Table

```
MariaDB [fahad_21201240]> select * from employee;
+-------------+------------+-----------+--------------------------+--------------+------------+--------+--------+----------------+------------+---------------+
| employee_id | first_name | last_name | email                    | phone_number | hire_date  | job_id | salary | commission_pct | manager_id | department_id |
+-------------+------------+-----------+--------------------------+--------------+------------+--------+--------+----------------+------------+---------------+
| EMP001      | Liam       | Williams  | liam.williams@email.com  | 345-6789     | 2022-05-22 | JOB001 | 30000  |         34.123 | MNG001     | DPT001        |
| EMP002      | Olivia     | Jones     | olivia.jones@email.com   | 456-7890     | 2021-10-15 | JOB002 | 35000  |         28.590 | MNG001     | DPT001        |
| EMP003      | Ethan      | Brown     | ethan.brown@email.com    | 567-8901     | 2023-01-28 | JOB003 | 25000  |         44.323 | MNG002     | DPT006        |
| EMP004      | Ava        | Johnson   | ava.johnson@email.com    | 678-9012     | 2022-07-09 | JOB004 | 20000  |         24.535 | MNG002     | DPT007        |
| EMP005      | Noah       | Smith     | noah.smith@email.com     | 789-0123     | 2023-03-14 | JOB005 | 35000  |         34.546 | MNG002     | DPT005        |
| EMP006      | Sophia     | Davis     | sophia.davis@email.com   | 890-1234     | 2021-12-01 | JOB006 | 50000  |         19.232 | MNG002     | DPT004        |
| EMP007      | Mason      | Taylor    | mason.taylor@email.com   | 901-2345     | 2022-09-05 | JOB007 | 36000  |         14.233 | MNG002     | DPT001        |
| EMP008      | Emma       | Miller    | emma.miller@email.com    | 012-3456     | 2023-06-20 | JOB008 | 40000  |          9.756 | MNG001     | DPT003        |
| EMP009      | Jackson    | Clark     | jackson.clark@email.com  | 123-4567     | 2021-08-11 | JOB009 | 15000  |         30.234 | MNG001     | DPT007        |
| EMP010      | Avery      | Evans     | avery.evans@email.com    | 234-5678     | 2022-04-02 | JOB010 | 30000  |         54.454 | MNG001     | DPT005        |
+-------------+------------+-----------+--------------------------+--------------+------------+--------+--------+----------------+------------+---------------+
10 rows in set (0.000 sec)
```

Query: 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)
);

INSERT INTO employee VALUES
   ('EMP001','Liam', 'Williams', 'liam.williams@email.com', '345-6789', '2022-05-22','JOB001',30000,34.123,'MNG001','DPT001'),
   ('EMP002','Olivia', 'Jones', 'olivia.jones@email.com', '456-7890', '2021-10-15','JOB002',35000,28.590,'MNG001','DPT001'),
   ('EMP003','Ethan', 'Brown', 'ethan.brown@email.com', '567-8901', '2023-01-28','JOB003',25000,44.323,'MNG002','DPT006'),
   ('EMP004','Ava', 'Johnson', 'ava.johnson@email.com', '678-9012', '2022-07-09','JOB004',20000,24.535,'MNG002','DPT007'),
   ('EMP005','Noah', 'Smith', 'noah.smith@email.com', '789-0123', '2023-03-14','JOB005',35000,34.546,'MNG002','DPT005'),
   ('EMP006','Sophia', 'Davis', 'sophia.davis@email.com', '890-1234', '2021-12-01','JOB006',50000,19.232,'MNG002','DPT004'),
   ('EMP007','Mason', 'Taylor', 'mason.taylor@email.com', '901-2345', '2022-09-05','JOB007',36000,14.233,'MNG002','DPT001'),
   ('EMP008','Emma', 'Miller', 'emma.miller@email.com', '012-3456', '2023-06-20','JOB008',40000,9.756,'MNG001','DPT003'),
   ('EMP009','Jackson', 'Clark', 'jackson.clark@email.com', '123-4567', '2021-08-11','JOB009',15000,30.234,'MNG001','DPT007'),
   ('EMP010','Avery', 'Evans', 'avery.evans@email.com', '234-5678', '2022-04-02','JOB010',30000,54.454,'MNG001','DPT005');

Answer to the question no 1

```
MariaDB [fahad_21201240]> 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 |
+------------+-----------+------------------------+--------------+------------+---------------+
| Emma       | Miller    | emma.miller@email.com  | 012-3456     | 2023-06-20 | DPT003        |
+------------+-----------+------------------------+--------------+------------+---------------+
1 row in set (0.001 sec)
```

Query: select first_name, last_name, email, phone_number, hire_date, department_id from employee where hire_date=(select max(hire_date) from employee);

Answer to the question no 2

```
MariaDB [fahad_21201240]> select first_name,last_name,employee_id,phone_number,salary,department_id from employee where (salary,department_id) in (select min(salary),department_id from employee group by department_id);
+------------+-----------+-------------+--------------+--------+---------------+
| first_name | last_name | employee_id | phone_number | salary | department_id |
+------------+-----------+-------------+--------------+--------+---------------+
| Liam       | Williams  | EMP001      | 345-6789     | 30000  | DPT001        |
| Ethan      | Brown     | EMP003      | 567-8901     | 25000  | DPT006        |
| Sophia     | Davis     | EMP006      | 890-1234     | 50000  | DPT004        |
| Emma       | Miller    | EMP008      | 012-3456     | 40000  | DPT003        |
| Jackson    | Clark     | EMP009      | 123-4567     | 15000  | DPT007        |
| Avery      | Evans     | EMP010      | 234-5678     | 30000  | DPT005        |
+------------+-----------+-------------+--------------+--------+---------------+
6 rows in set (0.001 sec)
```

Query: select first_name,last_name,employee_id,phone_number,salary,department_id from employee where (salary,department_id) in (select min(salary),department_id from employee group by department_id);

Answer to the question no 3

```
MariaDB [fahad_21201240]> 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 |
+------------+-----------+-------------+----------------+---------------+
| Ava        | Johnson   | EMP004      |         24.535 | DPT007        |
| Jackson    | Clark     | EMP009      |         30.234 | DPT007        |
+------------+-----------+-------------+----------------+---------------+
2 rows in set (0.000 sec)
```

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');

Answer to the question no 4

```
MariaDB [fahad_21201240]> select department_id, count(*) as Total_number_of_employee from employee e1 where not exists(SELECT * from employee e2 where e1.department_id=e2.department_id and e2.salary>30000) group by department_id;
+---------------+---------------------------+
| department_id | Total_number_of_employee |
+---------------+---------------------------+
| DPT006        |                         1 |
| DPT007        |                         2 |
+---------------+---------------------------+
2 rows in set (0.001 sec)
```

Query: select department_id, count(*) as Total_number_of_employee from employee e1 where not exists(SELECT * from employee e2 where e1.department_id=e2.department_id and e2.salary>30000) group by department_id;

Answer to the question no 5

```
MariaDB [fahad_21201240]> select department_id,job_id,commission_pct from employee e1 where exists (select * from employee 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        | JOB002 |         28.590 |
| DPT005        | JOB005 |         34.546 |
| DPT007        | JOB004 |         24.535 |
+---------------+--------+----------------+
3 rows in set (0.002 sec)
```

Query: select department_id,job_id,commission_pct from employee e1 where exists (select * from employee 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;

Answer to the question no 6

```
MariaDB [fahad_21201240]> select distinct manager_id FROM employee e1 where not exists (select * from employee e2 where e1.manager_id=e2.manager_id and e2.salary<3500);
+------------+
| manager_id |
+------------+
| MNG001     |
| MNG002     |
+------------+
2 rows in set (0.001 sec)
```

Query: select distinct manager_id FROM employee e1 where not exists (select * from employee e2 where e1.manager_id=e2.manager_id and e2.salary<3500);

Answer to the question no 7

```
MariaDB [fahad_21201240]> select first_name,last_name,employee_id,email,salary,department_id,commission_pct from employee where(commission_pct,manager_id) in (select min(commission_pct),manager_id from employee group by manager_id);
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
| first_name | last_name | employee_id | email                   | salary | department_id | commission_pct |
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
| Mason      | Taylor    | EMP007      | mason.taylor@email.com  |  36000 | DPT001        |         14.233 |
| Emma       | Miller    | EMP008      | emma.miller@email.com   |  40000 | DPT003        |          9.756 |
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
2 rows in set (0.001 sec)
```

Query: select first_name,last_name,employee_id,email,salary,department_id,commission_pct from employee where(commission_pct,manager_id) in (select min(commission_pct),manager_id from employee group by manager_id);