**Oracle Demo**

sql>ed vai

sql>@vai

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select constraint\_name,constraint\_type from user\_constraints where table\_name='customer'

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Single Row Miscellinous Functions\*\*\*\*\*\*\*\*\*\***

**SQL> select nvl(comm,0)from emp;**

NVL(COMM,0)

-----------

0

300

500

0

1400

0

0

0

0

0

0

0

0

0

14 rows selected.

SQL> select empno,nvl(comm,sal)from

EMPNO NVL(COMM,SAL)

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

7369 800

7499 300

7521 500

7566 2975

7654 1400

7698 2850

7782 2450

7788 3000

7839 5000

7844 0

7876 1100

7900 950

7902 3000

7934 1300

14 rows selected. if comm null it will return sal

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*NVL2 function\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SELECT empno,comm,NVL2(comm,(comm+sal),sal) FROM emp;

|  |  |  |
| --- | --- | --- |
| **EMPNO** | **COMM** | **NVL2(COMM,(COMM+SAL),SAL)** |
| 1234 |  |  |
| 1212 |  |  |
| 7839 |  | 6655 |
| 7698 |  | 3135 |
| 7782 |  | 3260.95 |
| 7566 |  | 2975 |
| 7654 | 1800 | 3175 |
| 7499 | 700 | 2460 |
| 7844 | 400 | 2050 |
| 7900 |  | 1045 |
| 7521 | 900 | 2275 |
| 7902 |  | 3000 |
| 7369 |  | 800 |
| 7788 |  | 3000 |
| **EMPNO** | **COMM** | **NVL2(COMM,(COMM+SAL),SAL)** |
| 7876 |  | 1100 |
| 7934 |  | 1730.3 |
| 9999 | 200 | 1544.31 |
| 8888 | 200 | 1544.31 |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*case\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SELECT staff\_code,staff\_name,

CASE

dept\_code WHEN 10 THEN 'Ten'

ELSE

'Otheres'

END

FROM staff\_masters

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*decode\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SELECT staff\_code,staff\_name,

dept\_code,

DECODE(dept\_code,10,'Ten',20,'Twenty','Others')

FROM staff\_masters

WHERE design\_code = 102

/

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*INSTR()\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select instr(ename,' ') from emp;

INSTR(ENAME,'')

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

0

4

0

0

0

0

0

0

0

0

0

INSTR(ENAME,'')

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

0

0

0

0

0

0

17 rows selected.

select substr(ename ,1,instr(ename,' ')-1) from emp

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Equi Join \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select empno,ename,dname from emp,dept where emp.deptno=dept.dep tno

EMPNO ENAME DNAME

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

7369 SMITH RESEARCH

7499 ALLEN SALES

7521 WARD SALES

7566 JONES RESEARCH

7654 MARTIN SALES

7698 BLAKE SALES

7782 CLARK ACCOUNTING

7788 SCOTT RESEARCH

7839 KING ACCOUNTING

7844 TURNER SALES

7876 ADAMS RESEARCH

EMPNO ENAME DNAME

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

7900 JAMES SALES

7902 FORD RESEARCH

7934 MILLER ACCOUNTING

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Non Equi Join\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select e.ename,e.sal,s.grade from emp e,salgrade s where sal between s.losal and s.hisal;

ENAME SAL GRADE

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

SMITH 800 1

JAMES 950 1

ADAMS 1100 1

WARD 1250 2

MARTIN 1250 2

MILLER 1300 2

TURNER 1500 3

ALLEN 1600 3

CLARK 2450 4

BLAKE 2850 4

JONES 2975 4

ENAME SAL GRADE

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

SCOTT 3000 4

FORD 3000 4

KING 5000 5

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Self Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select e.empno,e.ename,m.ename from emp e,emp m where e.mgr=m.empno /

EMPNO ENAME ENAME

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

7369 SMITH FORD

7499 ALLEN BLAKE

7521 WARD BLAKE

7566 JONES KING

7654 MARTIN BLAKE

7698 BLAKE KING

7782 CLARK KING

7788 SCOTT JONES

7844 TURNER BLAKE

7876 ADAMS SCOTT

7900 JAMES BLAKE

7902 FORD JONES

7934 MILLER CLARK

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Left Outer Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select e.empno,e.ename,e.deptno,d.dname from emp e left outer join dept d on(e.deptno=d.deptno);

EMPNO ENAME DEPTNO DNAME

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

1 vaishali

7369 SMITH 20 RESEARCH

7499 ALLEN 30 SALES

7521 WARD 30 SALES

7566 JONES 20 RESEARCH

7654 MARTIN 30 SALES

7698 BLAKE 30 SALES

7782 CLARK 10 ACCOUNTING

7788 SCOTT 20 RESEARCH

7839 KING 10 ACCOUNTING

7844 TURNER 30 SALES

EMPNO ENAME DEPTNO DNAME

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

7876 ADAMS 20 RESEARCH

7900 JAMES 30 SALES

7902 FORD 20 RESEARCH

7934 MILLER 10 ACCOUNTING

15 rows selected.

Extra Record from emp;

**\*\*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Right Outer Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select e.empno,e.ename,e.deptno,d.dname from emp e Right outer join dept d on(e.deptno=d.deptno);

EMPNO ENAME DEPTNO DNAME

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

7839 KING 10 ACCOUNTING

7934 MILLER 10 ACCOUNTING

7782 CLARK 10 ACCOUNTING

7369 SMITH 20 RESEARCH

7902 FORD 20 RESEARCH

7876 ADAMS 20 RESEARCH

7788 SCOTT 20 RESEARCH

7566 JONES 20 RESEARCH

7900 JAMES 30 SALES

7499 ALLEN 30 SALES

7698 BLAKE 30 SALES

EMPNO ENAME DEPTNO DNAME

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

7654 MARTIN 30 SALES

7844 TURNER 30 SALES

7521 WARD 30 SALES

OPERATIONS

15 rows selected.[dept at right] so no dept no;

**\*\*\*\*\*\*\*Extra Query Right Outer Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select e.empno,e.ename,d.deptno,d.dname from emp e Right outer join dept d on(e.deptno=d.deptno ;

EMPNO ENAME DEPTNO DNAME

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

7839 KING 10 ACCOUNTING

7934 MILLER 10 ACCOUNTING

7782 CLARK 10 ACCOUNTING

7369 SMITH 20 RESEARCH

7902 FORD 20 RESEARCH

7876 ADAMS 20 RESEARCH

7788 SCOTT 20 RESEARCH

7566 JONES 20 RESEARCH

7900 JAMES 30 SALES

7499 ALLEN 30 SALES

7698 BLAKE 30 SALES

EMPNO ENAME DEPTNO DNAME

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

7654 MARTIN 30 SALES

7844 TURNER 30 SALES

7521 WARD 30 SALES

40 OPERATIONS

15 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Full Outer Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*** select e.empno,e.ename,d.deptno,d.dname from emp e full outer join dept d on(e.deptno=d.deptno)

EMPNO ENAME DEPTNO DNAME

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

1 vaishali

7369 SMITH 20 RESEARCH

7499 ALLEN 30 SALES

7521 WARD 30 SALES

7566 JONES 20 RESEARCH

7654 MARTIN 30 SALES

7698 BLAKE 30 SALES

7782 CLARK 10 ACCOUNTING

7788 SCOTT 20 RESEARCH

7839 KING 10 ACCOUNTING

7844 TURNER 30 SALES

EMPNO ENAME DEPTNO DNAME

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

7876 ADAMS 20 RESEARCH

7900 JAMES 30 SALES

7902 FORD 20 RESEARCH

7934 MILLER 10 ACCOUNTING

40 OPERATIONS

16 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SQL Compilent \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select ename,dname from emp cross join dept ==Caretesian Product

SQL> select empno,ename,deptno,dname from emp natural join dept;==equi join

select empno,ename,deptno,dname from emp join dept using(deptno,deptno)==equi join

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SubQuery\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select empno,ename from emp where deptno=(select deptno from dept where dname='SALES')

EMPNO ENAME

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

7499 ALLEN

7521 WARD

7654 MARTIN

7698 BLAKE

7844 TURNER

7900 JAMES

6 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select \* from emp where sal=(select min(sal) from emp);

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

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

7369 SMITH CLERK 7902 17-DEC-80 800 20

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ANY\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select \* from emp where sal > ANY(select avg(sal) from emp);

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

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.

SQL>

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* ANY\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> set feedback on;

SQL> select \* from emp where sal > ANY(select avg(sal) from emp where deptno=10);

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

7839 KING PRESIDENT 17-NOV-81 5000 10

7902 FORD ANALYST 7566 03-DEC-81 3000 20

4 rows selected.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select \* from emp where hiredate between '1-JAN-81' and '31-DEC-81';

select \* from emp where job in('MANAGER','ANALYST');

select \* from emp where job like '%MAN%';

select \* from emp where job like 'SALES\_\_\_';

select \* from emp where job='MANAGER' and sal>=2500;

select \* from emp where job not in('CLERK');

select \* from emp where comm is not null;

desc dual;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SQL> select sysdate from dual;

SYSDATE

---------

27-MAR-14

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SQL> select (319/212)+10 from dual;

(319/212)+10

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

11.504717

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*OrderBy\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select \* from emp order by sal desc or asc;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Single Row Functions\*\*\*\*\*\*\*\*\*\*\*\*

select \* from emp order by sal,comm desc;

select sum(sal) from emp group by deptno;

select sum(sal) from emp where deptno=30;

select avg(sal) from emp where deptno=30;

select count(\*) from emp;

select min(sal) from emp;

SQL> select deptno ,count(\*) from emp group by deptno having count(\*)>5;

DEPTNO COUNT(\*)

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

30 6

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Single Row Functions\*\*\*\*\*\*\*\*\*\*\***

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*round\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select round(17.175,1) "ROUND" from dual;

ROUND

------

17.2

SQL> select round(17.175,2) "round" from dual;

trunc

----------

17.18

select round(17.175,-1) "ROUND" from dual;

ROUND

---------

20

SQL> select trunc(17.175,1) "trunc" from dual;

trunc

----------

17.1

SQL> select trunc(17.175,-1) from dual;

TRUNC(17.175,-1)

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

10

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*abc\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select abs(-15) from dual;

ABS(-15)

----------

15

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*trunc\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select trunc(17.175,-1) from dual;

TRUNC(17.175,-1)

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

10

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*lower\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select lower('Vaishali') from dual;

LOWER('V

--------

vaishali

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*concat\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select concat('vaishali','srivastava')from dual;

CONCAT('VAISHALI',

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

Vaishalisrivastava

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*substr\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select substr('vaishali srivastava',3,5) from dual;

SUBST

-----

ishal

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*REPLACE\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select replace('jack and jlu','j','BL') from dual;

REPLACE('JACKAN

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

BLack and BLlu

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LPAD\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select sal ,lpad(sal,10,'\*') from emp;

SAL LPAD(SAL,1

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

800 \*\*\*\*\*\*\*800

1600 \*\*\*\*\*\*1600

1250 \*\*\*\*\*\*1250

2975 \*\*\*\*\*\*2975

1250 \*\*\*\*\*\*1250

2850 \*\*\*\*\*\*2850

2450 \*\*\*\*\*\*2450

3000 \*\*\*\*\*\*3000

5000 \*\*\*\*\*\*5000

1500 \*\*\*\*\*\*1500

1100 \*\*\*\*\*\*1100

SAL LPAD(SAL,1

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

950 \*\*\*\*\*\*\*950

3000 \*\*\*\*\*\*3000

1300 \*\*\*\*\*\*1300

14 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LPAD\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select sal ,lpad(sal,10) from emp;

SAL LPAD(SAL,1

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

800 800

1600 1600

1250 1250

2975 2975

1250 1250

2850 2850

2450 2450

3000 3000

5000 5000

1500 1500

1100 1100

SAL LPAD(SAL,1

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

950 950

3000 3000

1300 1300

14 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Date Functions\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> select add\_months(sysdate,2) from dual;

ADD\_MONTH

---------

28-MAY-14

................................................................

SQL> select months\_between('15-feb-2014','12-jan-2014')from dual;

MONTHS\_BETWEEN('15-FEB-2014','12-JAN-2014')

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

1.09677419

.............................................................

SQL> select last\_day('15-feb-2014') from dual;

LAST\_DAY(

---------

28-FEB-14

………………………………………………………………………………………………………………………

SQL> select next\_day(sysdate,'Friday') from dual;

NEXT\_DAY(

---------

11-APR-14

………………………………………………………………………………………………………………………….

SQL> select extract(day from BOOK\_ISSUE\_DATE) from book\_transactions;

EXTRACT(DAYFROMBOOK\_ISSUE\_DATE)

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

2

10

1

12

14

1

1

31

8 rows selected.

SQL> select extract(month from BOOK\_ISSUE\_DATE) from book\_transactions;

EXTRACT(MONTHFROMBOOK\_ISSUE\_DATE)

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

2

3

4

2

3

4

4

5

8 rows selected.

SQL>

**\*\*\*\*\*\*\*\*\*\*\*\*\*Conversion Functions To\_Char function\*\*\*\*\*\*\*\*\*\*\***

SQL> select to\_char(sysdate ,'day')from dual

TO\_CHAR(S

---------

Wednesday

**…………………………………………………………………………………..**

**SQL> select to\_char(sysdate,'Q') from dual;**

T

-

2

**………………………………………………………………………………**

**select TO\_CHAR(sysdate,'ddsp') from dual;**

|  |
| --- |
| **TO\_CHAR(SYSD** |
| twenty-four |
|  |

**SELECT TO\_DATE('2014, 13 Feb' ,'yyyy dd month') FROM DUAL;**

**\*\*\*\*\*\*\*\*\*\*Miselinious Functions - Case Statement\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Sql> 1 select empno,ename, case deptno when 10 then 'Ten

else 'other' end from emp

EMPNO ENAME CASED

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

7369 SMITH other

7499 ALLEN other

7521 WARD other

7566 JONES other

7654 MARTIN other

7698 BLAKE other

7782 CLARK Ten

7788 SCOTT other

7839 KING Ten

7844 TURNER other

7876 ADAMS other

7900 JAMES other

7902 FORD other

7934 MILLER Ten

14 rows selected.

**…………………………………….Decode …………………………………………..**

**select staff\_code,staff\_name,dept\_code, decode dept\_code,10,'TEN',20,'TWENTY','Others') from staff\_masters where design\_code=102**

**TAFF\_CODE STAFF\_NAME DEPT\_CODE DECODE**

**----- ------**

**100001 Arvind 30 Others**

**100002 Shyam 20 TWENTY**

**100003 Mohan 10 TEN**

**100004 Anil 20 TWENTY**

**100008 Raviraj 40 Others**

**100009 Rahul 20 TWENTY**

**rows selected.**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*JOIN\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Outer Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**[Note : + sign must be kept on the side of the join which is deficient in information. Ex staff dept.**

SQL> select staff.staff\_code,staff.Dept\_code,

2 dept.dept\_name from staff\_masters staff,department\_masters dept

3 where staff.dept\_code=dept.dept\_code;

STAFF\_CODE DEPT\_CODE DEPT\_NAME

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

100001 30 Electronics

100002 20 Electricals

100003 10 Computer Science

100004 20 Electricals

100005 10 Computer Science

100006 30 Electronics

100007 20 Electricals

100008 40 Mechanics

100009 20 Electricals

100010 30 Electronics

10 rows selected.

1 select staff.staff\_code,staff.Dept\_code,

2 dept.dept\_name from staff\_masters staff,department\_masters dept

3\* where staff.dept\_code(+)=dept.dept\_code

STAFF\_CODE DEPT\_CODE DEPT\_NAME

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

100003 10 Computer Science

100005 10 Computer Science

100002 20 Electricals

100004 20 Electricals

100007 20 Electricals

100009 20 Electricals

100001 30 Electronics

100006 30 Electronics

100010 30 Electronics

100008 40 Mechanics

Robotics

**11 rows selected.**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SQL Compilent Join\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**Cross Join -> Cartesian product**

select student\_name,dept\_name from student\_masters cross join department\_masters

**Natural Join -> EquiJoin**

select student\_code,student\_name,dept\_code,dept\_name from

student\_masters natural join department\_masters

**Join Using ->when column names are same but data types are different**

select student\_code,student\_name,dept\_code,dept\_name

from student\_masters join

department\_masters using(dept\_code,dept\_code);

**Join -> On clause**

select student.student\_code,student.student\_name, student.dept\_code,dept.dept\_name

from student\_masters student join department\_masters dept on(student.dept\_code=dept.dept\_code)

and dept.dept\_name='Computer Science'

UDENT\_CODE STUDENT\_NAME DEPT\_CODE DEPT\_NAME

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

1001 Amit 10 Computer Science

1002 Ravi 10 Computer Science

1008 Dev 10 Computer Science

1014 Sunil 10 Computer Science

1020 Amrit 10 Computer Science

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Left Outer JOIN\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SELECT s.student\_code, s.dept\_code, d.dept\_name FROM student\_masters s

LEFT OUTER JOIN department\_masters d ON (s.dept\_code = d.dept\_code);

desc student\_masters;

SELECT s.student\_code, s.dept\_code, d.dept\_name

FROM student\_masters s, department\_masters d WHERE

s.dept\_code=d.dept\_code(+);

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SubQuery\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

select emp whose dept =sales

SQL> select ename ,sal from emp where deptno=(select deptno from dept where dname='SALES');

ENAME SAL

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

ALLEN 1600

WARD 1250

MARTIN 1250

BLAKE 2850

TURNER 1500

JAMES 950

6 rows selected.

.................................................

List all emp who have same job as scott

SQL> select empno,ename,sal from emp where job=(select job from emp where ename='SCOTT' and ename !=

'SCOTT');

no rows selected

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**........................ Predicate ALL..............................**

select all emp whose sal > than all emp whose dept=30

SQL> select ename ,sal from emp where deptno!=30 and sal>ALL(select sal from emp where deptno=30);

ENAME SAL

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

JONES 2975

SCOTT 3000

KING 5000

FORD 3000

**.........Predicate EXIEST .....................................**

List details of dept which has at least one emp assigned to it

sql> select \* from dept d where EXISTS (select \* from emp e where e.deptno=d.deptno)

DEPTNO DNAME LOC

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

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

**..................... Predicate Not Exists..................**

SQL>select \* from dept d where not EXISTS (select \* from emp e where e.deptno=d.deptno)

EPTNO DNAME LOC

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

40 OPERATIONS BOSTON

50 MARKETING BOLDER

60 DEVELOPMENT WASHINGTON

70 SUPPORT LA

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Corelated SubQuery\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Candidate key parent key

Return those emp whose hire date less than their mgr.

SQL> select \* from emp e where hiredate<(select hiredate from emp m where m.empno=e.mgr);

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

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

7369 SMITH CLERK 7902 17-DEC-80 800 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 20

7698 BLAKE MANAGER 7839 01-MAY-81 2850 30

7782 CLARK MANAGER 7839 09-JUN-81 2450 10

6 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Start With Connect By\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

select staff\_name,staff\_code,mgr\_code from staff\_masters connect by prior staff\_code =mgr\_code

start with staff\_name='Allen'

STAFF\_NAME STAFF\_CODE MGR\_CODE

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

Allen 100006 100005

Arvind 100001 100006

Mohan 100003 100006

Anil 100004 100006

Raviraj 100008 100006

Rahul 100009 100006

6 rows selected.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Objects\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

create table emp\_821219(

empno number(4) constraint vai\_empno\_pk\_con primary key,

ename varchar2(10) constraint en\_nn\_con not null,

acc\_no varchar2(10) UNIQUE,

job varchar2(10) default ('CLERK'),

sal number(7,2) check(sal>0),

city Varchar2(10) CHECK (city IN ('Pune','Chennai','Nagpur')),

deptno number(2) references dept(deptno)

)………………………………………………………………….

CREATE TABLE staff\_masters\_1111

(staff\_code NUMBER(10) PRIMARY KEY,staff\_name varchar2(20) NOT NULL,

staff\_sal number(10) , hiredate DATE DEFAULT SYSDATE,dept\_code number(5) REFERENCES

department\_masters(dept\_code) ,CONSTRAINT staff\_sal\_limit CHECK(staff\_sal>5000));

**…………….Drop the table which has reference integrity Constraint……**

**DROP TABLE product cascade constraint;**

**................Table Level Constrains Alter Command................**

SQL> alter table vai\_emp add (hiredate date not null);

Table altered.

**..............................Add Column................**

SQL> alter table vai\_emp add (mgr number(4),comm number(9,2));

Table altered.

**............................Add New Constraints......**

SQL> create table vai\_dept(deptno number(10),dname varchar2(20),loc varchar2(20));

Table created.

..........................................................

SQL> alter table vai\_dept add constraint uniq\_con unique(loc);

Table altered.

**...................Drop Constraints................**

SQL> alter table vai\_dept drop constraint uniq\_con

Table altered.

**.................................Drop Column............**

SQL> alter table vai\_emp drop column mgr

Table altered.

**..............Modify Column...................**

SQL> alter table vai\_emp modify(sal number(9,2));

Table altered.

**.........................INDEX......................**

create index index on sal colo in vai\_emp

SQL>create index v\_sal\_index on vai\_emp(sal)

Index created.

**................create unique index on ename column............**

create unique index v\_ename\_uniindex on vai\_emp(ename)

Index created.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Synonym\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> create synonym v\_empsys for vai\_emp;

Synonym created.

**................................access synonyms.............**

SQL> select \* from v\_empsys;

no rows selected

emp tbl is referred using synonyms.

synonyms are useful in multiuser environment where users are

sharing a object among then.

ex id

there is a user-trg1 has a share a table called order

and granted a required privileges’ to the current schema user scott.

try to select a data from orders .

sql> select \* from orders.

not accessible.

..........................................................

sql> select \* from trg1.orders.

not accessible.

sql> create a synonyms v\_order\_syn for trg1.order;

select \* from v\_order\_syn ;[if permission is granted.]

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*SEQUENCE\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Sql> create sequence v\_emp\_seq start with 4 increment by 2 minvalue 1 maxvalue 10

Sequence created.

SQL> select v\_emp\_seq.nextval from dual;

NEXTVAL

----------

4

SQL> select v\_emp\_seq.currval from dual;

CURRVAL

----------

4

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL>create sequence v\_emp\_seq start with 4 minvalue 1 maxvalue 40 increment by 2 CYCLE

Sequence created.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*view\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> create view v\_view\_emp as select \* from emp where hiredate>'1-jan-1982'

view created.

SQL> select \* from v\_view\_emp ;

EMPNO ENAME JOB MGR HIREDATE SAL COMM DEPTNO

-

7788 SCOTT ANALYST 7566 19-APR-87 3000 20

7876 ADAMS CLERK 7788 23-MAY-87 1100 20

7934 MILLER CLERK 7782 23-JAN-82 1300 10

**................View With Check Constraints..............**

create view v\_sal\_gt\_1500\_view as

select empno,ename,sal from emp where sal>1500 with check option

View created.

.......................................................

SQL> insert into v\_sal\_gt\_1500\_view values(6666,'vvv',1000);

ORA-01402: view WITH CHECK OPTION where-clause violation

......................................................

\*\*\*\*\*\*\*\*\*\*\*\*DML Statement Update\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SQL> update emp set ename='vaishali' where empno=7782;

1 row updated.

...........................................

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Transaction Management\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SQL> insert into emp(empno,ename,sal)values(666,'vaishali',2000);

1 row created.

SQL> update emp set sal=9000 where deptno=20;

5 rows updated.

SQL> savepoint spt1;

Savepoint created.

SQL> update emp set sal=8000 where deptno=20;

5 rows updated.

SQL> rollback to spt1;

Rollback complete.

*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Data Control Language\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\**

GRANT SELECT ON Customer TO user2;

Login To user-2

select \* from user1.customer;

update user1.customer set name='vai'

WHERE customer\_code=102;

Login –user-1

GRANT UPDATE ON customer to user2;

select \* from user1.customer;

update user1.customer set name='vai' where customer\_code=102;

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Merge\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

SELECT \* FROM staff\_masters;

CREATE TABLE staff\_copy AS SELECT staff\_code , staff\_name, dept\_code

FROM staff\_masters WHERE 1=2;

SELECT \* FROM staff\_copy;

MERGE INTO staff\_copy e1 USING staff\_masters e2

ON (e1.staff\_code = e2.staff\_code)

WHEN MATCHED THEN

UPDATE SET e1.staff\_name=e2.staff\_name,e1.dept\_code=e2.dept\_code

WHEN NOT MATCHED THEN

INSERT VALUES(e2.staff\_code,e2.staff\_name,e2.dept\_code);

SELECT \* FROM staff\_copy;

update staff\_masters SET staff\_name=’Vaishali S’ where staff\_code=101;

SELECT \* FROM staff\_masters;

SELECT \* FROM staff\_copy;

MERGE INTO staff\_copy e1 USING staff\_masters e2

ON (e1.staff\_code = e2.staff\_code)

WHEN MATCHED THEN

UPDATE SET e1.staff\_name=e2.staff\_name,e1.dept\_code=e2.dept\_code

WHEN NOT MATCHED THEN

INSERT VALUES(e2.staff\_code,e2.staff\_name,e2.dept\_code);

SELECT \* FROM staff\_copy;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*RollUp \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*8

**SELECT    deptno,   job,   count(\*),   sum(sal) FROM**

**Emp GROUP BY    ROLLUP(deptno,job);**

**DEPTNO JOB         COUNT(\*)   SUM(SAL)  
--------- --------- ---------   ---------  
       10 CLERK              1       1300  
       10 MANAGER            1       2450  
       10 PRESIDENT          1       5000  
       10                    3       8750  
       20 ANALYST            2       6000  
       20 CLERK              2       1900  
       20 MANAGER            1       2975  
       20**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Cube\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

In multidimensional jargon, a “cube” is a cross-tabulated summary of detail rows.  CUBE enables a SELECT statement to calculate subtotals for all possible combinations of a group of dimensions. It also calculates a grand total. This is the set of information typically needed for all cross-tabular reports, so CUBE can calculate a cross-tabular report with a single select statement.

SELECT    deptno,   job,   count(\*),   sum(sal) FROM    emp  
**GROUP BY    CUBE**(deptno,job);

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Oracle Account Locked\*\*\*\*\*\*\*\*

conn sys/sys as sysdba

it shows connect

alter user system account unlock;

con system/sys;

--------Unlock\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

