**Department of Computer Science and Engineering**

| **Course Code: CSE 370** | **Credits: 3.0** |
| --- | --- |
| **Course Name: Database Systems** |  |

**Lab Homework 3**

**Table create:**

CREATE TABLE employees (

employee\_id CHAR(10) NOT NULL,

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

email VARCHAR(60) NOT NULL,

phone\_number CHAR(14),

hire\_date DATE NOT NULL,

job\_id CHAR(10) NOT NULL,

salary INT,

commission\_pct DECIMAL(5,3),

manager\_id CHAR(10),

department\_id CHAR(10),

PRIMARY KEY (employee\_id)

);

**Insert into:**

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

VALUES

('EMP001', 'Shihab', 'Muhtasim', 'shihab@gmail.com', '01554375947', '2021-01-01', 'JOB001', 70000, 5, 'MNG001', 'DPT001'),

('EMP002', 'Martin', 'Garrix', 'garrix@gmail.com', '01563747483', '2023-01-02', 'JOB002', 40000, 0.3, 'MNG001', 'DPT001'),

('EMP003', 'David', 'Scooper', 'david@gmail.com', '01673837477', '2022-01-03', 'JOB002', 55000, 0.43, 'MNG001', 'DPT002'),

('EMP004', 'Harry', 'Potter', 'harry@gmail.com', '01364983827', '2022-01-04', 'JOB003', 85000, 0.02, 'MNG002', 'DPT007'),

('EMP005', 'charls', 'Brown', 'charls@gmail.com', '01925463737', '2022-01-05', 'JOB004', 37000, 2, 'MNG002', 'DPT003'),

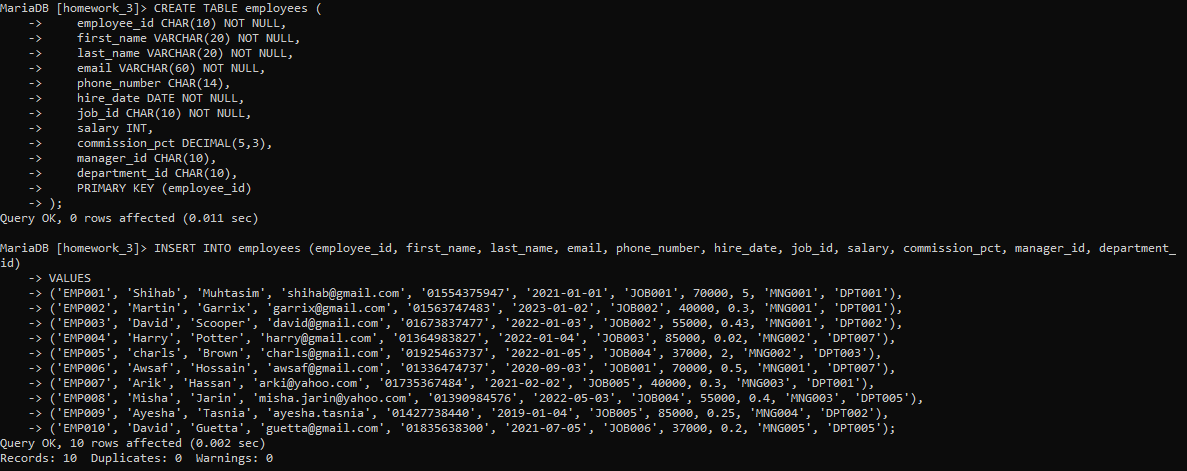
('EMP006', 'Awsaf', 'Hossain', 'awsaf@gmail.com', '01336474737', '2020-09-03', 'JOB001', 70000, 0.5, 'MNG001', 'DPT007'),

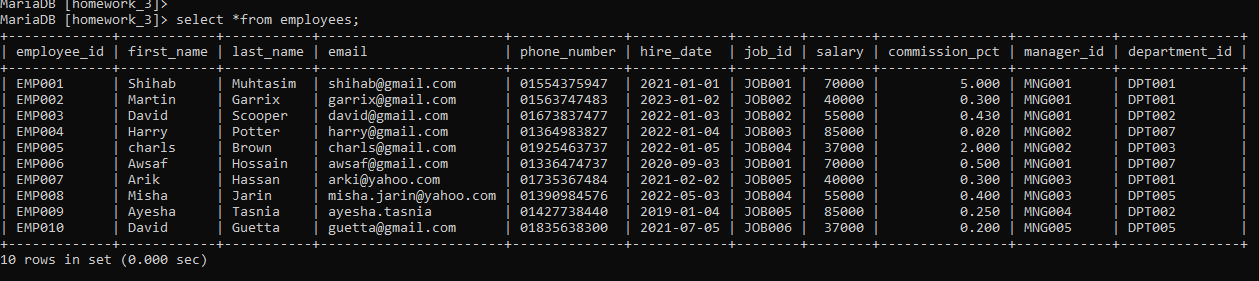
('EMP007', 'Arik', 'Hassan', 'arki@yahoo.com', '01735367484', '2021-02-02', 'JOB005', 40000, 0.3, 'MNG003', 'DPT001'),

('EMP008', 'Misha', 'Jarin', 'misha.jarin@yahoo.com', '01390984576', '2022-05-03', 'JOB004', 55000, 0.4, 'MNG003', 'DPT005'),

('EMP009', 'Ayesha', 'Tasnia', 'ayesha.tasnia', '01427738440', '2019-01-04', 'JOB005', 85000, 0.25, 'MNG004', 'DPT002'),

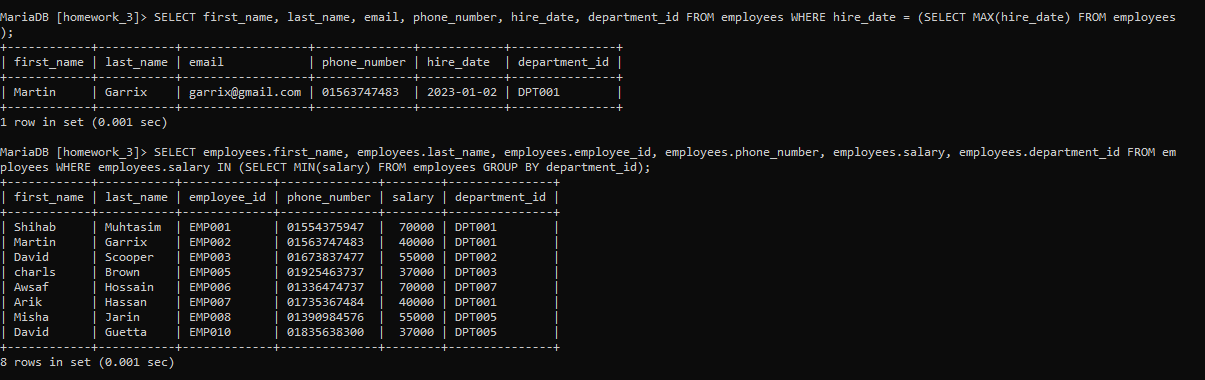
('EMP010', 'David', 'Guetta', 'guetta@gmail.com', '01835638300', '2021-07-05', 'JOB006', 37000, 0.2, 'MNG005', 'DPT005');





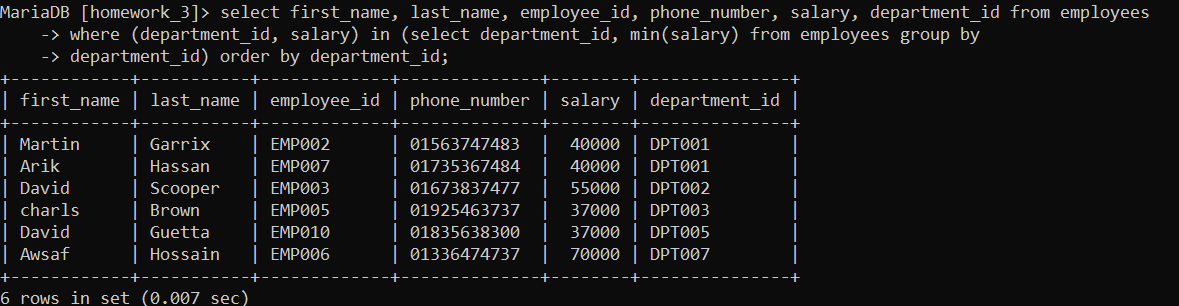
**Task 1:**

SELECT first\_name, last\_name, email, phone\_number, hire\_date, department\_id FROM employees WHERE hire\_date = (SELECT MAX(hire\_date) FROM employees);



**Task 2:**

select first\_name, last\_name, employee\_id, phone\_number, salary, department\_id from employees where (department\_id, salary) in (select department\_id, min(salary) from employees group by department\_id) order by department\_id;



**Task 3:**

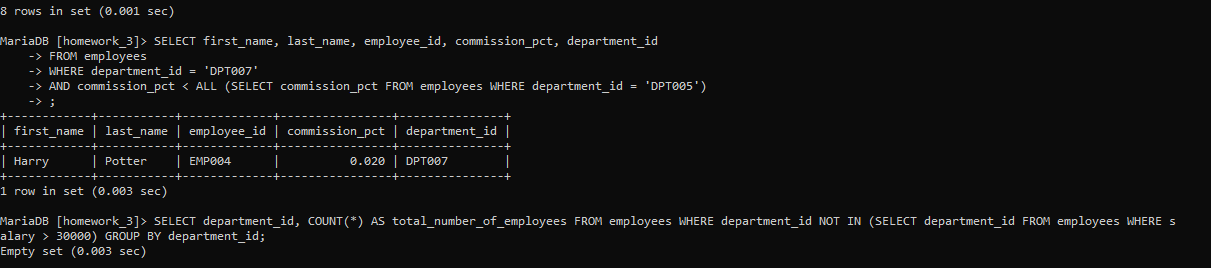
SELECT first\_name, last\_name, employee\_id, commission\_pct, department\_id

FROM employees WHERE department\_id = 'DPT007' AND commission\_pct < ALL (SELECT commission\_pct FROM employees WHERE department\_id = 'DPT005');

**Task 4:**

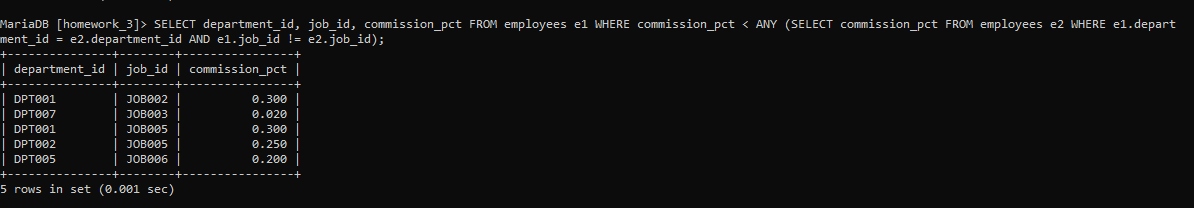
SELECT department\_id, COUNT(\*) AS total\_number\_of\_employees FROM employees WHERE department\_id NOT IN (SELECT department\_id FROM employees WHERE salary > 30000) GROUP BY department\_id;

*Task 3 and 4:*



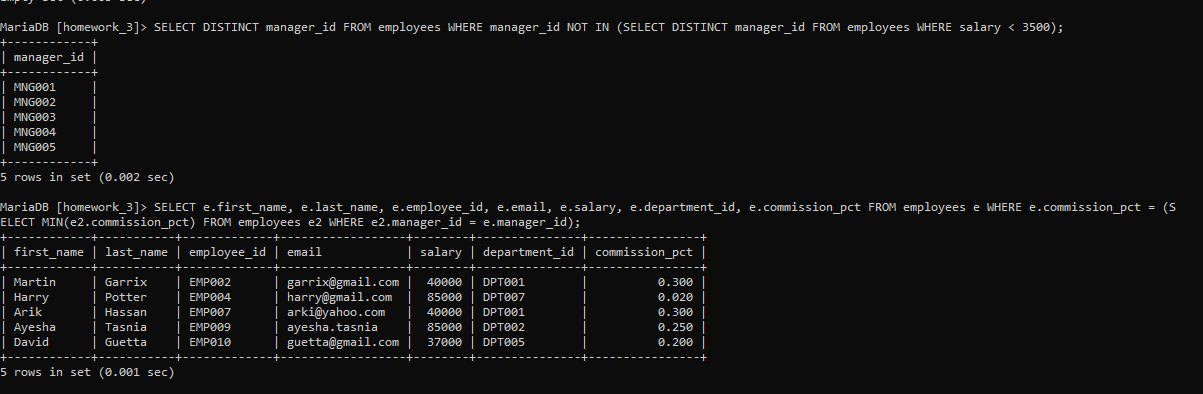
**Task 5:**

SELECT department\_id, job\_id, commission\_pct FROM employees e1 WHERE commission\_pct < ANY (SELECT commission\_pct FROM employees e2 WHERE e1.department\_id = e2.department\_id AND e1.job\_id != e2.job\_id);



**Task 6:**

SELECT DISTINCT manager\_id FROM employees WHERE manager\_id NOT IN (SELECT DISTINCT manager\_id FROM employees WHERE salary < 3500);



**Task 7:**

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

