

## CSE370 : Database Systems

### Assignment 02 | Summer 2025

ID : 23201432 | Name : Musfikur Rahman Mahin

<b>No 1 Query</b> (as Plain Text)	SELECT first_name, last_name, email, phone_number, hire_date, department_id FROM employee WHERE hire_date = (SELECT MAX(hire_date) FROM employee);
<b>No 1 SS</b> (of Query & Output in Shell)	<pre>MariaDB [company_23201432]&gt; SELECT first_name, last_name, email, phone_number, hire_date, department_id -&gt; FROM employee -&gt; WHERE hire_date = (SELECT MAX(hire_date) FROM employee); +-----+-----+-----+-----+-----+-----+   first_name   last_name   email                  phone_number   hire_date   department_id   +-----+-----+-----+-----+-----+-----+   Zara        Noor       zara.noor@email.com   01911223344    2023-06-10   DPT004          +-----+-----+-----+-----+-----+-----+ 1 row in set (0.001 sec)</pre>
<b>No 2 Query</b> (as Plain Text)	SELECT first_name, last_name, employee_id, phone_number, salary, department_id FROM employee e WHERE salary = ( SELECT MIN(salary) FROM employee WHERE department_id = e.department_id);

<b>No 2 SS</b> <b>(of Query &amp; Output</b> <b>in Shell)</b>	<pre> +-----+-----+-----+-----+-----+-----+   first_name   last_name   employee_id   phone_number   salary   department_id   +-----+-----+-----+-----+-----+-----+   Sara        Khan       EMP002       01823456789   25000   DPT002           Rina        Saha       EMP004       01745678901   27000   DPT003           Rafi        Ahmed      EMP007       01778901234   50000   DPT005           Meena       Paul       EMP008       01389012345   20000   DPT001           Fahim       Rahman     EMP010       01701234567   37000   DPT006           Zara        Noor       EMP011       01911223344   31000   DPT004           Lamia       Haque      EMP013       01899887766   29000   DPT007         +-----+-----+-----+-----+-----+-----+ </pre>
<b>No 3 Query</b> <b>(as Plain Text)</b>	<pre> SELECT first_name, last_name, employee_id, commission_pct, department_id FROM Employee WHERE department_id = 'DPT007' AND commission_pct &lt; ( SELECT MIN(commission_pct) FROM employee WHERE department_id = 'DPT005' ); </pre>
<b>No 3 SS</b> <b>(of Query &amp; Output</b> <b>in Shell)</b>	<pre> +-----+-----+-----+-----+-----+-----+   first_name   last_name   employee_id   commission_pct   department_id   +-----+-----+-----+-----+-----+-----+   Lamia        Haque       EMP013        0.035            DPT007          +-----+-----+-----+-----+-----+-----+ 1 row in set (0.000 sec) </pre>

<b>No 4 Query</b> <b>(as Plain Text)</b>	SELECT department_id, count(*) AS sum FROM employee GROUP BY department_id HAVING MAX(salary)<=30000;
<b>No 4 SS</b> <b>(of Query &amp; Output</b> <b>in Shell)</b>	<pre> +-----+-----+   department_id   sum   +-----+-----+   DPT001         3       DPT003         2       DPT007         1     +-----+-----+ 3 rows in set (0.001 sec) </pre>
<b>No 5 Query</b> <b>(as Plain Text)</b>	SELECT department_id, job_id, commission_pct FROM employee e1 WHERE EXISTS ( SELECT 1 FROM employee e2 WHERE e2.department_id = e1.department_id AND e2.commission_pct < e1.commission_pct);

No 5 SS  
(of Query & Output  
in Shell)

```
-> AND e2.commission_pct < e1.commission_pct
+-----+-----+-----+
| department_id | job_id | commission_pct |
+-----+-----+-----+
| DPT001        | JOB001 | 0.050          |
| DPT003        | JOB003 | 0.015          |
| DPT002        | JOB002 | 0.070          |
| DPT004        | JOB004 | 0.040          |
| DPT001        | JOB001 | 0.030          |
+-----+-----+-----+
5 rows in set (0.001 sec)
```

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)

```
MariaDB [company_23201432]> SELECT manager_id FROM employee GROUP BY manager_id HAVING MIN(salary)>=3500;
+-----+
| manager_id |
+-----+
| MNG001     |
| MNG002     |
| MNG003     |
| MNG004     |
| MNG005     |
| MNG006     |
| MNG007     |
+-----+
7 rows in set (0.000 sec)
```

No 7 Query (as Plain Text)	SELECT e.first_name, e.last_name, e.employee_id, e.email,e.salary, e.department_id, e.commission_pct FROM Employee e WHERE e.commission_pct = ( SELECT MIN(e2.commission_pct) FROM Employee e2 WHERE e2.manager_id = e.manager_id) ORDER BY e.manager_id;																																																															
No 7 SS (of Query & Output in Shell)	<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>John</td><td>Das</td><td>EMP003</td><td>john.das@email.com</td><td>30000</td><td>DPT001</td><td>0.030</td></tr><tr><td>Iqbal</td><td>Hossain</td><td>EMP005</td><td>iqbal.h@email.com</td><td>35000</td><td>DPT002</td><td>0.060</td></tr><tr><td>Kamal</td><td>Uddin</td><td>EMP012</td><td>kamal.uddin@email.com</td><td>46000</td><td>DPT002</td><td>0.060</td></tr><tr><td>Rina</td><td>Saha</td><td>EMP004</td><td>rina.saha@email.com</td><td>27000</td><td>DPT003</td><td>0.000</td></tr><tr><td>Nadia</td><td>Akter</td><td>EMP006</td><td>nadia.akter@email.com</td><td>42000</td><td>DPT004</td><td>0.020</td></tr><tr><td>Meena</td><td>Paul</td><td>EMP008</td><td>meena.paul@email.com</td><td>20000</td><td>DPT001</td><td>0.000</td></tr><tr><td>Fahim</td><td>Rahman</td><td>EMP010</td><td>fahim.r@email.com</td><td>37000</td><td>DPT006</td><td>0.025</td></tr><tr><td>Lamia</td><td>Haque</td><td>EMP013</td><td>lamia.haque@email.com</td><td>29000</td><td>DPT007</td><td>0.035</td></tr></table> <p>8 rows in set (0.001 sec)</p>	first_name	last_name	employee_id	email	salary	department_id	commission_pct	John	Das	EMP003	john.das@email.com	30000	DPT001	0.030	Iqbal	Hossain	EMP005	iqbal.h@email.com	35000	DPT002	0.060	Kamal	Uddin	EMP012	kamal.uddin@email.com	46000	DPT002	0.060	Rina	Saha	EMP004	rina.saha@email.com	27000	DPT003	0.000	Nadia	Akter	EMP006	nadia.akter@email.com	42000	DPT004	0.020	Meena	Paul	EMP008	meena.paul@email.com	20000	DPT001	0.000	Fahim	Rahman	EMP010	fahim.r@email.com	37000	DPT006	0.025	Lamia	Haque	EMP013	lamia.haque@email.com	29000	DPT007	0.035
first_name	last_name	employee_id	email	salary	department_id	commission_pct																																																										
John	Das	EMP003	john.das@email.com	30000	DPT001	0.030																																																										
Iqbal	Hossain	EMP005	iqbal.h@email.com	35000	DPT002	0.060																																																										
Kamal	Uddin	EMP012	kamal.uddin@email.com	46000	DPT002	0.060																																																										
Rina	Saha	EMP004	rina.saha@email.com	27000	DPT003	0.000																																																										
Nadia	Akter	EMP006	nadia.akter@email.com	42000	DPT004	0.020																																																										
Meena	Paul	EMP008	meena.paul@email.com	20000	DPT001	0.000																																																										
Fahim	Rahman	EMP010	fahim.r@email.com	37000	DPT006	0.025																																																										
Lamia	Haque	EMP013	lamia.haque@email.com	29000	DPT007	0.035																																																										