

Cse370 Lab Assignment 03

Deadline: 10-07-2023 11:59 pm

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Sec-06

```
mysql -u root -p
show databases;
use the_office;
show tables;
create table employees
(
employee_id char(10),
first_name varchar(20),
last_name varchar(20),
email varchar(60),
phone_number char(14),
hire_date date,
job_id char(10),
salary int,
commission_pct decimal(5,3),
manager_id char(10),
department_id char(10)
);
```

describe employees;

```
MariaDB [the_office]> describe employees;
```

Field	Type	Null	Key	Default	Extra
employee_id	char(10)	YES		NULL	
first_name	varchar(20)	YES		NULL	
last_name	varchar(20)	YES		NULL	
email	varchar(60)	YES		NULL	
phone_number	char(14)	YES		NULL	
hire_date	date	YES		NULL	
job_id	char(10)	YES		NULL	
salary	int(11)	YES		NULL	
commission_pct	decimal(5,3)	YES		NULL	
manager_id	char(10)	YES		NULL	
department_id	char(10)	YES		NULL	

11 rows in set (0.019 sec)

INSERT INTO employees VALUES

('EMP001', 'Michael', 'Scott', 'michael.scott11@gmail.com', '01812345678', '1999-09-20', 'JOB001', 1000, 5.125, 'MNG001', 'DPT001'),

('EMP002', 'Jim', 'Harper', 'jim.harper12@gmail.com', '01712345678', '2004-09-30', 'JOB002', 15000, 4.125, 'MNG002', 'DPT007'),

('EMP003', 'Pam', 'Beesly', 'pam.beesly13@gmail.com', '01912345678', '2003-09-30', 'JOB003', 2500, 3.125, 'MNG003', 'DPT003'),

('EMP004', 'Angela', 'Martin', 'angela.martin14@gmail.com', '01512345678', '2005-09-28', 'JOB004', 65000, 2.125, 'MNG004', 'DPT002'),

('EMP005', 'Dwight', 'Shrute', 'dwight.shrute15@gmail.com', '01612345678', '2003-09-30', 'JOB005', 3500, 1.125, 'MNG005', 'DPT007'),

('EMP006', 'Kelly', 'Kapoor', 'kelly.kapoor16@gmail.com', '01412345678', '2003-09-30', 'JOB006', 20000, 6.125, 'MNG006', 'DPT006'),

('EMP007', 'Andrew', 'Bernard', 'andrew.bernard17@gmail.com', '01312345678', '2007-05-10', 'JOB007', 50000, 7.125, 'MNG007', 'DPT004'),

('EMP008', 'Kevin', 'Malone', 'kevin.malone18@gmail.com', '01212345678', '2004-10-30', 'JOB008', 12500, 8.125, 'MNG008', 'DPT005'),

('EMP009', 'Toby', 'Flender', 'toby.flender19@gmail.com', '01832345678', '2004-09-30', 'JOB009', 1750, 9.125, 'MNG009', 'DPT007'),

('EMP010', 'Phyllis', 'Vance', 'phyllis.vance20@gmail.com', '01732345678', '1999-09-20', 'JOB010', 61000, 6.625, 'MNG010', 'DPT005'),

('EMP011', 'Creed', 'Bratton', 'creed.bratton21@gmail.com', '01932345678', '1980-06-01', 'JOB011', 2250, 5.625, 'MNG011', 'DPT004');

Select * from employees;

```
MariaDB [the_office]> Select * from employees;
```

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
EMP001	Michael	Scott	michael.scott11@gmail.com	01812345678	1999-09-20	JOB001	1000	5.125	MNG001	DPT001
EMP002	Jim	Harper	jim.harper12@gmail.com	01712345678	2004-09-30	JOB002	15000	4.125	MNG002	DPT007
EMP003	Pam	Beesly	pam.beesly13@gmail.com	01912345678	2003-09-30	JOB003	2500	3.125	MNG003	DPT003
EMP004	Angela	Martin	angela.martin14@gmail.com	01512345678	2005-09-28	JOB004	65000	2.125	MNG004	DPT002
EMP005	Dwight	Shrute	dwright.shrute15@gmail.com	01612345678	2003-09-30	JOB005	3500	1.125	MNG005	DPT007
EMP006	Kelly	Kapoor	kelly.kapoor16@gmail.com	01412345678	2003-09-30	JOB006	20000	6.125	MNG006	DPT006
EMP007	Andrew	Bernard	andrew.bernard17@gmail.com	01312345678	2007-05-10	JOB007	50000	7.125	MNG007	DPT004
EMP008	Kevin	Malone	kevin.malone18@gmail.com	01212345678	2004-10-30	JOB008	12500	8.125	MNG008	DPT005
EMP009	Toby	Flender	toby.flender19@gmail.com	01832345678	2004-09-30	JOB009	1750	9.125	MNG009	DPT007
EMP010	Phyllis	Vance	phyllis.vance20@gmail.com	01732345678	1999-09-20	JOB010	61000	6.625	MNG010	DPT005
EMP011	Creed	Bratton	creed.bratton21@gmail.com	01932345678	1980-06-01	JOB011	2250	5.625	MNG011	DPT004

11 rows in set (0.001 sec)

1.

Select first_name, last_name, email, phone_number, hire_date, department_id from employees where hire_date = (select max(hire_date) from employees);

```
MariaDB [the_office]> 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
Andrew	Bernard	andrew.bernard17@gmail.com	01312345678	2007-05-10	DPT004

1 row in set (0.001 sec)

2.

Select first_name, last_name, employee_id, phone_number, salary as lowest_salary, department_id from employees group by department_id having min(salary);

```
MariaDB [the_office]> Select first_name, last_name, employee_id, phone_number, salary as lowest_salary, department_id from employees group by department_id having min(salary);
```

first_name	last_name	employee_id	phone_number	lowest_salary	department_id
Michael	Scott	EMP001	01812345678	1000	DPT001
Angela	Martin	EMP004	01512345678	65000	DPT002
Pam	Beesly	EMP003	01912345678	2500	DPT003
Andrew	Bernard	EMP007	01312345678	50000	DPT004
Kevin	Malone	EMP008	01212345678	12500	DPT005
Kelly	Kapoor	EMP006	01412345678	20000	DPT006
Jim	Harper	EMP002	01712345678	15000	DPT007

7 rows in set (0.000 sec)

3.

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 [the_office]> 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 |
+-----+-----+-----+-----+-----+
| Jim       | Harper   | EMP002     | 4.125          | DPT007        |
| Dwight    | Shrute    | EMP005     | 1.125          | DPT007        |
+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

4.

Select distinct department_id, count(*) as sum_employees from employees where salary < 30000 group by department_id;

```
MariaDB [the_office]> Select distinct department_id, count(*) as sum_employees from employees
where salary < 30000 group by department_id;
+-----+-----+
| department_id | sum_employees |
+-----+-----+
| DPT001        | 1             |
| DPT003        | 1             |
| DPT004        | 1             |
| DPT005        | 1             |
| DPT006        | 1             |
| DPT007        | 3             |
+-----+-----+
5 rows in set (0.001 sec)
```

5.

Select department_id,job_id,commission_pct from employees E1 where not exists (select * from employees E2 where E1.department_id = E2.department_id and E1.job_id != E2.job_id and E1.commission_pct > E2.commission_pct) group by department_id;

```
MariaDB [the_office]> Select department_id,job_id,commission_pct from employees E1 where not
exists (select * from employees E2 where E1.department_id = E2.department_id and E1.job_id !=
E2.job_id and E1.commission_pct > E2.commission_pct) group by department_id;
+-----+-----+-----+
| department_id | job_id | commission_pct |
+-----+-----+-----+
| DPT001        | JOB001 | 5.125          |
| DPT002        | JOB004 | 2.125          |
| DPT003        | JOB003 | 3.125          |
| DPT004        | JOB011 | 5.625          |
| DPT005        | JOB010 | 6.625          |
| DPT006        | JOB006 | 6.125          |
| DPT007        | JOB005 | 1.125          |
+-----+-----+-----+
7 rows in set (0.001 sec)
```

6.

Select manager_id from employees where salary >= 3500;

```
MariaDB [the_office]> Select manager_id from employees where salary >= 3500;
+-----+
| manager_id |
+-----+
| MNG002      |
| MNG004      |
| MNG005      |
| MNG006      |
| MNG007      |
| MNG008      |
| MNG010      |
+-----+
7 rows in set (0.000 sec)
```

7.

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 [the_office]> 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);
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| Michael | Scott | EMP001 | michael.scott11@gmail.com | 1000 | DPT001 | 5.125 |
| Jim | Harper | EMP002 | jim.harper12@gmail.com | 15000 | DPT007 | 4.125 |
| Pam | Beesly | EMP003 | pam.beesly13@gmail.com | 2500 | DPT003 | 3.125 |
| Angela | Martin | EMP004 | angela.martin14@gmail.com | 65000 | DPT002 | 2.125 |
| Dwight | Shrute | EMP005 | dwight.shrute15@gmail.com | 3500 | DPT007 | 1.125 |
| Kelly | Kapoor | EMP006 | kelly.kapoor16@gmail.com | 20000 | DPT006 | 6.125 |
| Andrew | Bernard | EMP007 | andrew.bernard17@gmail.com | 50000 | DPT004 | 7.125 |
| Kevin | Malone | EMP008 | kevin.malone18@gmail.com | 12500 | DPT005 | 8.125 |
| Toby | Flender | EMP009 | toby.flender19@gmail.com | 1750 | DPT007 | 9.125 |
| Phyllis | Vance | EMP010 | phyllis.vance20@gmail.com | 61000 | DPT005 | 6.625 |
| Creed | Bratton | EMP011 | creed.bratton21@gmail.com | 2250 | DPT004 | 5.625 |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.001 sec)
```