

CSE370 : Database Systems

Assignment 02 | Spring 2025

ID : 22301518 | Name : Adittya Kumar Chowdhury

XAMPP for Windows - mysql -u root -p

MariaDB [Company_22301518]> 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	

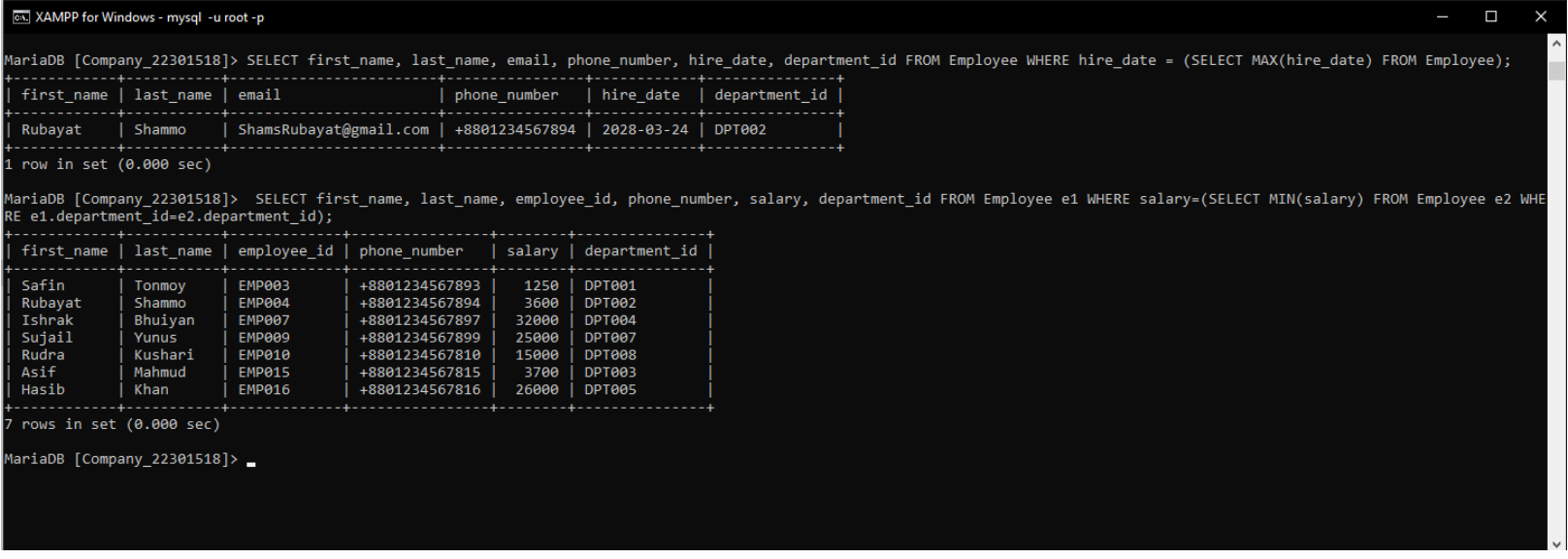
11 rows in set (0.011 sec)

XAMPP for Windows - mysql -u root -p

MariaDB [Company_22301518]> SELECT * FROM Employee;

employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id
EMP001	Zarif	Kazmi	ZarifKazmi@gmail.com	+8801234567891	2027-02-15	JOB001	31200	12.345	MNG001	DPT001
EMP002	Usaeed	Tibro	UsaeedRahmanTibro@gmail.com	+8801234567892	2027-02-16	JOB001	31500	18.452	MNG001	DPT001
EMP003	Safin	Tonmoy	SafinAhmedTonmoy@gmail.com	+8801234567893	2027-03-05	JOB002	1250	10.123	MNG001	DPT001
EMP004	Rubayat	Shammo	ShamsRubayat@gmail.com	+8801234567894	2028-03-24	JOB002	3600	12.345	MNG002	DPT002
EMP005	Adittya	Kumar	AdittyaKumar@gmail.com	+8801234567895	2027-03-05	JOB003	31000	11.111	MNG002	DPT002
EMP006	Mashrafi	Abedin	MashrafiAbedin@gmail.com	+8801234567896	2027-07-07	JOB004	46500	13.123	MNG003	DPT003
EMP007	Ishrak	Bhuiyan	IshrakBhuiyan@gmail.com	+8801234567897	2027-08-08	JOB005	32000	13.123	MNG004	DPT004
EMP008	Fahim	Faisal	FahimFaisal@gmail.com	+8801234567898	2027-09-09	JOB001	3700	12.345	MNG001	DPT001
EMP009	Sujail	Yunus	SujailYunus@gmail.com	+8801234567899	2027-09-15	JOB006	25000	10.111	MNG005	DPT007
EMP010	Rudra	Kushari	RudraKushari@gmail.com	+8801234567810	2027-01-02	JOB007	15000	10.111	MNG006	DPT008
EMP011	Kabir	Hossain	kabir.hossain@gmail.com	+8801234567811	2027-06-10	JOB005	28000	9.999	MNG004	DPT005
EMP012	Tanvir	Rahman	tanvir.rahman@gmail.com	+8801234567812	2027-04-20	JOB006	32000	12.500	MNG005	DPT007
EMP013	Mehdi	Hassan	mehdi.hassan@gmail.com	+8801234567813	2027-05-12	JOB007	35000	10.000	MNG006	DPT008
EMP014	Farzana	Karim	farzana.karim@gmail.com	+8801234567814	2027-02-28	JOB002	4000	11.500	MNG002	DPT002
EMP015	Asif	Mahmud	asif.mahmud@gmail.com	+8801234567815	2027-01-15	JOB004	3700	10.500	MNG003	DPT003
EMP016	Hasib	Khan	hasib.khan@gmail.com	+8801234567816	2027-08-15	JOB009	26000	9.500	MNG004	DPT005
EMP017	Jahid	Islam	jahid.islam@gmail.com	+8801234567817	2027-07-18	JOB004	42000	11.200	MNG003	DPT003
EMP018	Fariha	Zaman	fariha.zaman@gmail.com	+8801234567818	2027-05-30	JOB007	32000	10.000	MNG006	DPT008
EMP019	Tanisha	Ahmed	tanisha.ahmed@gmail.com	+8801234567819	2027-06-12	JOB006	27000	9.200	MNG005	DPT007

19 rows in set (0.000 sec)

No 1 Query (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);
No 1 SS (of Query & Output in Shell)	 <pre> XAMPP for Windows - mysql -u root -p MariaDB [Company_22301518]> 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 +-----+-----+-----+-----+-----+-----+ Rubayat Shammo ShamsRubayat@gmail.com +8801234567894 2028-03-24 DPT002 +-----+-----+-----+-----+-----+-----+ 1 row in set (0.000 sec) MariaDB [Company_22301518]> 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 +-----+-----+-----+-----+-----+-----+ Safin Tonmoy EMP003 +8801234567893 1250 DPT001 Rubayat Shammo EMP004 +8801234567894 3600 DPT002 Ishrak Bhuiyan EMP007 +8801234567897 32000 DPT004 Sujail Yunus EMP009 +8801234567899 25000 DPT007 Rudra Kushari EMP010 +8801234567810 15000 DPT008 Asif Mahmud EMP015 +8801234567815 3700 DPT003 Hasib Khan EMP016 +8801234567816 26000 DPT005 +-----+-----+-----+-----+-----+-----+ 7 rows in set (0.000 sec) MariaDB [Company_22301518]> _ </pre>
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)

```
XAMPP for Windows - mysql -u root -p
1 row in set (0.000 sec)

MariaDB [Company_22301518]> 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 |
+-----+-----+-----+-----+-----+-----+
| Safin      | Tonmoy    | EMP003      | +8801234567893 | 1250   | DPT001        |
| Rubayat    | Shammo    | EMP004      | +8801234567894 | 3600   | DPT002        |
| Ishrak     | Bhuiyan   | EMP007      | +8801234567897 | 32000  | DPT004        |
| Sujail     | Yunus     | EMP009      | +8801234567899 | 25000  | DPT007        |
| Rudra      | Kushari   | EMP010      | +8801234567810 | 15000  | DPT008        |
| Asif       | Mahmud    | EMP015      | +8801234567815 | 3700   | DPT003        |
| Hasib      | Khan      | EMP016      | +8801234567816 | 26000  | DPT005        |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.000 sec)

MariaDB [Company_22301518]> _
```

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)

```
XAMPP for Windows - mysql -u root -p
7 rows in set (0.000 sec)

MariaDB [Company_22301518]> SELECT first_name,last_name,employee_id,commision_pct,department_id FROM Employee WHERE department_id='DPT007' AND commission_pct<(SELECT MIN(commisio
n_pct) FROM Employee WHERE department_id='DPT005');
ERROR 1054 (42S22): Unknown column 'commision_pct' in 'field list'
MariaDB [Company_22301518]> SELECT first_name,last_name,employee_id,commission_pct,department_id FROM Employee WHERE department_id='DPT007' AND commission_pct<(SELECT MIN(commis
ion_pct) FROM Employee WHERE department_id='DPT005');
+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | commission_pct | department_id |
+-----+-----+-----+-----+-----+
| Tanisha   | Ahmed    | EMP019      | 9.200          | DPT007        |
+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [Company_22301518]> _
```

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)

```
XAMPP for Windows - mysql -u root -p
MariaDB [Company_22301518]> 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;
+-----+-----+
| department_id | total_employees |
+-----+-----+
| DPT005        | 2              |
+-----+-----+
1 row in set (0.001 sec)

MariaDB [Company_22301518]>
```

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)

```
XAMPP for Windows - mysql -u root -p
+-----+
1 row in set (0.001 sec)

MariaDB [Company_22301518]> SELECT department_id, job_id, commission_pct FROM Employee WHERE commission_pct<(SELECT MAX(commission_pct) FROM Employee AS subquery WHERE subquery.d
department_id = Employee.department_id);
+-----+
| department_id | job_id | commission_pct |
+-----+
| DPT001        | JOB001 | 12.345         |
| DPT001        | JOB002 | 10.123         |
| DPT002        | JOB003 | 11.111         |
| DPT001        | JOB001 | 12.345         |
| DPT007        | JOB006 | 10.111         |
| DPT008        | JOB007 | 10.000         |
| DPT002        | JOB002 | 11.500         |
| DPT003        | JOB004 | 10.500         |
| DPT005        | JOB009 | 9.500          |
| DPT003        | JOB004 | 11.200         |
| DPT008        | JOB007 | 10.000         |
| DPT007        | JOB006 | 9.200          |
+-----+
12 rows in set (0.001 sec)

MariaDB [Company_22301518]> _
```

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)

```
XAMPP for Windows - mysql -u root -p
DPT005      JOB009      9.500
DPT003      JOB004      11.200
DPT008      JOB007      10.000
DPT007      JOB006      9.200
+-----+
12 rows in set (0.001 sec)

MariaDB [Company_22301518]> SELECT manager_id FROM Employee WHERE manager_id NOT IN(SELECT DISTINCT manager_id FROM Employee WHERE salary<3500);
+-----+
| manager_id |
+-----+
| MNG002     |
| MNG002     |
| MNG003     |
| MNG004     |
| MNG005     |
| MNG006     |
| MNG004     |
| MNG005     |
| MNG006     |
| MNG002     |
| MNG003     |
| MNG004     |
| MNG003     |
| MNG006     |
| MNG005     |
+-----+
15 rows in set (0.001 sec)

MariaDB [Company_22301518]>
```

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)

XAMPP for Windows - mysql -u root -p

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near '=(SELECT MIN(commission_pct) FROM Employee AS subquery WHERE subquery.manager...' at line 1

MariaDB [Company_22301518]> 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
Safin	Tonmoy	EMP003	SafinAhmedTonmoy@gmail.com	1250	DPT001	10.123
Adittya	Kumar	EMP005	AdittyaKumar@gmail.com	31000	DPT002	11.111
Mehdi	Hassan	EMP013	mehdi.hassan@gmail.com	35000	DPT008	10.000
Asif	Mahmud	EMP015	asif.mahmud@gmail.com	3700	DPT003	10.500
Hasib	Khan	EMP016	hasib.khan@gmail.com	26000	DPT005	9.500
Fariha	Zaman	EMP018	fariha.zaman@gmail.com	32000	DPT008	10.000
Tanisha	Ahmed	EMP019	tanisha.ahmed@gmail.com	27000	DPT007	9.200

7 rows in set (0.001 sec)

MariaDB [Company_22301518]>