe housetype;

Name Null? Type

----------------------------------------- -------- ----------------------------

HOUSETYPECODE VARCHAR2(10)

AVGSUM NUMBER(3)

AVGSPR NUMBER(3)

AVGFALL NUMBER(3)

AVGWIN NUMBER(3)

SQL> select \* from housetype;

HOUSETYPEC AVGSUM AVGSPR AVGFALL AVGWIN

---------- ---------- ---------- ---------- ----------

ranch 60 60 100 200

cape 72 70 90 160

colonial 100 100 110 320

**Delivery Table**

SQL> describe delivery;

Name Null? Type

----------------------------------------- -------- ----------------------------

CUSTID VARCHAR2(4)

DELDATE DATE

NUMGAL NUMBER(3)

PRICEGAL NUMBER(5,2)

SQL> select \* from delivery;

CUST DELDATE NUMGAL PRICEGAL

---- --------- ---------- ----------

01 01-MAR-12 60 3.45

02 14-JUN-12 48 3.35

01 01-DEC-13 72 3.85

03 25-JUL-13 40 3.25

04 28-OCT-12 28 3.35

05 16-MAR-12 44 3.45

06 14-FEB-12 48 3.55

03 01-MAR-14 40 3.35

8 rows selected.

**Problem #2:**

select custid, numgal from delivery

2 where numgal \* 2 > ( select min(avgfall) from housetype);

CUST NUMGAL

---- ----------

01 60

02 48

01 72

06 48

**Problem #6:**

**(Pairwise)**

1 select \* from customer

2 where (custid, housetypecode)in ( select custid, housetypecode from

3 customer where housetypecode = 'ranch' and

4\* state = 'MA')

SQL> /

CUST CNAME STREET CITY ST ZIP TANKCAPACITY

---- -------------------- --------------- --------------- -- ----- ------------

HOUSETYPEC

----------

01 Stephen Jones 2 State Street Beantown MA 12345 235

ranch

04 DAvid Manson 15 Mark Street Georgetown MA 32345 235

ranch

**Problem #7:**

**(non Pairwise**)

select \* from customer

where custid in ( select custid from customer where housetypecode = 'ranch')

3 and custid in ( select custid from customer where state = 'MA');

CUST CNAME STREET CITY ST ZIP TANKCAPACITY

---- -------------------- --------------- --------------- -- ----- ------------

HOUSETYPEC

----------

01 Stephen Jones 2 State Street Beantown MA 12345 235

ranch

04 DAvid Manson 15 Mark Street Georgetown MA 32345 235

ranch

**Problem #9:**

select custid, cname, city from customer

2 where custid in ( select custid from delivery group by custid having sum(numgal)>100);

CUST CNAME CITY

---- -------------------- ---------------

01 Stephen Jones Beantown