

## CSE370 : Database Systems

### Assignment 02 | Fall 2024

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**Make a PDF after completing the assignment**

<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_22201421]&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   +-----+-----+-----+-----+-----+-----+   Guido   van Rossum   guido@company.com   123-456-7895   2020-07-18   DPT005   +-----+-----+-----+-----+-----+-----+ 1 row in set (0.197 sec)</pre>
<b>No 2 Query</b> (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 AS e2 WHERE e2.department_id = e1.department_id);

<b>No 2 SS</b> <b>(of Query &amp; Output</b> <b>in Shell)</b>	<pre> MariaDB [Company_22201421]&gt; SELECT first_name, last_name, employee_id, phone_number, salary, department_id -&gt; FROM Employee e1 -&gt; WHERE salary = (SELECT MIN(salary) FROM Employee AS e2 WHERE e2.department_id = e1.department_id); +-----+-----+-----+-----+-----+-----+   first_name   last_name   employee_id   phone_number   salary   department_id   +-----+-----+-----+-----+-----+-----+   Ryan        Dahl       EMP002       123-456-7891   30000   DPT001           Guido       van Rossum   EMP006       123-456-7895   31000   DPT005           Rod         Johnson    EMP010       123-456-7899   32000   DPT007         +-----+-----+-----+-----+-----+-----+ 3 rows in set (1.727 sec) </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> MariaDB [Company_22201421]&gt; SELECT first_name, last_name, employee_id, commission_pct, department_id -&gt; FROM Employee -&gt; WHERE department_id = 'DPT007' AND commission_pct &lt; (SELECT MIN(commission_pct) FROM Employee WHERE department_id = 'DPT005'); +-----+-----+-----+-----+-----+   first_name   last_name   employee_id   commission_pct   department_id   +-----+-----+-----+-----+-----+   James       Gosling    EMP009       0.020           DPT007           Satoshi     Nakamoto   EMP011       0.030           DPT007         +-----+-----+-----+-----+-----+ 2 rows in set (0.198 sec) </pre>
<b>No 4 Query</b> <b>(as Plain Text)</b>	<pre> SELECT department_id, COUNT(*) AS total_employees FROM Employee WHERE department_id NOT IN (SELECT DISTINCT department_id FROM Employee WHERE salary &gt; 30000) GROUP BY department_id; </pre>

<b>No 4 SS</b> <b>(of Query &amp; Output in Shell)</b>	<pre> MariaDB [Company_22201421]&gt; SELECT department_id, COUNT(*) AS total_employees -&gt; FROM Employee -&gt; WHERE department_id NOT IN (SELECT DISTINCT department_id FROM Employee WHERE salary &gt; 30000) GROUP BY department_id; Empty set (0.326 sec) </pre>
<b>No 5 Query</b> <b>(as Plain Text)</b>	<pre> SELECT E1.department_id, E1.job_id, E1.commission_pct FROM Employee E1 WHERE E1.commission_pct &lt; (SELECT MIN(E2.commission_pct) FROM Employee E2 WHERE E1.department_id = E2.department_id AND E1.job_id != E2.job_id); </pre>
<b>No 5 SS</b> <b>(of Query &amp; Output in Shell)</b>	<pre> MariaDB [Company_22201421]&gt; SELECT E1.department_id, E1.job_id, E1.commission_pct -&gt; FROM Employee E1 -&gt; WHERE E1.commission_pct &lt; (SELECT MIN(E2.commission_pct) FROM Employee E2 WHERE E1.department_id = E2.department_id AND E1.job_id != E2.job_id); +-----+-----+-----+   department_id   job_id   commission_pct   +-----+-----+-----+   DPT001         JOB003   0.030             DPT005         JOB004   0.040             DPT007         JOB009   0.020           +-----+-----+-----+ 3 rows in set (0.159 sec) </pre>
<b>No 6 Query</b> <b>(as Plain Text)</b>	<pre> SELECT DISTINCT manager_id FROM Employee WHERE manager_id NOT IN (SELECT DISTINCT manager_id FROM Employee WHERE salary &lt; 3500); </pre>

**No 6 SS**  
(of Query & Output  
in Shell)

```
MariaDB [Company_22201421]> SELECT DISTINCT manager_id
-> FROM Employee
-> WHERE manager_id NOT IN (SELECT DISTINCT manager_id FROM Employee WHERE salary < 3500);
+-----+
| manager_id |
+-----+
| MNG001     |
| MNG005     |
| MNG007     |
+-----+
3 rows in set (0.669 sec)
```

**No 7 Query**  
(as Plain Text)

```
SELECT E1.first_name, E1.last_name, E1.employee_id, E1.email, E1.salary, E1.department_id, E1.commission_pct
FROM Employee E1
WHERE E1.commission_pct = (SELECT MIN(E2.commission_pct) FROM Employee E2 WHERE E1.manager_id =
E2.manager_id);
```

**No 7 SS**  
(of Query & Output  
in Shell)

```
MariaDB [Company_22201421]> SELECT E1.first_name, E1.last_name, E1.employee_id, E1.email, E1.salary, E1.department_id, E1.commission_pct
-> FROM Employee E1
-> WHERE E1.commission_pct = (SELECT MIN(E2.commission_pct) FROM Employee E2 WHERE E1.manager_id = E2.manager_id);
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| Brendan   | Eich      | EMP003      | brendan@company.com | 38000 | DPT001        | 0.030 |
| Evan      | You       | EMP004      | evan@company.com    | 42000 | DPT005        | 0.040 |
| James     | Gosling   | EMP009      | james@company.com    | 33000 | DPT007        | 0.020 |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (1.726 sec)
```