

CSE370 : Database Systems

Assignment 02 | Spring 2025

ID : <2-3> | Name : 6-r

**No 1 Query
(as Plain Text)**

```
mysql -u root -p
CREATE DATABASE Company_2-3;
USE Company_2-3;
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));
SHOW TABLES;
DESCRIBE Employee;
INSERT INTO Employee VALUES
('EMP001','Sharmin','Akter','sharminaktereducation@gmail.com','+8801234567892','2025-03-07','JOB001',1000000, 11.123,
'MNG001','DPT001'),
('EMP002','Abu','Saleh','abusalehsidduque14@gmail.com','+8801234567892','2025-03-08','JOB001',100000, 10.122,
'MNG002','DPT002'),
('EMP003','Shahruk','Khan','shahrukkhan@gmail.com','+8801234567893','2025-03-09','JOB003',90000, 9.121,
'MNG003','DPT003'),
('EMP004','Nafi','AsSami','nafeassami@gmail.com','+8801234567894','2025-03-10','JOB004',80000, 8.120,
'MNG004','DPT004'),
('EMP005','Fahim','Nahar','fahimnahar@gmail.com','+8801234567895','2025-03-11','JOB005',50000, 7.119,
'MNG005','DPT005'),
('EMP006','Lisa','manoban','lisamanoban@gmail.com','+8801234567896','2025-03-12','JOB004',30000, 6.118,
'MNG006','DPT003'),
('EMP007','Sathi','akter','sathiakter@gmail.com','+8801234567897','2025-03-13','JOB005',35000, 5.117,
```

```
'MNG003','DPT007'),  
(('EMP008','Mona','lisa','monalisa@gmail.com','+8801234567898','2025-03-14','JOB001',10000, 4.115, 'MNG004','DPT008'),  
(('EMP009','Dr','Yunus','dryunus@gmail.com','+8801234567899','2025-03-15','JOB001',5000, 3.114, 'MNG002','DPT001'),  
(('EMP010','Sala','Uddin','salauddin@gmail.com','+8801234567810','2025-03-16','JOB002',3500, 2.113,'MNG001','DPT001'),  
(('EMP011','Kamal','Hossain','kamalhossain@gmail.com','+8801234567811','2025-03-17','JOB002',3000, 1.112,  
'MNG001','DPT001'));  
SELECT * FROM Employee;  
  
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)

```
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 100
Server version: 10.4.32-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input state

MariaDB [(none)]> CREATE DATABASE Company_21301163;
Query OK, 1 row affected (0.002 sec)

MariaDB [(none)]> USE Company_21301163;
Database changed
MariaDB [Company_21301163]> CREATE TABLE Employee(employee_id char(10),fi
Query OK, 0 rows affected (0.018 sec)

MariaDB [Company_21301163]> SHOW TABLES;
+-----+
| Tables_in_company_21301163 |
+-----+
| employee                    |
+-----+
1 row in set (0.002 sec)

MariaDB [Company_21301163]> DESCRIBE Employee;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| employee_id | char(10)  | YES  |     | NULL    |       |
| first_name  | varchar(20) | YES  |     | NULL    |       |
| last_name   | varchar(20) | YES  |     | NULL    |       |
| email       | varchar(60) | YES  |     | NULL    |       |
| phone_number | char(14)   | YES  |     | NULL    |       |
| hire_date   | date      | YES  |     | NULL    |       |
| job_id      | char(10)  | YES  |     | NULL    |       |
| salary      | int(11)   | YES  |     | NULL    |       |
| commission_pct | decimal(5,3) | YES  |     | NULL    |       |
| manager_id  | char(10)  | YES  |     | NULL    |       |
| department_id | char(10)  | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
11 rows in set (0.007 sec)
```

```

MariaDB [Company_21301163]> INSERT INTO Employee VALUES
-> ('EMP001','Sharmin','Akteer','sharminaktereducation@gmail.com','+8801234567892','2025-03-07','JOB001',1000000, 11.123, 'MNG001','DPT001'),
-> ('EMP002','Abu','Saleh','abusalehsidduque14@gmail.com','+8801234567892','2025-03-08','JOB001',100000, 10.122, 'MNG002','DPT002'),
-> ('EMP003','Shahruk','Khan','shahrukkhan@gmail.com','+8801234567893','2025-03-09','JOB003',90000, 9.121, 'MNG003','DPT003'),
-> ('EMP004','Nafi','AsSami','nafeassami@gmail.com','+8801234567894','2025-03-10','JOB004',80000, 8.120, 'MNG004','DPT004'),
-> ('EMP005','Fahim','Nahar','fahimnahar@gmail.com','+8801234567895','2025-03-11','JOB005',50000, 7.119, 'MNG005','DPT005'),
-> ('EMP006','Lisa','manoban','lisamanoban@gmail.com','+8801234567896','2025-03-12','JOB004',30000, 6.118, 'MNG006','DPT003'),
-> ('EMP007','Sathi','akteer','sathiakter@gmail.com','+8801234567897','2025-03-13','JOB005',35000, 5.117, 'MNG003','DPT007'),
-> ('EMP008','Mona','lisa','monalisa@gmail.com','+8801234567898','2025-03-14','JOB001',10000, 4.115, 'MNG004','DPT008'),
-> ('EMP009','Dr','Yunus','dryunus@gmail.com','+8801234567899','2025-03-15','JOB001',5000, 3.114, 'MNG002','DPT001'),
-> ('EMP010','Sala','Uddin','salauddin@gmail.com','+8801234567810','2025-03-16','JOB002',3500, 2.113, 'MNG001','DPT001'),
-> ('EMP011','Kamal','Hossain','kamalhossain@gmail.com','+8801234567811','2025-03-17','JOB002',3000, 1.112, 'MNG001','DPT001');
Query OK, 11 rows affected (0.012 sec)
Records: 11 Duplicates: 0 Warnings: 0

```

```

MariaDB [Company_21301163]> SELECT * FROM Employee;

```

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
EMP001	Sharmin	Akteer	sharminaktereducation@gmail.com	+8801234567892	2025-03-07	JOB001	1000000	11.123	MNG001	DPT001
EMP002	Abu	Saleh	abusalehsidduque14@gmail.com	+8801234567892	2025-03-08	JOB001	100000	10.122	MNG002	DPT002
EMP003	Shahruk	Khan	shahrukkhan@gmail.com	+8801234567893	2025-03-09	JOB003	90000	9.121	MNG003	DPT003
EMP004	Nafi	AsSami	nafeassami@gmail.com	+8801234567894	2025-03-10	JOB004	80000	8.120	MNG004	DPT004
EMP005	Fahim	Nahar	fahimnahar@gmail.com	+8801234567895	2025-03-11	JOB005	50000	7.119	MNG005	DPT005
EMP006	Lisa	manoban	lisamanoban@gmail.com	+8801234567896	2025-03-12	JOB004	30000	6.118	MNG006	DPT003
EMP007	Sathi	akteer	sathiakter@gmail.com	+8801234567897	2025-03-13	JOB005	35000	5.117	MNG003	DPT007
EMP008	Mona	lisa	monalisa@gmail.com	+8801234567898	2025-03-14	JOB001	10000	4.115	MNG004	DPT008
EMP009	Dr	Yunus	dryunus@gmail.com	+8801234567899	2025-03-15	JOB001	5000	3.114	MNG002	DPT001
EMP010	Sala	Uddin	salauddin@gmail.com	+8801234567810	2025-03-16	JOB002	3500	2.113	MNG001	DPT001
EMP011	Kamal	Hossain	kamalhossain@gmail.com	+8801234567811	2025-03-17	JOB002	3000	1.112	MNG001	DPT001

```

MariaDB [Company_21301163]> SELECT first_name, last_name, email, phone_number, hire_date, department_id
-> FROM Employee
-> WHERE hire_date = (SELECT MAX(hire_date) FROM Employee);

```

```

+-----+-----+-----+-----+-----+-----+
| first_name | last_name | email | phone_number | hire_date | department_id |
+-----+-----+-----+-----+-----+-----+
| Kamal | Hossain | kamalhossain@gmail.com | +8801234567811 | 2025-03-17 | DPT001 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

```

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 e1.department_id=e2.department_id);

```

No 2 SS
(of Query & Output
in Shell)

```
MariaDB [Company_21301163]> SELECT first_name, last_name, employee_id, phone_number, salary, department_id FROM Employee e1 WHERE salary=(SELECT MIN(salary) FROM Employee e2 WHERE e1.department_id=e2.department_id);
```

first_name	last_name	employee_id	phone_number	salary	department_id
Abu	Saleh	EMP002	+8801234567892	100000	DPT002
Nafi	AsSami	EMP004	+8801234567894	80000	DPT004
Fahim	Nahar	EMP005	+8801234567895	50000	DPT005
Lisa	manoban	EMP006	+8801234567896	30000	DPT003
Sathi	akter	EMP007	+8801234567897	35000	DPT007
Mona	Lisa	EMP008	+8801234567898	10000	DPT008
Kamal	Hossain	EMP011	+8801234567811	3000	DPT001

```
7 rows in set (0.003 sec)
```

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<(SELECT MIN(commission_pct) FROM Employee WHERE department_id='DPT005');

No 3 SS
(of Query & Output
in Shell)

```
MariaDB [Company_21301163]> SELECT first_name,last_name,employee_id,commission_pct,department_id FROM Employee WHERE department_id='DPT005';
```

first_name	last_name	employee_id	commission_pct	department_id
Sathi	akter	EMP007	5.117	DPT007

```
1 row in set (0.004 sec)
```

```
MariaDB [Company_21301163]> |
```

No 4 Query
(as Plain Text)

SELECT department_id, COUNT(*) AS total_employees FROM Employee WHERE department_id NOT IN (SELECT DISTINCT department_id FROM Employee WHERE salary > 30000) GROUP BY department_id;

No 4 SS (of Query & Output in Shell)	<pre> MariaDB [Company_21301163]> SELECT department_id, COUNT(*) AS total_employees FROM Employee WHERE department_id NOT IN (SELECT DISTINCT department_id FROM Employee GROUP BY department_id); +-----+-----+ department_id total_employees +-----+-----+ DPT008 1 +-----+-----+ 1 row in set (0.003 sec) </pre>
No 5 Query (as Plain Text)	SELECT department_id, job_id, commission_pct FROM Employee WHERE commission_pct < (SELECT MAX(commission_pct) FROM Employee AS subquery WHERE subquery.department_id = Employee.department_id);
No 5 SS (of Query & Output in Shell)	<pre> MariaDB [Company_21301163]> SELECT department_id, job_id, commission_pct FROM Employee WHERE commission_pct < (SELECT MAX(commission_pct) FROM Employee WHERE department_id = Employee.department_id); +-----+-----+-----+ department_id job_id commission_pct +-----+-----+-----+ DPT003 JOB004 6.118 DPT001 JOB001 3.114 DPT001 JOB002 2.113 DPT001 JOB002 1.112 +-----+-----+-----+ 4 rows in set (0.001 sec) MariaDB [Company_21301163]> </pre>
No 6 Query (as Plain Text)	SELECT manager_id FROM Employee WHERE manager_id NOT IN (SELECT DISTINCT manager_id FROM Employee WHERE salary < 3500);

No 6 SS
(of Query & Output
in Shell)

```
MariaDB [Company_21301163]> SELECT manager_id FROM Employee WHERE manager_id NOT IN(SELECT DISTINCT manager_id FROM Employee WHERE salary<3500);
+-----+
| manager_id |
+-----+
| MNG002     |
| MNG003     |
| MNG004     |
| MNG005     |
| MNG006     |
| MNG003     |
| MNG004     |
| MNG002     |
+-----+
8 rows in set (0.001 sec)
```

No 7 Query
(as Plain Text)

SELECT first_name, last_name, employee_id, email, salary, department_id, commission_pct FROM Employee WHERE
commission_pct = (SELECT MIN(commission_pct) FROM Employee AS subquery WHERE subquery.manager_id =
Employee.manager_id);

No 7 SS
(of Query & Output
in Shell)

```
MariaDB [Company_21301163]> SELECT first_name, last_name, employee_id, email, salary, department_id, commission_pct FROM Employee WHERE commission_pct = (SELECT MIN(commission_pct) FROM Employee AS subquery WHERE subquery.manager_id = Employee.manager_id);
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| Fahim      | Nahar     | EMP005      | fahimnahar@gmail.com | 50000  | DPT005        | 7.119          |
| Lisa       | manoban   | EMP006      | lisamanoban@gmail.com | 30000  | DPT003        | 6.118          |
| Sathi      | akter     | EMP007      | sathiakter@gmail.com  | 35000  | DPT007        | 5.117          |
| Mona       | lisa      | EMP008      | monalisa@gmail.com    | 10000  | DPT008        | 4.115          |
| Dr         | Yunus     | EMP009      | dryunus@gmail.com     | 5000   | DPT001        | 3.114          |
| Kamal      | Hossain   | EMP011      | kamalhossain@gmail.com | 3000   | DPT001        | 1.112          |
+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.002 sec)

MariaDB [Company_21301163]> |
```