2CS402 Database Management System

Practical 7	
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Aim : 1.To perform join operations
        2. Use set operators

Create one table department.

Dept_no	Dname	Location
30	ACCOUNTING	NEW YORK
60	RESEARCH	DALLAS
90	SALES	CHICAGO
110	MARKETING	BOSTON

SQL> create table
department(Dept_no number(3),Dname varchar2(15), Location varchar2(15));

Table created.

SQL> insert all
 2 into department values(30,'ACCOUNTING','NEW YORK')
 3 into department values(60,'RESEARCH','DALLAS')
 4 into department values(90,'SALES','CHICAGO')
 5 into department values(110,'MARKETING','BOSTON')
 6 select * from dual;

4 rows created.

   1) **Display the common jobs from department number 90 and 60.**

      SQL> select job_id from employees where department_id=90 intersect select job_id from employees where department_id=60;

      no rows selected

   2) **Display the unique jobs found in department number 90 and 60.**

SQL> (select job_id from employees where department_id=90 union select job_id from employees where department_id=60) minus (select job_id from employees where department_id=90 intersect select job_id from employees where department_id=60);

JOB_ID

FINANCE ACCOUNTANT
FINANCIAL MANAGER
IT PROG
PRESIDENT
VICE PRESIDENT

3) Display the jobs which are in dept no 90 but not in 30.

SQL> select job_id from employees where department_id=90 minus select job_id from employees where department_id=30;

JOB_ID

PRESIDENT
VICE PRESIDENT

4) Display those employees who are working in the same dept with their manager.

SQL> select employee_id,first_name,manager_id,department_id from employees e1 where department_id=(select department_id from employees e2 where e1.manager_id=e2.employee_id);

EMPLOYEE_ID	FIRST_NAME	MANAGER_ID	DEPARTMENT_ID
101	Neena	100	90
102	Lex	100	90
104	Bruce	103	60
105	David	103	60
106	Valli	103	60
119	Karen	114	30

6 rows selected.

SQL> select * from employees;

5) Display the name of the employees who are working as a Accountant or IT and joined the company before 31-dec-2014.

SQL> select employee_id,first_name,last_name from employees where (job_id like "%ACCOUNTANT" or job_id like 'IT%') and hire_date<'31-DEC-2014';

```
EMPLOYEE_ID FIRST_NAME           LAST_NAME
----------- -------------------- ------------------------
        105 David                Austin
        106 Valli                Pataballa
        206 William              Gietz
```

6) Display employee name, job, deptname, location for all, who are working as managers.

7) Display those employees whose manager names is 'Steven'.

SQL> select employee_id,first_name,manager_id from employees where manager_id=(select employee_id from employees where first_name='Steven');

```
EMPLOYEE_ID FIRST_NAME           MANAGER_ID
----------- -------------------- ----------
        101 Neena                       100
        102 Lex                         100
        114 Den                         100
```

8) Display emp number and salary of 'Steven' if his Sal is equal to highest Sal of his department.

SQL> select employee_id,first_name,salary from employees where salary= (select max(a.salary) from employees a,employees b where b.first_name='Steven' and a.department_id=b.department_id) and first_name='Steven;

```
EMPLOYEE_ID FIRST_NAME           SALARY
----------- -------------------- ----------
        100 Steven                24000
```

9) List employees who is not working as a 'CLERK' (Sort on salary).

SQL> select employee_id,first_name,salary from employees where job_id not like '%CLERK%' order by salary;

```
EMPLOYEE_ID FIRST_NAME           SALARY
----------- -------------------- ----------
```

```
106 Valli                4800
105 David                4800
104 Bruce                6000
206 William              8300
103 Alexander            9000
101 Neena               17000
102 Lex                 17000
100 Steven              24000
```

8 rows selected.

10) Display employees who are without manager.

SQL> select first_name ,employee_id, manager_id from employees where manager_id=NULL;

no rows selected

11) Display the name of those employees who are getting highest salary in the organization.

SQL> select employee_id,first_name,salary from employees where salary=(select max(salary) from employees);

```
EMPLOYEE_ID FIRST_NAME           SALARY
----------- -------------------- ----------
    100 Steven                   24000
```

12) Display the name of those employees who are getting second highest salary in the organization.

SQL> select employee_id,first_name from employees e1 where
(2-1)=(select count(distinct salary) from employees e2 where e2.salary>e1.salary);

```
EMPLOYEE_ID FIRST_NAME
----------- --------------------
    101 Neena
    102 Lex
```

13) Display those employees whose salary is equal to average of maximum and minimum.

SQL> select employee_id,first_name,salary from employees e1 where salary=(select avg(salary) from employees where salary=(select max(salary) from employees) and salary=(select min(salary) from employees));

no rows selected

14) Display the name of the department along with count of employees where count greater than 3.

SQL> select department_id,count(department_id) from employees group by department_id having count(employee_id)>3;

DEPARTMENT_ID COUNT(DEPARTMENT_ID)
------------- --------------------
          60   4

15) Display dname where at least 2 employees are working.

SQL> select dname from employees e,department d where department_id=dept_no group by e.department_id,dname having count(*)>=2 ;

DNAME

SALES
ACCOUNTING
RESEARCH

16) Display name of those managers whose salary is more than average salary of company.

SQL> select a.first_name,a.salary from employees a,employees b where a.salary>(select avg(salary) from employees) and a.employee_id=b.employee_id;

FIRST_NAME   SALARY
-------------------- ----------
Steven   24000
Neena   17000
Lex   17000
Den   11000

17) Find out the top 3 earner of company.

SQL> select employee_id,first_name,salary from employees e where 3>(select count(distinct salary) from employees where e.salary<salary);

```
EMPLOYEE_ID FIRST_NAME          SALARY
----------- ------------------- ----------
        100 Steven               24000
        101 Neena                17000
        102 Lex                  17000
        114 Den                  11000
```

18) Find out the last 3(least) earner of the company?

SQL> select employee_id,first_name,salary from employees e where 2>(select count(distinct salary) from employees where e.salary>salary) order by salary;

```
EMPLOYEE_ID FIRST_NAME          SALARY
----------- ------------------- ----------
        119 Karen                2500
        105 David                4800
        106 Valli                4800
```

19) Display employee name, his job, his dept name, his manager name, his sal and arrange it based on salary.

SQL> select e.first_name, e.job_id, dname, m.first_name, e.salary from (employees e inner join employees m on e.manager_id = m.employee_id) inner join department d on e.department_id= d.dept_no order by salary;

```
FIRST_NAME          JOB_ID                                  DNAME
FIRST_NAME          SALARY
------------------- --------------------------------------- -------------- ------------------- ----------
Karen               CLERK                                   Accounting     Den
2500
Valli               FINANCE ACCOUNTANT                      Research       Alexander
4800
David               IT PROG                                 Research       Alexander
4800
Bruce               FINANCIAL MANAGER                       Research       Alexander
6000
```

Alexander 9000	IT PROG	Research	Lex
Den 11000	SALES CLERK	Accounting	Steven
Neena 17000	VICE PRESIDENT	Sales	Steven
Lex 17000	VICE PRESIDENT	Sales	Steven
Steven 24000	PRESIDENT	Sales	Alexander

9 rows selected.

20)List the emps who are not working in sales dept.

SQL> select employee_id,first_name from employees e,department d where dname != 'SALES' and e.department_id=d.dept_no;

```
EMPLOYEE_ID FIRST_NAME
----------- --------------------
        119 Karen
        114 Den
        106 Valli
        105 David
        104 Bruce
        103 Alexander
        206 William
```

7 rows selected.

21)Find jobwise salary average.

SQL> select job_id,avg(salary) from employees group by job_id;

```
JOB_ID                          AVG(SALARY)
--------------------------------- -----------
FINANCE ACCOUNTANT                      4800
ACCOUNTANT                              8300
VICE PRESIDENT                         17000
IT PROG                                 6900
FINANCIAL MANAGER                       6000
SALES CLERK                            11000
CLERK                                   2500
PRESIDENT                              24000
```

8 rows selected.

22)Find the name of department taking maximum salary

SQL> select department_id,sum(salary) from employees group by department_id having sum(salary)=(select max(sum(salary)) from employees group by department_id);

DEPARTMENT_ID SUM(SALARY)
------------- -----------
90   58000

23)Find name of department taking minimum salary.

SQL> select department_id,sum(salary) from employees group by department_id having sum(salary)=(select min(sum(salary)) from employees group by department_id);

DEPARTMENT_ID SUM(SALARY)
------------- -----------
110   8300