

1. WAQ to display second highest salary in HR schema.

Different ways to display second highest are:

select MAX(salary) AS salary from employees where salary < (select Max(salary) from employees);

select salary from employees GROUP BY salary order by salary DESC limit 1 OFFSET 1;

select salary from employees order by salary DESC limit 1 OFFSET 1;

```
SQL Developer
SQL> select MAX(salary) AS salary from employees where salary < (select Max(salary) from employees);
      salary
-----
17000.00
(1 row)

SQL> select MAX(salary) from employees group by salary LIMIT 1,1;
ERROR: LIMIT #,# syntax is not supported
LINE 1: select MAX(salary) from employees group by salary limit 1,1;
          ^
HINT: the separate LIMIT and OFFSET clauses.
SQL> select MAX(salary) from employees order by salary DESC LIMIT 1,1;
      salary
-----
17000.00
(1 row)
ERROR: LIMIT #,# syntax is not supported
LINE 1: ... MAX(salary) from employees order by salary DESC limit 1,1;
          ^
HINT: the separate LIMIT and OFFSET clauses.
SQL> select MAX(salary) from employees order by salary DESC limit 1, OFFSET 1;
      salary
-----
17000.00
(1 row)
ERROR: syntax error at or near "OFFSET"
LINE 1: ... salary) from employees order by salary DESC limit 1, OFFSET 1;
          ^
SQL> select MAX(salary) from employees order by salary DESC limit 1 OFFSET 1;
      salary
-----
17000.00
(1 row)
ERROR: column "employees.salary" does not exist
LINE 1: select MAX(salary) from employees order by salary DESC limit...
          ^
SQL> select salary from employees GROUP BY salary order by salary DESC limit 1 OFFSET 1;
      salary
-----
17000.00
(1 row)

SQL> select salary from employees order by salary DESC limit 1 OFFSET 1;
      salary
-----
17000.00
(1 row)

SQL> select e.first_name, d.department_name, max(salary) highest_salary from employees e, department d where e.department_id = d.department_id group by department_id having max(salary);
ERROR: relation "department" does not exist
LINE 1: ...max, max(salary) highest_salary from employees e, department...
                  ^
```

2. WAQ to display name of employee who is earning maximum in his/her department.

select first_name, department_id, salary from employees e where salary = (select max(salary) from employees where department_id = e.department_id);

```
SQL Developer
SQL> select first_name, department_id, salary from employees e where salary = (select max(salary) from employees where department_id = e.department_id);
first_name | department_id | salary
-----
Vernon     | 10             | 24000.00
Alexander  | 60             | 9000.00
Baer       | 30             | 12000.00
Doe        | 20             | 11000.00
Abaa       | 50             | 8100.00
Tjoe       | 80             | 10000.00
Gonzalez   | 10             | 4420.00
Hillman    | 20             | 23000.00
Neenan     | 40             | 6100.00
Hermann    | 20             | 10000.00
Mullins    | 10             | 13000.00
(11 rows)

SQL>
```

3. WAQ to display employees count who are working from same location.

```
select l.city, count(employee_id) from employees e, departments d, locations l where  
e.department_id = d.department_id and d.location_id = l.location_id group by city;
```

```
postgres# select l.city, count(employee_id) from employees e, departments d, locations l where e.department_id = d.department_id and d.location_id = l.location_id group by city;
```

city	count
Austin	6
London	1
South San Francisco	80
Toronto	2
Seattle	10
Sanford	98
Swiss	1
(7 rows)	

```
postgres#
```

4. WAQ to display number of employees joined year wise.

```
select to_char(hire_date, 'yyyy'), count(employee_id) from employees group by  
to_char(hire_date, 'yyyy');
```

```
postgres# select to_char(hire_date, 'yyyy'), count(employee_id) from employees group by to_char(hire_date, 'yyyy');
```

to_char	count
1995	10
1996	1
1999	11
1994	7
1987	2
1993	1
1997	28
1981	1
1989	1
1988	33
1995	4
1999	18
(12 rows)	

```
postgres#
```

5. WAQ to print top 2 earning employee name and salary in each department.

```
select e.first_name, d.department_name, e.salary from employees e inner join  
department d on e.department_id = d.id where (department_id, salary) in (select  
department_id, max(salary) from employees AND salary < (select Max(salary) from  
employees) group by department_id);
```