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Sec: 16

Assignment: 02

Table making:

**Query:**

1. CREATE TABLE Employee (

- > 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)
- > );

2. INSERT INTO Employee (employee\_id, first\_name, last\_name, email, phone\_number, hire\_date, job\_id, salary, commission\_pct, manager\_id, department\_id)

-> VALUES

- > ('EMP001', 'Rahim', 'Ahmed', 'rahim.ahmed@example.com', '+8801712345678', '2023-01-01', 'JOB001', 50000, 17.555, 'MNG001', 'DPT001'),
- > ('EMP002', 'Alif', 'Khan', 'alif.khan@example.com', '+8801712345679', '2023-02-01', 'JOB002', 60000, 10.123, 'MNG002', 'DPT005'),
- > ('EMP003', 'Meher', 'Alam', 'meher.alam@example.com', '+8801712345680', '2023-03-01', 'JOB003', 70000, 5.789, 'MNG001', 'DPT007'),
- > ('EMP004', 'Fahima', 'Begum', 'fahima.begum@example.com', '+8801712345681', '2023-04-01', 'JOB002', 2500, 2.345, 'MNG003', 'DPT001'),

```

-> ('EMP005', 'Mohammad', 'Ibrahim', 'mohammad.ibrahim@example.com',
'+8801712345682', '2023-05-01', 'JOB003', 30000, 15.678, 'MNG002', 'DPT005'),
-> ('EMP006', 'Jahid', 'Hasan', 'jahid.hasan@example.com', '+8801712345683', '2023-06-01',
'JOB001', 48000, 3.456, 'MNG001', 'DPT001'),
-> ('EMP007', 'Samira', 'Begum', 'samira.begum@example.com', '+8801712345684',
'2023-07-01', 'JOB003', 4000, 7.891, 'MNG002', 'DPT007'),
-> ('EMP008', 'Nasir', 'Rahman', 'nasir.rahman@example.com', '+8801712345685',
'2023-08-01', 'JOB002', 58000, 12.345, 'MNG001', 'DPT005'),
-> ('EMP009', 'Anika', 'Akhtar', 'anika.akhtar@example.com', '+8801712345686', '2023-09-01',
'JOB001', 3200, 8.765, 'MNG002', 'DPT001'),
-> ('EMP010', 'Farhan', 'Hossain', 'farhan.hossain@example.com', '+8801712345687',
'2023-10-01', 'JOB003', 67000, 19.876, 'MNG001', 'DPT007');

```

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
EMP001	Rahim	Ahmed	rahim.ahmed@example.com	+8801712345678	2023-01-01	JOB001	50000	17.555	MNG001	DPT001
EMP002	Alif	Khan	alif.khan@example.com	+8801712345679	2023-02-01	JOB002	60000	10.123	MNG002	DPT005
EMP003	Mehar	Alam	mehar.alam@example.com	+8801712345680	2023-03-01	JOB003	70000	5.789	MNG001	DPT007
EMP004	Fahima	Begum	fahima.begum@example.com	+8801712345681	2023-04-01	JOB002	2500	2.345	MNG003	DPT001
EMP005	Mohammad	Ibrahim	mohammad.ibrahim@example.com	+8801712345682	2023-05-01	JOB003	30000	15.678	MNG002	DPT005
EMP006	Jahid	Hasan	jahid.hasan@example.com	+8801712345683	2023-06-01	JOB001	48000	3.456	MNG001	DPT001
EMP007	Samira	Begum	samira.begum@example.com	+8801712345684	2023-07-01	JOB003	4000	7.891	MNG002	DPT007
EMP008	Nasir	Rahman	nasir.rahman@example.com	+8801712345685	2023-08-01	JOB002	58000	12.345	MNG001	DPT005
EMP009	Anika	Akhtar	anika.akhtar@example.com	+8801712345686	2023-09-01	JOB001	3200	8.765	MNG002	DPT001
EMP010	Farhan	Hossain	farhan.hossain@example.com	+8801712345687	2023-10-01	JOB003	67000	19.876	MNG001	DPT007

10 rows in set (0.001 sec)

### Question-1:

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
employee where hire_date= (select max(hire_date) from employee);

```

```

MariaDB [shuvashis]> select first_name, last_name, email, phone_number, hire_date, department_id from employee where hire_date= (select max(hire_date) from employee);

```

first_name	last_name	email	phone_number	hire_date	department_id
Farhan	Hossain	farhan.hossain@example.com	+8801712345687	2023-10-01	DPT007

1 row in set (0.001 sec)

**Question-2:**

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, employee_id, phone_number, min(salary) as min_salary,
department_id from employee group by department_id;
```

first_name	last_name	employee_id	phone_number	min_salary	department_id
Rahim	Ahmed	EMP001	+8801712345678	2500	DPT001
Alif	Khan	EMP002	+8801712345679	30000	DPT005
Mehar	Alam	EMP003	+8801712345680	4000	DPT007

3 rows in set (0.001 sec)

**Question-3: \**

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 department 'DPT005' employees.

**Query:**

```
select first_name, last_name, employee_id, commission_pct, department_id from
employee where department_id= 'DPT007' and commission_pct < all( select
commission_pct from employee where department_id='DPT005');
```

first_name	last_name	employee_id	commission_pct	department_id
Mehar	Alam	EMP003	5.789	DPT007
Samira	Begum	EMP007	7.891	DPT007

2 rows in set (0.007 sec)

**Question-4:**

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 employee where salary < 30000 group by department_id;
```

```
+-----+-----+
| department_id | total_Employees |
+-----+-----+
| DPT001        | 2               |
| DPT007        | 1               |
+-----+-----+
2 rows in set (0.001 sec)
```

**Question-5:**

For each department, 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 employee L1 where exists(select * from employee L2 where L1.department_id=L2.department_id and L1.job_id != L2.job_id and L1.commission_pct < L2.commission_pct);
```

```
+-----+-----+-----+
| department_id | job_id | commission_pct |
+-----+-----+-----+
| DPT001        | JOB002 | 2.345          |
| DPT005        | JOB002 | 10.123         |
| DPT005        | JOB002 | 12.345         |
+-----+-----+-----+
3 rows in set (0.001 sec)
```

**Question-6:** Find the ***manager\_id*** who does not have any employee under them with a ***salary*** less than 3500.

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

```
MariaDB [shuvashis]> select distinct manager_id from employee where salary > 3500;
+-----+
| manager_id |
+-----+
| MNG001     |
| MNG002     |
+-----+
2 rows in set (0.001 sec)
```

**Question-7:** Find the ***first\_name***, ***last\_name***, ***employee\_id***, ***email***, ***salary***, ***department\_id*** and ***commission\_pct*** of the employee with the lowest ***commission\_pct*** under each manager.

**Query:** select first\_name, last\_name, employee\_id, email, salary, department\_id, commission\_pct from employee where (manager\_id, commission\_pct) in (select manager\_id, min(commission\_pct) from employee group by manager\_id);

```
MariaDB [shuvashis]> select first_name, last_name, employee_id, email, salary, department_id, commission_pct from employee where (manager_id, commission_pct) in (select m
anager_id, min(commission_pct) from employee group by manager_id);
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| Fahima    | Begum    | EMP004     | fahima.begum@example.com | 2500   | DPT001        | 2.345          |
| Jahid     | Hasan    | EMP006     | jahid.hasan@example.com | 40000  | DPT001        | 3.456          |
| Sanira    | Begum    | EMP007     | sanira.begum@example.com | 4000   | DPT007        | 7.891          |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)
```

