

**CSE370**  
**LAB ASSIGNMENT 03**

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ID : 21101048  
SECTION : 06  
DATE : Feb 27, 2022

## TABLE -

```
MariaDB [CSE370]> select * from employees;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| employee_id | first_name | last_name | email                | phone_number | hire_date | job_id | salary | commission_pct | manager_id | department_id |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EMP001      | Taylor    | Otwell    | otwell@laravel.com   | 01856238341  | 2020-06-10 | J08001 | 150000 | 32.222         | MNG001     | DPT001        |
| EMP002      | Ryan      | Dhal      | ryan@laravel.com     | 01836533331  | 2020-04-22 | J08002 | 160000 | 55.500         | MNG001     | DPT001        |
| EMP003      | Brendan   | Eich      | eich@laravel.com     | 01333536631  | 2020-05-07 | J08001 | 135000 | 24.500         | MNG002     | DPT001        |
| EMP004      | Evan      | You       | you@laravel.com      | 01733536222  | 2020-06-11 | J08002 | 166000 | 51.500         | MNG002     | DPT001        |
| EMP005      | Rasmus    | Lerdorf   | Rasmus@laravel.com   | 01733536232  | 2020-06-03 | J08003 | 186000 | 77.500         | MNG003     | DPT005        |
| EMP006      | Emmy      | Rossum    | Rossum@laravel.com   | 01774536232  | 2020-07-18 | J08003 | 185000 | 73.500         | MNG003     | DPT005        |
| EMP007      | Walter    | White     | White@laravel.com    | 01774556232  | 2020-04-25 | J08004 | 256000 | 25.500         | MNG004     | DPT007        |
| EMP008      | Jesse     | Pinkman   | Pinkman@laravel.com  | 01774556233  | 2020-05-25 | J08004 | 240000 | 15.500         | MNG004     | DPT007        |
| EMP009      | Pablo     | Escobar   | Escobar@laravel.com  | 01774556236  | 2021-04-15 | J08004 | 556000 | 37.500         | MNG004     | DPT007        |
| EMP010      | Eren      | Yeager    | Yeager@laravel.com   | 01774556632  | 2022-09-15 | J08002 | 735000 | 50.000         | MNG002     | DPT001        |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.001 sec)

MariaDB [CSE370]> 
```

**Question - 01** : Find the **first\_name**, **last\_name**, **email**, **phone\_number**, **hire\_date** and **department\_id** of all the employees with the latest **hire\_date**.

**Query** : select first\_name, last\_name, email, phone\_number, hire\_date, department\_id from employees where hire\_date=(select max(hire\_date) from employees);

```
MariaDB [CSE370]> select first_name, last_name, email, phone_number, hire_date, department_id from employees where hire_date=(select max(hire_date) from employees);
+-----+-----+-----+-----+-----+-----+
| first_name | last_name | email                | phone_number | hire_date | department_id |
+-----+-----+-----+-----+-----+-----+
| Eren       | Yeager    | Yeager@laravel.com   | 01774556632  | 2022-09-15 | DPT001        |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

**Question - 02** : Find the **first\_name**, **last\_name**, **employee\_id**, **phone\_number**, **salary** and **department\_id** of all the employees with the lowest **salary** in each department.

**Query** : SELECT first\_name, last\_name, email, phone\_number, MIN(salary), department\_id FROM employees GROUP BY department\_id;

```
MariaDB [CSE370]> SELECT first_name, last_name, email, phone_number, MIN(salary), department_id FROM employees GROUP BY department_id;
```

first_name	last_name	email	phone_number	MIN(salary)	department_id
Taylor	Otwell	otwell@laravel.com	01856238341	135000	DPT001
Rasmus	Lerdorf	Rasmus@laravel.com	01733536232	185000	DPT005
Walter	White	White@laravel.com	01774556232	240000	DPT007

```
3 rows in set (0.001 sec)
```

**Question - 03 :** Find the ***first\_name, last\_name, employee\_id, commission\_pct and department\_id*** of all the employees in the department 'DPT007' who have a lower commission\_pct than all of the employees of the department 'DPT005'.

**Query:** select first\_name, last\_name, employee\_id, commission\_pct, department\_id from employees where department\_id = 'DPT007' and commission\_pct < all(select commission\_pct from employees where department\_id = 'DPT005');

```
MariaDB [CSE370]> select first_name, last_name, employee_id, commission_pct, department_id from employees where department_id = 'DPT007' and commission_pct < all(select commission_pct from employees where department_id = 'DPT005');
```

first_name	last_name	employee_id	commission_pct	department_id
Walter	White	EMP007	25.500	DPT007
Jesse	Pinkman	EMP008	15.500	DPT007
Pablo	Escobar	EMP009	37.500	DPT007

```
3 rows in set (0.001 sec)
```

**Question - 04 :** Find the ***department\_id*** and total number of employees of each department which does not have a single employee under it with a **salary** more than 30,000.

**Query :** select distinct department\_id, count(\*) as total\_Employees from employees where salary < 30000 group by department\_id;

```
MariaDB [CSE370]> select distinct department_id, count(*) as total_Employees from employees where salary < 30000 group by department_id;
```

Empty set (0.001 sec)

**Question - 05** : For each of the departments, find the **department\_id**, **job\_id** and **commission\_pct** with **commission\_pct** less than at least one other **job\_id** in that department.

**Query** : select department\_id, job\_id, commission\_pct from employees L1 where exists(select \* from employees L2 where L1.department\_id=L2.department\_id and L1.job\_id != L2.job\_id and L1.commission\_pct < L2.commission\_pct);

```
MariaDB [CSE370]> select department_id, job_id, commission_pct from employees L1 where exists(select * from employees L2 where L1.department_id=L2.department_id and
+-----+-----+-----+
| department_id | job_id | commission_pct |
+-----+-----+-----+
| DPT001        | JOB001 | 32.222         |
| DPT001        | JOB001 | 24.500         |
+-----+-----+-----+
2 rows in set (0.002 sec)
```

**Question - 06** : Find the **manager\_id** who does not have any employee under them with a **salary** less than 3500.

**Query** : select distinct manager\_id from employees where salary > 3500;

```
MariaDB [CSE370]> select distinct manager_id from employees where salary > 3500;
+-----+
| manager_id |
+-----+
| MNG001     |
| MNG002     |
| MNG003     |
| MNG004     |
+-----+
4 rows in set (0.001 sec)
```

**Question - 06** : Find the **first\_name**, **last\_name**, **employee\_id**, **email**, **salary**, **department\_id** and **commission\_pct** of the employee who has the lowest **commission\_pct** under each manager.

**Query** : select first\_name, last\_name, employee\_id, email, salary, department\_id, commission\_pct from employees where (manager\_id,

commission\_pct) in (select manager\_id, min(commission\_pct) from employees group by manager\_id);

```
MariaDB [CSE370]> select first_name, last_name, employee_id, email, salary, department_id, commission_pct from employees where (manager_id, commission_pct)
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email                | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| Taylor     | Otwell    | EMP001      | otwell@laravel.com  | 150000 | DPT001        | 32.222         |
| Brendan    | Eich      | EMP003      | eich@laravel.com    | 135000 | DPT001        | 24.500         |
| Emmy       | Rossum    | EMP006      | Rossum@laravel.com  | 185000 | DPT005        | 73.500         |
| Jesse      | Pinkman   | EMP008      | Pinkman@laravel.com | 240000 | DPT007        | 15.500         |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.002 sec)
```