

Name: Mehedi Hasan Shahed

ID: 21301436

Theory & Lab section: 09

Fields with data type:

```
MariaDB [project]> 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 (0.051 sec)

Employee Table:

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

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
E001	Mehedi	Hasan	mehedi116@gmail.com	0184692769	2023-02-03	J08001	69000	6.070	MNG004	DPT106
E002	Maria	Shifa	shifa606@gmail.com	01534987129	2023-02-01	J08003	58000	5.660	MNG002	DPT308
E003	Sazzad	Himla	himla43@gmail.com	0168429830	2023-02-06	J08005	73000	4.830	MNG001	DPT305
E004	Nishat	Subha	nishat5ub@gmail.com	0184265913	2023-02-04	J08002	68000	5.230	MNG006	DPT295
E005	Alimun	Mikdad	alalimun@gmail.com	0194632180	2023-01-26	J08007	65000	5.530	MNG003	DPT135
E006	Mahinul	Haque	cmahinhu@gmail.com	01841260358	2023-03-02	J08004	72000	4.830	MNG005	DPT335
E007	Sumaiya	Saba	saba756@gmail.com	01641035972	2023-02-14	J08006	68000	3.930	MNG007	DPT285
E008	Tasmiah	Meherin	meherin404@gmail.com	01841036920	2023-04-02	J08009	54000	6.820	MNG010	DPT435
E009	Shakib	Parvez	khan587@gmail.com	01574103259	2023-02-20	J08008	78000	3.530	MNG008	DPT256
E010	Samir	Emon	riyen483@gmail.com	018410320590	2023-02-07	J08013	74000	5.630	MNG013	DPT896

10 rows in set (0.000 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 [project]> 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
Tasmiah	Meherin	meherin404@gmail.com	01841036920	2023-04-02	DPT435

```
1 row in set (0.025 sec)
```

2. select first_name, last_name, employee_id, phone_number, salary, department_id from Employees where salary in (select min(salary) from Employees group by department_id);

```
MariaDB [project]> select first_name, last_name, employee_id, phone_number, salary, department_id from Employees where salary in (select min(salary) from Employees group by department_id);
```

first_name	last_name	employee_id	phone_number	salary	department_id
Mehedi	Hasan	E001	0184692769	69000	DPT106
Maria	Shifa	E002	01534987129	58000	DPT308
Sazzad	Himla	E003	0168429830	73000	DPT305
Nishat	Subha	E004	0184265913	68000	DPT295
Alimun	Mikdad	E005	0194632180	65000	DPT135
Mahinul	Haque	E006	01841260358	72000	DPT335
Sumaiya	Saba	E007	01641035972	68000	DPT285
Tasmiah	Meherin	E008	01841036920	54000	DPT435
Shakib	Parvez	E009	01574103259	78000	DPT256
Samir	Emon	E010	018410320590	74000	DPT896

```
10 rows in set (0.004 sec)
```

3. select first_name, last_name, employee_id, commission_pct, department_id from employees where department_id="DPT285" AND commission_pct<ALL(select commission_pct from employees WHERE DEPARTMENT_ID="DPT135");
[Here, DPT005 = DPT135 and DPT007 = DPT285]

```
MariaDB [project]> select first_name, last_name, employee_id, commission_pct, department_id from employees where department_id="DPT285" AND commission_pct<ALL(select commission_pct from employees WHERE DEPARTMENT_ID="DPT135");
```

first_name	last_name	employee_id	commission_pct	department_id
Sumaiya	Saba	E007	3.930	DPT285

```
1 row in set (0.000 sec)
```

4. select distinct department_id, count(*) as total_employees from Employees where salary<30000 group by department_id;

```
MariaDB [project]> select distinct department_id, count(*) as total_employees from Employees where salary<30000 group by department_id;
```

```
Empty set (0.002 sec)
```

- select department_id, job_id, commission_pct from Employees ins1 WHERE EXISTS(SELECT * FROM EMPLOYEES ins2 WHERE ins1.DEPARTMENT_ID=ins2.DEPARTMENT_ID AND ins1.JOB_ID!= ins2.JOB_ID AND ins1.COMMISSION_PCT < ins2.COMMISSION_PCT);

```
MariaDB [project]> select department_id, job_id, commission_pct from Employees ins1 WHERE EXISTS(SELECT * FROM EMPLOYEES ins2 WHERE ins1.DEPARTMENT_ID=ins2.DEPARTMENT_ID AND ins1.JOB_ID!= ins2.JOB_ID AND ins1.COMMISSION_PCT < ins2.COMMISSION_PCT);
Empty set (0.002 sec)
```

- select distinct manager_id from employees where salary>3500;

```
MariaDB [project]> select distinct manager_id from employees where salary>3500;
+-----+
| manager_id |
+-----+
| MNG004     |
| MNG002     |
| MNG001     |
| MNG006     |
| MNG003     |
| MNG005     |
| MNG007     |
| MNG010     |
| MNG008     |
| MNG013     |
+-----+
10 rows in set (0.000 sec)
```

- 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 [project]> 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 |
+-----+-----+-----+-----+-----+-----+-----+
| Mehedi    | Hasan    | E001       | mehedi116@gmail.com | 69000 | DPT106       | 6.070 |
| Maria     | Shifa    | E002       | shifa606@gmail.com  | 58000 | DPT308       | 5.660 |
| Sazzad    | Himla    | E003       | himla43@gmail.com   | 73000 | DPT305       | 4.830 |
| Nishat    | Subha    | E004       | nishatsub@gmail.com | 68000 | DPT295       | 5.230 |
| Alimun    | Mikdad   | E005       | alalimun@gmail.com  | 65000 | DPT135       | 5.530 |
| Mahinul   | Haque    | E006       | cmahinh@gmail.com   | 72000 | DPT335       | 4.830 |
| Sumaiya   | Saba     | E007       | saba756@gmail.com   | 68000 | DPT285       | 3.930 |
| Tasmiyah  | Meherin  | E008       | meherin404@gmail.com | 54000 | DPT435       | 6.820 |
| Shakib    | Parvez   | E009       | khan587@gmail.com   | 78000 | DPT256       | 3.530 |
| Samir     | Emon     | E010       | riye483@gmail.com   | 74000 | DPT896       | 5.630 |
+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.002 sec)
```