CSE370 : Database Systems

Assignment 01/02/03 | Summer 2025

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No 1 Query (as Plain Text)	SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number, EMP.hire_date, EMP.department_id FROM employee AS EMP ORDER BY EMP.hire_date DESC LIMIT 1;
| **No 1 SS (of Query & Output in Shell)** | ```
MariaDB [Company_21201811]> SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number, EMP.hire_date, EMP.departmen
t_id FROM employee AS EMP
    -> ORDER BY EMP.hire_date DESC
    -> LIMIT 1;
+------------+-----------+---------------------+--------------+------------+---------------+
| first_name | last_name | email               | phone_number | hire_date  | department_id |
+------------+-----------+---------------------+--------------+------------+---------------+
| James      | Khan      | james.khan@yahoo.com | 01722223344 | 2023-03-25 | DPT004        |
+------------+-----------+---------------------+--------------+------------+---------------+
1 row in set (0.001 sec)
``` |
| | |
| **No 2 Query (as Plain Text)** | SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number,EMP.salary, EMP.department_id FROM employee AS EMP
GROUP BY EMP.department_id
HAVING EMP.salary = (SELECT MIN(EMP2.salary) FROM employee AS EMP2 WHERE EMP2.department_id=EMP.department_id); |
| **No 2 SS (of Query & Output in Shell)** | ```
MariaDB [Company_21201811]> SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number,EMP.salary, EMP.department_id
 FROM employee AS EMP
    -> GROUP BY EMP.department_id
    -> HAVING EMP.salary = (SELECT MIN(EMP2.salary) FROM employee AS EMP2 WHERE EMP2.department_id=EMP.department_id);
+------------+-----------+-------------------------+--------------+--------+---------------+
| first_name | last_name | email                   | phone_number | salary | department_id |
+------------+-----------+-------------------------+--------------+--------+---------------+
| John       | Rahman    | john.rahman@gmail.com   | 01711112221  | 15000  | DPT001        |
| Michael    | Hasan     | michael.hasan@yahoo.com | 01987654321  | 22000  | DPT002        |
| Robert     | Hossain   | robert.hossain@gmail.com | 01699887766 | 27000  | DPT003        |
| James      | Khan      | james.khan@yahoo.com    | 01722223344  | 62000  | DPT004        |
| William    | Alam      | william.alam@hotmail.com | 01933334455 | 18000  | DPT005        |
| Thomas     | Islam     | thomas.islam@gmail.com  | 01855556677  | 41000  | DPT006        |
| Richard    | Ahmed     | richard.ahmed@yahoo.com | 01744445566  | 55000  | DPT007        |
+------------+-----------+-------------------------+--------------+--------+---------------+
7 rows in set (0.001 sec)
``` |
| | |
| **No 3 Query (as Plain Text)** | SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number,EMP.commission_pct, EMP.department_id FROM employee AS EMP
WHERE EMP.department_id='DPT007' AND EMP.commission_pct < (SELECT MIN(EMP1.commission_pct) FROM employee AS EMP1 WHERE EMP1.department_id='DPT005'); |

| **No 3 SS**<br>**(of Query &**<br>**Output**<br>**in Shell)** | ```
MariaDB [Company_21201811]> SELECT EMP.first_name,EMP.last_name,EMP.email,EMP.phone_number,EMP.commission_pct, EMP.department_id FROM employee AS EMP
    -> WHERE EMP.department_id='DPT007' AND EMP.commission_pct < (SELECT MIN(EMP1.commission_pct) FROM employee AS EMP1 WHERE EMP1.department_id='DPT005');
Empty set (0.001 sec)

MariaDB [Company_21201811]> 
``` |
| | |
| **No 4 Query**
(as Plain Text) | SELECT EMP.department_id, COUNT(EMP.department_id) FROM employee AS EMP
GROUP BY EMP.department_id
HAVING MAX(EMP.salary)<=30000; |
| **No 4 SS**<br>**(of Query &**<br>**Output**<br>**in Shell)** | ```
MariaDB [Company_21201811]> SELECT EMP.department_id, COUNT(EMP.department_id) FROM employee AS EMP
    -> GROUP BY EMP.department_id
    -> HAVING MAX(EMP.salary)<=30000;
+---------------+-------------------------+
| department_id | COUNT(EMP.department_id) |
+---------------+-------------------------+
| DPT001        |                       2 |
| DPT005        |                       1 |
+---------------+-------------------------+
2 rows in set (0.001 sec)
``` |
| | |
| **No 5 Query**
(as Plain Text) | SELECT EMP.department_id,EMP.job_id,EMP.commission_pct FROM employee AS EMP
WHERE EMP.commission_pct < (SELECT MAX(EMP1.commission_pct) FROM employee AS EMP1 WHERE EMP1.department_id=EMP.department_id); |
| **No 5 SS**<br>**(of Query &**<br>**Output**<br>**in Shell)** | ```
MariaDB [Company_21201811]> SELECT EMP.department_id,EMP.job_id,EMP.commission_pct FROM employee AS EMP
    -> WHERE EMP.commission_pct < (SELECT MAX(EMP1.commission_pct) FROM employee AS EMP1 WHERE EMP1.department_id=EMP.department_id);
+---------------+--------+----------------+
| department_id | job_id | commission_pct |
+---------------+--------+----------------+
| DPT001        | JOB003 |          0.030 |
| DPT003        | JOB001 |          0.020 |
| DPT002        | JOB004 |          0.000 |
+---------------+--------+----------------+
3 rows in set (0.001 sec)
``` |
| | |
| **No 6 Query**
(as Plain Text) | SELECT EMP.manager_id FROM employee AS EMP
GROUP BY EMP.manager_id
HAVING MIN(EMP.salary)>3500; |

| No 6 SS (of Query & Output in Shell) | ```
MariaDB [(none)]> USE Company_21201811;
Database changed
MariaDB [Company_21201811]> SELECT EMP.manager_id FROM employee AS EMP
    -> GROUP BY EMP.manager_id
    -> HAVING MIN(EMP.salary)>3500;
+------------+
| manager_id |
+------------+
| MNG001     |
| MNG002     |
| MNG003     |
+------------+
3 rows in set (0.000 sec)
``` |
|---|---|
| | |
| No 7 Query (as Plain Text) | SELECT EMP.first_name,EMP.last_name,EMP.employee_id,EMP.email,EMP.salary,EMP.department_id,EMP.commission_pct FROM employee AS EMP WHERE EMP.commission_pct=(SELECT MIN(EMP1.commission_pct)FROM employee AS EMP1 WHERE EMP1.manager_id = EMP.manager_id); |
| No 7 SS (of Query & Output in Shell) | ```
MariaDB [Company_21201811]> SELECT EMP.first_name,EMP.last_name,EMP.employee_id,EMP.email,EMP.salary,EMP.department_id,EMP.commission_pct FROM employee AS EMP
    -> WHERE EMP.commission_pct=(SELECT MIN(EMP1.commission_pct)FROM employee AS EMP1 WHERE EMP1.manager_id = EMP.manager_id);
+------------+-----------+-------------+------------------------+--------+---------------+----------------+
| first_name | last_name | employee_id | email                  | salary | department_id | commission_pct |
+------------+-----------+-------------+------------------------+--------+---------------+----------------+
| James      | Khan      | EMP005      | james.khan@yahoo.com   |  62000 | DPT004        |          0.000 |
| Thomas     | Islam     | EMP007      | thomas.islam@gmail.com |  41000 | DPT006        |          0.010 |
| Joseph     | Miah      | EMP010      | joseph.miah@gmail.com  |  60000 | DPT002        |          0.000 |
+------------+-----------+-------------+------------------------+--------+---------------+----------------+
3 rows in set (0.001 sec)
``` |
| | |