```
SQL> select *from stafff;

     EMPID FIRST_NAME            LAST_NAME                  PHONENO    SALARY DEPARTMENTID
---------- --------------------- ---------------------- ----------- --------- --------------------
         1 ramesh                kumar                   7003616607    210000 60
         2 suresh                kumar                   7003616607    210000 61
         3 karuna                kumari                  7003616677    220000 62
         4 paul                  adam                    7003616777    230000 62
```

Any

- The Oracle ANY operator is used to compare a value to a list of values or result set returned by a subquery.

- The ANY operator must be preceded by a comparison operator such as =, !=, >, >=,<, <=

- The list or subquery must be surrounded by the parentheses

Syntax

operator ANY (v1, v2, v3)

operator ANY (subquery)

```sql
SELECT *
FROM
    table_name
WHERE
    c > ANY (
        v1,
        v2,
        v3
    );
```

```sql
SELECT *
FROM
    table_name
WHERE
    c > v1
    OR c > v2
    OR c > v3;
```

```
SQL>  select first_name from stafff
  2    where salary > any(100,2000000,3000000);

FIRST_NAME
---------------------
ramesh
suresh
karuna
paul


        SQL>  select first_name from stafff
          2    where salary > any(select (salary) from stafff);

        FIRST_NAME
        ---------------------
        paul
        karuna
```

```
SQL>  select first_name from stafff
  2   where salary > any(select (salary) from stafff) and first_name like '%r%';

FIRST_NAME
--------------------
karuna
```

ALL

- operator ALL (v1, v2, v3)

- operator ALL (subquery)

- The ALL operator must be preceded by an comparison operator such as =, != >,>=, <, <= and followed by a list or subquery.

- The list or subquery must be surrounded by the parentheses.

```sql
SELECT
  *
FROM
  table_name
WHERE
  c > ALL (
    v1,
    v2,
    v3
  );
```

```sql
SELECT
  *
FROM
  table_name
WHERE
  c > v1
  AND c > v2
  AND c > v3;
```

```
SQL>  select first_name from stafff
  2   where salary > all(100,210000,30000);

FIRST_NAME
---------------------
karuna
paul
```
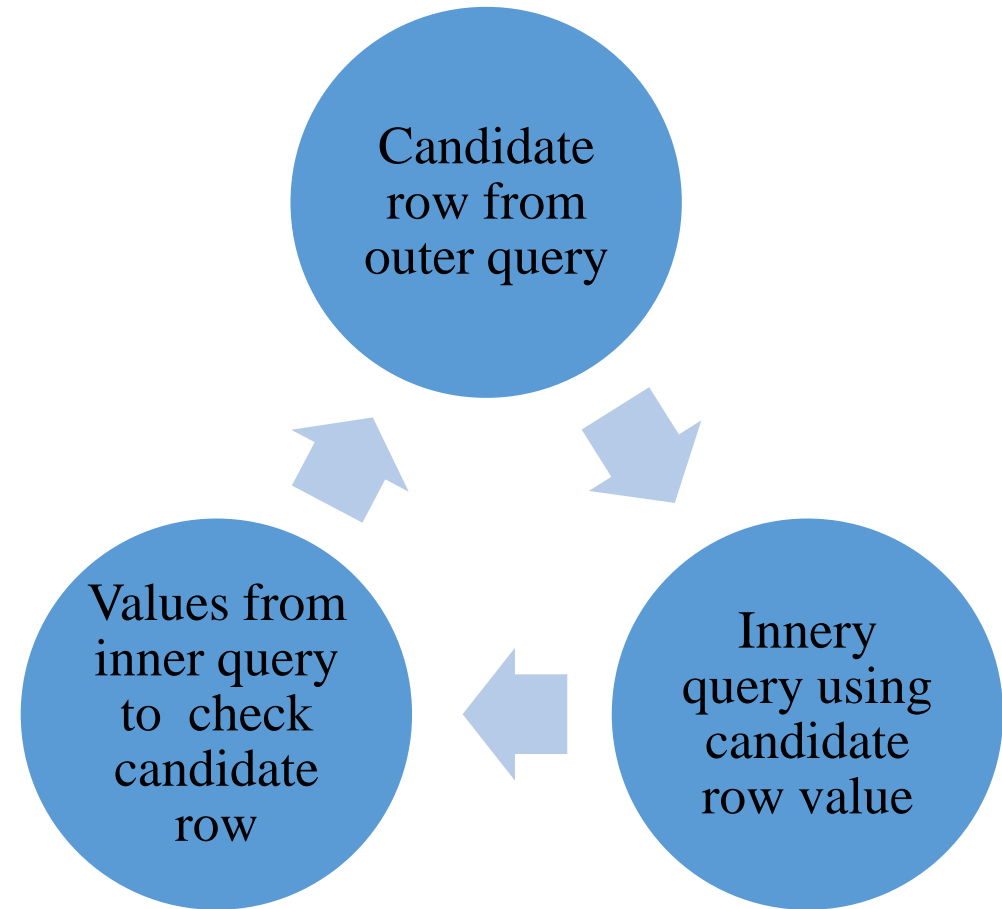
```
SQL>  select first_name from stafff
  2   where salary > all(select avg(salary)-10000 from stafff group by salary);

FIRST_NAME
---------------------
paul
```

Correlated subquery

• Each subquery is executed once for every row of the outer query.

Candidate row from outer query

Innery query using candidate row value

Values from inner query to check candidate row

```
SQL> select first_name, salary from stafff s
  2  where salary>(select avg(salary) from stafff
  3  where departmentid =s.departmentid)
  4  order by salary;

FIRST_NAME                        SALARY
------------------------- ----------
paul                              230000
```

Sub query in select clause

```
SQL> select first_name, (select avg(salary) from stafff s where s.departmentid=
  2  s1.departmentid) from stafff s1;

FIRST_NAME              (SELECTAVG(SALARY)FROMSTAFFFSWHERES.DEPARTMENTID=S1.DEPARTMENTID)
-------------------     -----------------------------------------------------------------
ramesh                                                                             210000
suresh                                                                             210000
karuna                                                                             225000
paul                                                                               225000
```

subquery in the FROM clause

- Inline view

a SELECT statement in the FROM-clause of another SELECT statement to create a temporary table that could be referenced by the SELECT statement

```
SQL> select  departmentid
  2  from( select departmentid FROM stafff where first_name like '%u%');

DEPARTMENTID
--------------------
61
62
62
```

Lab exercise:

- Find the senior most hod in institute (Without using Join).
- Find the course taught by senior most professor in Biology department
- Report department wise, the course that has maximum number of prerequisite
- Report faculty-wise average enrollments for course taught in all the semesters during 2002-2004
- What are the total enrollments in the course of the comp. sci. department in Even 2004.