

CSE370 : Database Systems

Assignment 01/02/03 | Summer 2025

ID : 23201003 | Name : Masrur Sarar

No 1 Query
(as Plain Text)

```
CREATE DATABASE Company_23201003;
use Company_23201003;
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','FN001','LN001','EMA001','PHN001','2000-01-01','JOB001',001,0.001,'MNG001','DPT001'),
('EMP002','FN002','LN002','EMA002','PHN002','2000-01-02','JOB002',002,0.002,'MNG002','DPT002'),
('EMP003','FN003','LN003','EMA003','PHN003','2000-01-03','JOB003',003,0.003,'MNG003','DPT003'),
('EMP004','FN004','LN004','EMA004','PHN004','2000-01-04','JOB004',004,0.004,'MNG004','DPT004'),
('EMP005','FN005','LN005','EMA005','PHN005','2000-01-05','JOB005',005,0.005,'MNG005','DPT005'),
('EMP006','FN006','LN006','EMA006','PHN006','2000-01-06','JOB006',006,0.006,'MNG006','DPT006'),
('EMP007','FN007','LN007','EMA007','PHN007','2000-01-07','JOB007',007,0.007,'MNG007','DPT007'),
('EMP008','FN008','LN008','EMA008','PHN008','2000-01-08','JOB008',008,0.008,'MNG008','DPT008'),
('EMP009','FN009','LN009','EMA009','PHN009','2000-01-09','JOB009',009,0.009,'MNG009','DPT009'),
('EMP010','FN010','LN010','EMA010','PHN010','2000-01-10','JOB010',010,0.010,'MNG010','DPT010');
select first_name,last_name,email,phone_number,hire_date,department_id from employee
where hire_date=(select max(hire_date)from employee);
```

No 1 SS (of Query & Output in Shell)

db<>fiddle MySQL 8.4 run markdown

```

1 CREATE DATABASE Company_23201003;
2 use Company_23201003;
3 create table employee
4 (
5     employee_id char(10),
6     first_name varchar(20),
7     last_name varchar(20),
8     email varchar(60),
9     phone_number char(14),
10    hire_date date,
11    job_id char(10),
12    salary int,
13    commission_pct decimal(5,3),
14    manager_id char(10),
15    department_id char(10)
16 );
17 INSERT INTO employee values
18 ('EMP001','FN001','LN001','EMA001','PHN001','2000-01-01','JOB001',001,0.001,'MNG001','DP
19 ('EMP002','FN002','LN002','EMA002','PHN002','2000-01-02','JOB002',002,0.002,'MNG002','DP
20 ('EMP003','FN003','LN003','EMA003','PHN003','2000-01-03','JOB003',003,0.003,'MNG003','DP
21 ('EMP004','FN004','LN004','EMA004','PHN004','2000-01-04','JOB004',004,0.004,'MNG004','DP
22 ('EMP005','FN005','LN005','EMA005','PHN005','2000-01-05','JOB005',005,0.005,'MNG005','DP
23 ('EMP006','FN006','LN006','EMA006','PHN006','2000-01-06','JOB006',006,0.006,'MNG006','DP
24 ('EMP007','FN007','LN007','EMA007','PHN007','2000-01-07','JOB007',007,0.007,'MNG007','DP
25 ('EMP008','FN008','LN008','EMA008','PHN008','2000-01-08','JOB008',008,0.008,'MNG008','DP
26 ('EMP009','FN009','LN009','EMA009','PHN009','2000-01-09','JOB009',009,0.009,'MNG009','DP
27 ('EMP010','FN010','LN010','EMA010','PHN010','2000-01-10','JOB010',010,0.010,'MNG010','DP

```

Records: 10 Duplicates: 0 Warnings: 0

```

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

```

first_name	last_name	email	phone_number	hire_date	department_id
FN010	LN010	EMA010	PHN010	2000-01-10	DPT010

No 2 Query (as Plain Text)

select first_name,last_name,employee_id,phone_number,salary,department_id from employee e1
where salary=(select min(salary)from employee e2 where e2.department_id = e1.department_id);

No 2 SS (of Query & Output in Shell)	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><pre>1 v select first_name,last_name,employee_id,phone_number,salary,department_id 2 from employee e1 3 where salary=(select min(salary)from employee e2 4 where e2.department_id = e1.department_id);</pre></div></div></div> <table><thead><tr><th>first_name</th><th>last_name</th><th>employee_id</th><th>phone_number</th><th>salary</th><th>department_id</th></tr></thead><tbody><tr><td>FN001</td><td>LN001</td><td>EMP001</td><td>PHN001</td><td>1</td><td>DPT001</td></tr><tr><td>FN002</td><td>LN002</td><td>EMP002</td><td>PHN002</td><td>2</td><td>DPT002</td></tr><tr><td>FN003</td><td>LN003</td><td>EMP003</td><td>PHN003</td><td>3</td><td>DPT003</td></tr><tr><td>FN004</td><td>LN004</td><td>EMP004</td><td>PHN004</td><td>4</td><td>DPT004</td></tr><tr><td>FN005</td><td>LN005</td><td>EMP005</td><td>PHN005</td><td>5</td><td>DPT005</td></tr><tr><td>FN006</td><td>LN006</td><td>EMP006</td><td>PHN006</td><td>6</td><td>DPT006</td></tr><tr><td>FN007</td><td>LN007</td><td>EMP007</td><td>PHN007</td><td>7</td><td>DPT007</td></tr><tr><td>FN008</td><td>LN008</td><td>EMP008</td><td>PHN008</td><td>8</td><td>DPT008</td></tr><tr><td>FN009</td><td>LN009</td><td>EMP009</td><td>PHN009</td><td>9</td><td>DPT009</td></tr><tr><td>FN010</td><td>LN010</td><td>EMP010</td><td>PHN010</td><td>10</td><td>DPT010</td></tr></tbody></table>	first_name	last_name	employee_id	phone_number	salary	department_id	FN001	LN001	EMP001	PHN001	1	DPT001	FN002	LN002	EMP002	PHN002	2	DPT002	FN003	LN003	EMP003	PHN003	3	DPT003	FN004	LN004	EMP004	PHN004	4	DPT004	FN005	LN005	EMP005	PHN005	5	DPT005	FN006	LN006	EMP006	PHN006	6	DPT006	FN007	LN007	EMP007	PHN007	7	DPT007	FN008	LN008	EMP008	PHN008	8	DPT008	FN009	LN009	EMP009	PHN009	9	DPT009	FN010	LN010	EMP010	PHN010	10	DPT010
first_name	last_name	employee_id	phone_number	salary	department_id																																																														
FN001	LN001	EMP001	PHN001	1	DPT001																																																														
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FN010	LN010	EMP010	PHN010	10	DPT010																																																														
No 3 Query (as Plain Text)	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');																																																																		
No 3 SS (of Query & Output in Shell)	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><pre>1 v select first_name,last_name,employee_id,commission_pct,department_id from employee 2 where department_id='DPT007' and 3 commission_pct<all(select commission_pct 4 from employee where department_id='DPT005');</pre></div></div></div> <table><thead><tr><th>first_name</th><th>last_name</th><th>employee_id</th><th>commission_pct</th><th>department_id</th></tr></thead></table>	first_name	last_name	employee_id	commission_pct	department_id																																																													
first_name	last_name	employee_id	commission_pct	department_id																																																															
No 4 Query (as Plain Text)	select department_id, count(*) as total_employees from employee group by department_id having max(salary)<=30000;																																																																		

No 4 SS (of Query & Output in Shell)	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1 v</div><div>select department_id, count(*) as total_employees from employee</div></div><div><div>2</div><div>group by department_id having max(salary)<=30000;</div></div></div> <div><table><tr><th>department_id</th><th>total_employees</th></tr><tr><td>DPT001</td><td>1</td></tr><tr><td>DPT002</td><td>1</td></tr><tr><td>DPT003</td><td>1</td></tr><tr><td>DPT004</td><td>1</td></tr><tr><td>DPT005</td><td>1</td></tr><tr><td>DPT006</td><td>1</td></tr><tr><td>DPT007</td><td>1</td></tr><tr><td>DPT008</td><td>1</td></tr><tr><td>DPT009</td><td>1</td></tr><tr><td>DPT010</td><td>1</td></tr></table></div>	department_id	total_employees	DPT001	1	DPT002	1	DPT003	1	DPT004	1	DPT005	1	DPT006	1	DPT007	1	DPT008	1	DPT009	1	DPT010	1
department_id	total_employees																						
DPT001	1																						
DPT002	1																						
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DPT006	1																						
DPT007	1																						
DPT008	1																						
DPT009	1																						
DPT010	1																						
No 5 Query (as Plain Text)	select department_id,job_id,commission_pct from employee e1 where commission_pct<any (select commission_pct from employee e2 where e2.department_id=e1.department_id and e2.job_id!=e1.job_id);																						
No 5 SS (of Query & Output in Shell)	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div><div>1 v</div><div>select department_id,job_id,commission_pct</div></div><div><div>2</div><div>from employee e1</div></div><div><div>3</div><div>where commission_pct<any</div></div><div><div>4</div><div>(select commission_pct</div></div><div><div>5</div><div>from employee e2</div></div><div><div>6</div><div>where e2.department_id=e1.department_id and e2.job_id!=e1.job_id);</div></div></div> <div><table><tr><th>department_id</th><th>job_id</th><th>commission_pct</th></tr></table></div>	department_id	job_id	commission_pct																			
department_id	job_id	commission_pct																					
No 6 Query (as Plain Text)	select manager_id from employee group by manager_id having min(salary)>=3500;																						

No 6 SS (of Query & Output in Shell)	<div><div><div></div><div></div><div></div></div><div><div>1</div><div><code>select manager_id from employee group by manager_id having min(salary)>=3500;</code></div></div><div><div></div><div>manager_id</div></div></div>																																																																													
No 7 Query (as Plain Text)	select first_name,last_name,employee_id,email,salary,department_id,commission_pct from employee e1 where commission_pct=(select min(commission_pct) from employee e2 where e2.manager_id=e1.manager_id);																																																																													
No 7 SS (of Query & Output in Shell)	<div><div><div><div></div><div></div><div></div></div><div><div>1 v</div><div><code>select first_name,last_name,employee_id,email,salary,department_id,commission_pct</code></div></div><div><div>2</div><div><code>from employee e1</code></div></div><div><div>3</div><div><code>where commission_pct=(select min(commission_pct)</code></div></div><div><div>4</div><div><code>from employee e2 where e2.manager_id=e1.manager_id);</code></div></div></div><div><table><tr><th>first_name</th><th>last_name</th><th>employee_id</th><th>email</th><th>salary</th><th>department_id</th><th>commission_pct</th></tr><tr><td>FN001</td><td>LN001</td><td>EMP001</td><td>EMA001</td><td>1</td><td>DPT001</td><td>0.001</td></tr><tr><td>FN002</td><td>LN002</td><td>EMP002</td><td>EMA002</td><td>2</td><td>DPT002</td><td>0.002</td></tr><tr><td>FN003</td><td>LN003</td><td>EMP003</td><td>EMA003</td><td>3</td><td>DPT003</td><td>0.003</td></tr><tr><td>FN004</td><td>LN004</td><td>EMP004</td><td>EMA004</td><td>4</td><td>DPT004</td><td>0.004</td></tr><tr><td>FN005</td><td>LN005</td><td>EMP005</td><td>EMA005</td><td>5</td><td>DPT005</td><td>0.005</td></tr><tr><td>FN006</td><td>LN006</td><td>EMP006</td><td>EMA006</td><td>6</td><td>DPT006</td><td>0.006</td></tr><tr><td>FN007</td><td>LN007</td><td>EMP007</td><td>EMA007</td><td>7</td><td>DPT007</td><td>0.007</td></tr><tr><td>FN008</td><td>LN008</td><td>EMP008</td><td>EMA008</td><td>8</td><td>DPT008</td><td>0.008</td></tr><tr><td>FN009</td><td>LN009</td><td>EMP009</td><td>EMA009</td><td>9</td><td>DPT009</td><td>0.009</td></tr><tr><td>FN010</td><td>LN010</td><td>EMP010</td><td>EMA010</td><td>10</td><td>DPT010</td><td>0.010</td></tr></table></div></div>	first_name	last_name	employee_id	email	salary	department_id	commission_pct	FN001	LN001	EMP001	EMA001	1	DPT001	0.001	FN002	LN002	EMP002	EMA002	2	DPT002	0.002	FN003	LN003	EMP003	EMA003	3	DPT003	0.003	FN004	LN004	EMP004	EMA004	4	DPT004	0.004	FN005	LN005	EMP005	EMA005	5	DPT005	0.005	FN006	LN006	EMP006	EMA006	6	DPT006	0.006	FN007	LN007	EMP007	EMA007	7	DPT007	0.007	FN008	LN008	EMP008	EMA008	8	DPT008	0.008	FN009	LN009	EMP009	EMA009	9	DPT009	0.009	FN010	LN010	EMP010	EMA010	10	DPT010	0.010
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FN005	LN005	EMP005	EMA005	5	DPT005	0.005																																																																								
FN006	LN006	EMP006	EMA006	6	DPT006	0.006																																																																								
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