

## HomeWork-03

Name: Mutasim Fouad Showmik

ID: 21101052

Section: 07

```
# mysql -u root -p
# create database lab3;
# use lab3;
# 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;

```
Setting environment for using XAMPP for Windows.
User@MSI e:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.4.27-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database lab3;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> use lab3;
Database changed
MariaDB [lab3]> 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));
Query OK, 0 rows affected (0.503 sec)

MariaDB [lab3]> 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 (0.036 sec)
```

```
# insert into employees values("EMP001", "Nargis", "Chowdhury", "nargis.chowdhury@yahoo.com",
"+8801456789365", "2001-02-02", "JOB001", 36000, 11.365, "MNG001", "DPT001"), ("EMP003", "Nargis",
"Chowdhury", "nargis.chowdhury@yahoo.com", "+8801456789365", "2001-02-02", "JOB003", 36000,
11.365, "MNG003", "DPT003"), ("EMP005", "John",
"Wick", "johnwick_killer@gmail.com", "+8805693256984", "2003-10-23", "JOB005", 39000, 14.365,
"MNG005", "DPT005"), ("EMP002", "Salhea", "Khatun", "saleha.khtun@hotmail.com",
"+8805986320142", "2003-11-24", "JOB002", 36500, 12.310, "MNG002", "DPT002"), ("EMP008",
"Chadwick", "Boseman", "chadwick143@gmail.com", "+8809856698912", "2006-09-
12", "JOB008", 23900, 13.256, "MNG008", "DPT008"), ("EMP009", "Arfanul",
"Islam", "arfa456@gmail.com", "+8807536985220", "2009-09-28", "JOB009", 45000, 15.012,
"MNG009", "DPT008"), ("EMP010", "Arya", "Starck", "aryaaaaaa999@yahoo.com",
```

```
" +8805125698745", "2010-06-08", "JOB010", 45010, 16.399, "MNG010", "DPT001"), ("EMP011", "Sadiya",
"Khan", "sadiya420@gmail.com", "+8807598412223", "2010-08-21", "JOB011", 42020, 17.365,
"MNG011", "DPT005"), ("EMP012", "Tom", "Holland", "tommy34567@gmail.com",
"+8808459874569", "2011-02-02", "JOB012", 3400, 13.204, "MNG012", "DPT003"), ("EMP013", "Shakib",
"Khan", "sakib696@gmail.com", "+8806985412547", "2012-03-26", "JOB013", 98562, 16.365,
"MNG013", "DPT012"), ("EMP014", "Elizabeth", "Olsen", "elzauuuu56@yahoo.com", "+8802369985412",
"2012-03-27", "JOB014", 3000, 13.200, "MNG014", "DPT002");
```

```
# select*from employees;
```

```
MariaDB [lab3]> insert into employees values("EMP001", "Nargis", "Chowdhury", "nargis.chowdhury@yahoo.com", "+8801456789365", "2001-02-02", "JOB001", 36000, 11.365, "MNG001", "DPT001"), ("EMP003", "Nargis", "Chowdhury", "nargis.chowdhury@yahoo.com", "+8801456789365", "2001-02-02", "JOB003", 36000, 11.365, "MNG003", "DPT003"), ("EMP005", "John", "Wick", "johnwick.killer@gmail.com", "+8805693256984", "2003-10-23", "JOB005", 39000, 14.365, "MNG005", "DPT005"), ("EMP002", "Salhea", "Khatun", "saleha.khatun@hotmail.com", "+8805986320142", "2003-11-24", "JOB002", 36500, 12.310, "MNG002", "DPT002"), ("EMP008", "Chadwick", "Boseman", "chadwick143@gmail.com", "+8809856698912", "2006-09-12", "JOB008", 23900, 13.256, "MNG008", "DPT008"), ("EMP009", "Arfanul", "Islam", "arfa456@gmail.com", "+8807536985220", "2009-09-28", "JOB009", 45000, 15.012, "MNG009", "DPT009"), ("EMP010", "Arya", "Starck", "aryaaaaaa999@yahoo.com", "+8805125698745", "2010-06-08", "JOB010", 45010, 16.399, "MNG010", "DPT001"), ("EMP011", "Sadiya", "Khan", "sadiya420@gmail.com", "+8807598412223", "2010-08-21", "JOB011", 42020, 17.365, "MNG011", "DPT005"), ("EMP012", "Tom", "Holland", "tommy34567@gmail.com", "+8808459874569", "2011-02-02", "JOB012", 3400, 13.204, "MNG012", "DPT003"), ("EMP013", "Shakib", "Khan", "sakib696@gmail.com", "+8806985412547", "2012-03-26", "JOB013", 98562, 16.365, "MNG013", "DPT012"), ("EMP014", "Elizabeth", "Olsen", "elzauuuu56@yahoo.com", "+8802369985412", "2012-03-27", "JOB014", 3000, 13.200, "MNG014", "DPT002");
Query OK, 11 rows affected (0.434 sec)
Records: 11 Duplicates: 0 Warnings: 0

MariaDB [lab3]> select*from employees;
```

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
EMP001	Nargis	Chowdhury	nargis.chowdhury@yahoo.com	+8801456789365	2001-02-02	JOB001	36000	11.365	MNG001	DPT001
EMP003	Nargis	Chowdhury	nargis.chowdhury@yahoo.com	+8801456789365	2001-02-02	JOB003	36000	11.365	MNG003	DPT003
EMP005	John	Wick	johnwick.killer@gmail.com	+8805693256984	2003-10-23	JOB005	39000	14.365	MNG005	DPT005
EMP002	Salhea	Khatun	saleha.khatun@hotmail.com	+8805986320142	2003-11-24	JOB002	36500	12.310	MNG002	DPT002
EMP008	Chadwick	Boseman	chadwick143@gmail.com	+8809856698912	2006-09-12	JOB008	23900	13.256	MNG008	DPT008
EMP009	Arfanul	Islam	arfa456@gmail.com	+8807536985220	2009-09-28	JOB009	45000	15.012	MNG009	DPT009
EMP010	Arya	Starck	aryaaaaaa999@yahoo.com	+8805125698745	2010-06-08	JOB010	45010	16.399	MNG010	DPT001
EMP011	Sadiya	Khan	sadiya420@gmail.com	+8807598412223	2010-08-21	JOB011	42020	17.365	MNG011	DPT005
EMP012	Tom	Holland	tommy34567@gmail.com	+8808459874569	2011-02-02	JOB012	3400	13.204	MNG012	DPT003
EMP013	Shakib	Khan	sakib696@gmail.com	+8806985412547	2012-03-26	JOB013	98562	16.365	MNG013	DPT012
EMP014	Elizabeth	Olsen	elzauuuu56@yahoo.com	+8802369985412	2012-03-27	JOB014	3000	13.200	MNG014	DPT002

```
11 rows in set (0.000 sec)
```

```
#Task-01
```

```
# select first_name, last_name, email, phone_number, hire_date, department_id from
employees order by hire_date desc;
```

```
MariaDB [lab3]> select first_name, last_name, email, phone_number, hire_date, department_id from employees order by hire_date desc;
```

first_name	last_name	email	phone_number	hire_date	department_id
Elizabeth	Olsen	elzauuuu56@yahoo.com	+8802369985412	2012-03-27	DPT002
Shakib	Khan	sakib696@gmail.com	+8806985412547	2012-03-26	DPT012
Tom	Holland	tommy34567@gmail.com	+8808459874569	2011-02-02	DPT003
Sadiya	Khan	sadiya420@gmail.com	+8807598412223	2010-08-21	DPT005
Arya	Starck	aryaaaaaa999@yahoo.com	+8805125698745	2010-06-08	DPT001
Arfanul	Islam	arfa456@gmail.com	+8807536985220	2009-09-28	DPT008
Chadwick	Boseman	chadwick143@gmail.com	+8809856698912	2006-09-12	DPT008
Salhea	Khatun	saleha.khatun@hotmail.com	+8805986320142	2003-11-24	DPT002
John	Wick	johnwick.killer@gmail.com	+8805693256984	2003-10-23	DPT005
Nargis	Chowdhury	nargis.chowdhury@yahoo.com	+8801456789365	2001-02-02	DPT003
Nargis	Chowdhury	nargis.chowdhury@yahoo.com	+8801456789365	2001-02-02	DPT001

```
#Task-02
```

```
# select first_name, last_name, employee_id, phone_number, min(salary) as salary,  
department_id from employees group by department_id;
```

```
MariaDB [lab3]> select first_name, last_name, employee_id, phone_number, min(salary) as salary, department_id from employees group by department_id;
```

first_name	last_name	employee_id	phone_number	salary	department_id
Nargis	Chowdhury	EMP001	+8801456789365	36000	DPT001
Salhea	Khatun	EMP002	+8805986320142	3000	DPT002
Nargis	Chowdhury	EMP003	+8801456789365	3400	DPT003
John	Wick	EMP005	+8805693256984	39000	DPT005
Chadwick	Boseman	EMP008	+8809856698912	23900	DPT008
Shakib	Khan	EMP013	+8806985412547	98562	DPT012

### # Task-03

```
#select first_name, last_name, employee_id, commission_pct, department_id from employees  
where department_id='DPT007' and commission_pct<any(select commission_pct from  
employees where department_id='DPT005');
```

```
MariaDB [lab3]> select first_name, last_name, employee_id, commission_pct, department_id from employees where department_id='DPT007' and commission_pct<any(select commission_pct from employees where department_id='DPT005');
```

Empty set (0.001 sec)

### #Task-04

```
#select department_id, count(department_id) as count from employees l1 where not  
exists(select department_id, salary from employees l2 where  
l1.department_id=l2.department_id and salary>30000)group by department_id;
```

```
MariaDB [lab3]> select department_id, count(department_id) as count from employees l1 where not exists(select department_id, salary from employees l2 where l1.department_id=l2.department_id and salary>30000)group by department_id;
```

Empty set (0.310 sec)

### #Task-05

```
select department_id, job_id, commission_pct from employees p1 where exists(select  
department_id, commission_pct from employees p2 where p1.department_id =  
p2.department_id and p1.commission_pct<p2.commission_pct);
```

```
MariaDB [lab3]> select department_id, job_id, commission_pct from employees p1 where exists(select department_id, commission_pct from employees p2 where p1.department_id = p2.department_id and p1.commission_pct > p2.commission_pct);
```

department_id	job_id	commission_pct
DPT008	JOB008	13.256
DPT001	JOB001	11.365
DPT005	JOB005	14.365
DPT003	JOB003	11.365
DPT002	JOB002	12.310

## #Task-06

select manager\_id from employees l1 where exists(select manager\_id, salary from employees l2 where l1.manager\_id=l2.manager\_id and salary >3500) group by manager\_id;

```
MariaDB [lab3]> select manager_id from employees l1 where exists(select manager_id, salary from employees l2 where l1.manager_id=l2.manager_id and salary >3500) group by manager_id;
```

manager_id
MNG001
MNG002
MNG003
MNG005
MNG008
MNG009
MNG010
MNG011
MNG013

## #Task-07

# select first\_name, last\_name, employee\_id, email, salary, department\_id, min(commission\_pct) as commission\_pct from employees group by manager\_id;

```
MariaDB [lab3]> select first_name, last_name, employee_id, email, salary, department_id, min(commission_pct) as commission_pct from employees group by manager_id;
```

first_name	last_name	employee_id	email	salary	department_id	commission_pct
Nargis	Chowdhury	EMP001	nargis.chowdhury@yahoo.com	36000	DPT001	11.365
Salha	Khatun	EMP002	saleha.khtun@hotmail.com	36500	DPT002	12.310
Nargis	Chowdhury	EMP003	nargis.chowdhury@yahoo.com	36000	DPT003	11.365
John	Wick	EMP005	johnwick_killer@gmail.com	39000	DPT005	14.365
Chadwick	Boseman	EMP008	chadwick143@gmail.com	23900	DPT008	13.256
Arfanul	Islam	EMP009	arfa456@gmail.com	45000	DPT008	15.012
Arya	Starck	EMP010	aryaaaaaa999@yahoo.com	45010	DPT001	16.399
Sadiya	Khan	EMP011	sadiya420@gmail.com	42020	DPT005	17.365
Tom	Holland	EMP012	tommy34567@gmail.com	3400	DPT003	13.204
Shakib	Khan	EMP013	sakib696@gmail.com	98562	DPT012	16.365
Elizabeth	Olsen	EMP014	elzauiuu56@yahoo.com	3000	DPT002	13.200