21BDS0340

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Database Systems Lab

<div align="center">Assignment – V</div>

Exercise – V

1. Find the employee who is getting the highest salary in the research department

Command:
select f_name, m_name, l_name from employee_bds0340 where salary = (select max(salary) from employee_bds0340 e join department_bds0340 d on e.dept = d.num where d.name = 'Research');

Output:
```
SQL> select f_name, m_name, l_name from employee_bds0340 where salary = (select max(salary) from employee_bds0340 e join departm

F_NAME                  M L_NAME
----------------------- - -----------------------
Frankin                 T Wong
```

2. Find the employees who earn the same salary as the minimum salary for each department

Command:
select f_name, m_name, l_name from employee_bds0340 where salary in (select min(salary) from employee_bds0340 group by dept);

Output:
```
SQL> select f_name, m_name, l_name from employee_bds0340 where salary in (select min(salary) from employee_bds0340 group by dept

F_NAME                  M L_NAME
----------------------- - -----------------------
Doug                    E Glibert
Joyce                   Y Pan
Joyce                   A English
James                   E Borg
Alicia                  J Zelaya
Ahmad                   V Jabbar

6 rows selected.
```

3. Find the employee whose salary is greater than the average salary of department 2

Command:
select f_name, m_name, l_name from employee_bds0340 where salary > (select avg(salary) from employee_bds0340 where dept = 2);

Output:
```
SQL> select f_name, m_name, l_name from employee_bds0340 where salary > (select avg(salary) from employee_bds0340 where dept = 2

F_NAME                  M L_NAME
----------------------- - -----------------------
Doug                    E Glibert
```

4. List out all the department names with their individual employee strength

Command:
select d.name, count(e.f_name) from department_bds0340 d join employee_bds0340 e on d.num = e.dept group by d.name;

Output:
```
SQL> select d.name, count(e.f_name) from department_bds0340 d join employee_bds0340 e on d.num = e.dept group by d.name;

NAME                     COUNT(E.F_NAME)
------------------------ ---------------
Headquarter                            1
Administration                         1
Research                               4
Finance                                3
Manufacture                            1
```

5. Find out the department name having the highest employee strength

Command:
select name from department_bds0340 where num = (select dept from employee_bds0340 group by dept order by count(*) desc fetch first 1 row only);

Output:
```
SQL> select name from department_bds0340 where num = (select dept from employee_bds0340 group by dept order by count(*) desc fet

NAME
------------------------
Research
```

6. List out all the departments and average salary drawn by their employees

Command:
select d.name, avg(e.salary) from department_bds0340 d join employee_bds0340 e on d.num = e.dept group by d.name;

Output:
```
SQL> select d.name, avg(e.salary) from department_bds0340 d join employee_bds0340 e on d.num = e.dept group by d.name;

NAME                     AVG(E.SALARY)
------------------------ -------------
Headquarter                      80000
Administration                   70000
Research                         33250
Finance                          31000
Manufacture                      55000
```

7. Find the maximum salary for each department

Command:
select d.name, max(e.salary) from employee_bds0340 e join department_bds0340 d on e.dept = d.num group by d.name;

Output:

```
[SQL> select d.name, max(e.salary) from employee_bds0340 e join department_bds0340 d on e.dept = d.num group by d.name;

NAME                    MAX(E.SALARY)
----------------------- -------------
Headquarter                     80000
Administration                  70000
Research                        40000
Finance                         43000
Manufacture                     55000
```

8. Create a view to display the employee details who is working in IT department (IT does not exist, finding for Administration)

Command:
select e.* from employee_bds0340 e join department_bds0340 d on e.dept = d.num where d.name = 'Administration';

Output:

```
[SQL> select e.* from employee_bds0340 e join department_bds0340 d on e.dept = d.num where d.name = 'Administration';

F_NAME                  M L_NAME                       SSN BDAY               ADDRESS
----------------------- - ----------------------- ---------- ------------------ ----------------------------------------
Joyce                   Y Pan                     543216789 07-FEB-78          35 A 18 E, Salt lake City, UT
```

9. Create a logical table to store employee details who is getting salary more than 10000

Command:
create table high_salary_emp_bds0340(f_name varchar(25) not null, m_name varchar(1), l_name varchar(25) not null, ssn number(9) not null primary key, bday Date, address varchar(50), sex varchar(1) check (sex in ('M', 'F', 'm', 'f')), salary number(6) default 800, super_ssn number(9), dept number(1), constraint emp_sup_ssn_fk10 foreign key (super_ssn) references employee_bds0340 (ssn) on delete set null, constraint dept_fk10 foreign key (dept) references department_bds0340 (num) on delete cascade);

insert into high_salary_emp_bds0340 (f_name, m_name, l_name, ssn, bday, address, sex, salary, super_ssn, dept) select * from employee_bds0340 where salary > 10000;

select * from high_salary_emp_bds0340;

Output:

```
[SQL> create table high_salary_emp_bds0340( f_name varchar(25) not null,  m_name varchar(1),  l_name varchar(25) not null,  ssn n
(sex in ('M', 'F', 'm', 'f')),  salary number(6) default 800,  super_ssn number(9),  dept number(1), constraint emp_sup_ssn_fk10
int dept_fk10 foreign key (dept) references department_bds0340 (num) on delete cascade );

Table created.

[SQL> insert into high_salary_emp_bds0340 (f_name, m_name, l_name, ssn, bday, address, sex, salary, super_ssn, dept) select * fro

10 rows created.

[SQL> select * from high_salary_emp_bds0340;

F_NAME                  M L_NAME                       SSN BDAY               ADDRESS
----------------------- - ----------------------- ---------- ------------------ ----------------------------------------
Doug                    E Glibert                 554433221 09-JUN-60          11 S 59 E, Salt Lake City, UT
Joyce                   Y Pan                     543216789 07-FEB-78          35 A 18 E, Salt lake City, UT
Frankin                 T Wong                    333445555 08-DEC-45          638 Voss, Houston, TX
Jennifer                S Wallace                 987654321 20-JUN-31          291 Berry, Bellaire, TX
John                    B Smith                   123456789 09-JAN-55          731 Fondren, Houston, TX
Ramesh                  K Narayan                 666884444 15-SEP-52          975 Fire Oak, Humble, TX
Joyce                   A English                 453453453 31-JUL-62          5631 Rice, Houston, TX
James                   E Borg                    888665555 10-NOV-27          450 Stone, Houston, TX
Alicia                  J Zelaya                  999887777 19-JUL-58          3321 Castle, Spring, TX
Ahmad                   V Jabbar                  987987987 29-MAR-59          980 Dallas, Houston, TX

10 rows selected.
```

10. Create a table to store the employee details based on department number

Command:
create table dept_bds0340(f_name varchar(25) not null, m_name varchar(1), l_name varchar(25) not null, ssn number(9) not null primary key, bday Date, address varchar(50), sex varchar(1), salary number(6) default 800, super_ssn number(9), dept_name varchar(15));

insert into dept_bds0340(f_name, m_name, l_name, ssn, bday, address, sex, salary, super_ssn, dept_name) select e.f_name, e.m_name, e.l_name, e.ssn, e.bday, e.address, e.sex, e.salary, e.super_ssn, d.name from employee_bds0340 e join department_bds0340 d on e.dept = d.num;

select * from dept_bds0340;

Output:
```
SQL> insert into dept_bds0340(f_name, m_name, l_name, ssn, bday, address, sex, salary, super_ssn, dept_name) select e.f_name, e.m_name, e.l_name, e.ssn, e.bday, e.address, e.s
employee_bds0340 e join department_bds0340 d on e.dept = d.num;

10 rows created.

SQL> select * from dept_bds0340;

F_NAME                    M L_NAME                      SSN BDAY       ADDRESS                                            S    SALARY SUPER_SSN DEPT_NAME
------------------------- - ------------------------- --------- --------- -------------------------------------------------- - ---------- --------- ---------------
Doug                      E Glibert                 554433221 09-JUN-60 11 S 59 E, Salt Lake City, UT                     M     80000           Headquarter
Joyce                     Y Pan                     543216789 07-FEB-78 35 A 18 E, Salt lake City, UT                     F     70000           Administration
Frankin                   T Wong                    333445555 08-DEC-45 638 Voss, Houston, TX                             M     40000 554433221 Research
Jennifer                  S Wallace                 987654321 20-JUN-31 291 Berry, Bellaire, TX                           F     43000 554433221 Finance
John                      B Smith                   123456789 09-JAN-55 731 Fondren, Houston, TX                          M     30000 333445555 Research
Ramesh                    K Narayan                 666884444 15-SEP-52 975 Fire Oak, Humble, TX                          M     38000 333445555 Research
Joyce                     A English                 453453453 31-JUL-62 5631 Rice, Houston, TX                            F     25000 333445555 Research
James                     E Borg                    888665555 10-NOV-27 450 Stone, Houston, TX                            M     55000 543216789 Manufacture
Alicia                    J Zelaya                  999887777 19-JUL-58 3321 Castle, Spring, TX                           F     25000 987654321 Finance
Ahmad                     V Jabbar                  987987987 29-MAR-59 980 Dallas, Houston, TX                           M     25000 987654321 Finance

10 rows selected.
```