

## CSE370 : Database Systems

### Assignment 02 | Fall 2024

ID : 22301242 | Name : Md. Sabbir Akon

No 1 Query (as Plain Text)	select *from Employee;																																																																																																																																				
No 1 SS (of Query & Output in Shell)	<div>MariaDB [company_22301242]&gt; select *from Employee;</div> <table><tr><th>employee_id</th><th>first_name</th><th>last_name</th><th>email</th><th>phone_number</th><th>hire_date</th><th>job_id</th><th>salary</th><th>commission_pct</th><th>manager_id</th><th>department_id</th></tr><tr><td>EMP001</td><td>MD. SABBIR</td><td>AKON</td><td>md.sabbir.akon@g.bracu.ac.bd</td><td>01700000001</td><td>2020-03-15</td><td>JOB001</td><td>50000</td><td>0.100</td><td>MNG003</td><td>DPT002</td></tr><tr><td>EMP002</td><td>MD. SHOYEB</td><td>ISLAM</td><td>md.shoyeb.islam@g.bracu.ac.bd</td><td>01700000002</td><td>2021-06-20</td><td>JOB002</td><td>45000</td><td>0.080</td><td>MNG001</td><td>DPT004</td></tr><tr><td>EMP003</td><td>FAHIM IBN</td><td>MIZAN</td><td>fahim.ibn.mizan@g.bracu.ac.bd</td><td>01700000003</td><td>2022-09-10</td><td>JOB003</td><td>60000</td><td>0.120</td><td>MNG002</td><td>DPT005</td></tr><tr><td>EMP004</td><td>GAZI FAHMID</td><td>ERAZ</td><td>gazi.fahmid.eraz@g.bracu.ac.bd</td><td>01700000004</td><td>2023-02-01</td><td>JOB004</td><td>55000</td><td>0.090</td><td>MNG003</td><td>DPT001</td></tr><tr><td>EMP005</td><td>RAKIB</td><td>HASAN</td><td>rakib.hasan1@g.bracu.ac.bd</td><td>01700000005</td><td>2021-11-11</td><td>JOB005</td><td>40000</td><td>0.070</td><td>MNG001</td><td>DPT007</td></tr><tr><td>EMP006</td><td>MEZBAH</td><td>KHAN</td><td>mezbah.khan@g.bracu.ac.bd</td><td>01700000006</td><td>2022-05-25</td><td>JOB006</td><td>70000</td><td>0.150</td><td>MNG002</td><td>DPT003</td></tr><tr><td>EMP007</td><td>DIPTA</td><td>MAZUMDER</td><td>dipta.mazumder@g.bracu.ac.bd</td><td>01700000007</td><td>2023-06-15</td><td>JOB007</td><td>65000</td><td>0.130</td><td>MNG003</td><td>DPT006</td></tr><tr><td>EMP008</td><td>RASHED UL</td><td>ISLAM</td><td>rashed.ul.islam@g.bracu.ac.bd</td><td>01700000008</td><td>2020-10-30</td><td>JOB008</td><td>48000</td><td>0.100</td><td>MNG001</td><td>DPT004</td></tr><tr><td>EMP009</td><td>MUHAMMAD SADMAN</td><td>NOOR</td><td>muhammad.sadman.noor@g.bracu.ac.bd</td><td>01700000009</td><td>2022-01-01</td><td>JOB009</td><td>52000</td><td>0.110</td><td>MNG002</td><td>DPT002</td></tr><tr><td>EMP010</td><td>CHOWDHURY ASEER</td><td>RUTHBAH</td><td>chowdhury.aseer.ruthbah@g.bracu.ac.bd</td><td>01700000010</td><td>2021-12-15</td><td>JOB010</td><td>57000</td><td>0.095</td><td>MNG003</td><td>DPT001</td></tr><tr><td>EMP011</td><td>TAMEEM</td><td>ISLAM</td><td>tameem.islam@g.bracu.ac.bd</td><td>01700000011</td><td>2023-05-10</td><td>JOB011</td><td>53000</td><td>0.105</td><td>MNG001</td><td>DPT007</td></tr></table> <div>11 rows in set (0.000 sec)</div>	employee_id	first_name	last_name	email	phone_number	hire_date	job_id	salary	commission_pct	manager_id	department_id	EMP001	MD. SABBIR	AKON	md.sabbir.akon@g.bracu.ac.bd	01700000001	2020-03-15	JOB001	50000	0.100	MNG003	DPT002	EMP002	MD. SHOYEB	ISLAM	md.shoyeb.islam@g.bracu.ac.bd	01700000002	2021-06-20	JOB002	45000	0.080	MNG001	DPT004	EMP003	FAHIM IBN	MIZAN	fahim.ibn.mizan@g.bracu.ac.bd	01700000003	2022-09-10	JOB003	60000	0.120	MNG002	DPT005	EMP004	GAZI FAHMID	ERAZ	gazi.fahmid.eraz@g.bracu.ac.bd	01700000004	2023-02-01	JOB004	55000	0.090	MNG003	DPT001	EMP005	RAKIB	HASAN	rakib.hasan1@g.bracu.ac.bd	01700000005	2021-11-11	JOB005	40000	0.070	MNG001	DPT007	EMP006	MEZBAH	KHAN	mezbah.khan@g.bracu.ac.bd	01700000006	2022-05-25	JOB006	70000	0.150	MNG002	DPT003	EMP007	DIPTA	MAZUMDER	dipta.mazumder@g.bracu.ac.bd	01700000007	2023-06-15	JOB007	65000	0.130	MNG003	DPT006	EMP008	RASHED UL	ISLAM	rashed.ul.islam@g.bracu.ac.bd	01700000008	2020-10-30	JOB008	48000	0.100	MNG001	DPT004	EMP009	MUHAMMAD SADMAN	NOOR	muhammad.sadman.noor@g.bracu.ac.bd	01700000009	2022-01-01	JOB009	52000	0.110	MNG002	DPT002	EMP010	CHOWDHURY ASEER	RUTHBAH	chowdhury.aseer.ruthbah@g.bracu.ac.bd	01700000010	2021-12-15	JOB010	57000	0.095	MNG003	DPT001	EMP011	TAMEEM	ISLAM	tameem.islam@g.bracu.ac.bd	01700000011	2023-05-10	JOB011	53000	0.105	MNG001	DPT007
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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)	<div>MariaDB [company_22301242]&gt; select first_name,last_name,email,phone_number,hire_date,department_id from Employee where hire_date=(select MAX(hire_date) from Employee);</div> <table><tr><th>first_name</th><th>last_name</th><th>email</th><th>phone_number</th><th>hire_date</th><th>department_id</th></tr><tr><td>DIPTA</td><td>MAZUMDER</td><td>dipta.mazumder@g.bracu.ac.bd</td><td>01700000007</td><td>2023-06-15</td><td>DPT006</td></tr></table> <div>1 row in set (0.003 sec)</div>	first_name	last_name	email	phone_number	hire_date	department_id	DIPTA	MAZUMDER	dipta.mazumder@g.bracu.ac.bd	01700000007	2023-06-15	DPT006																																																																																																																								
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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_22301242]> 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 |
+-----+-----+-----+-----+-----+-----+
| MD. SABBIR | AKON      | EMP001      | 01700000001  | 50000  | DPT002        |
| MD. SHOYEB | ISLAM     | EMP002      | 01700000002  | 45000  | DPT004        |
| FAHIM IBN  | MIZAN     | EMP003      | 01700000003  | 60000  | DPT005        |
| GAZI FAHMID | ERAZ      | EMP004      | 01700000004  | 55000  | DPT001        |
| RAKIB      | HASAN     | EMP005      | 01700000005  | 40000  | DPT007        |
| MEZBAH     | KHAN      | EMP006      | 01700000006  | 70000  | DPT003        |
| DIPTA      | MAZUMDER  | EMP007      | 01700000007  | 65000  | DPT006        |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.001 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 < all(select commission_pct from employee where department_id='DPT005');
```

No 3 SS  
(of Query & Output  
in Shell)

```
MariaDB [company_22301242]> select first_name,last_name,employee_id,commission_pct,department_id
-> from employee
-> where department_id='DPT007'
-> and commission_pct < all(select commission_pct from employee where department_id='DPT005');
+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | commission_pct | department_id |
+-----+-----+-----+-----+-----+
| RAKIB      | HASAN     | EMP005      | 0.070          | DPT007        |
| TAMEEM     | ISLAM     | EMP011      | 0.105          | DPT007        |
+-----+-----+-----+-----+-----+
2 rows in set (0.001 sec)
```

<b>No 4 Query (as Plain Text)</b>	select department_id,count(employee_id) from employee group by department_id having max(salary)<=30000;
<b>No 4 SS (of Query &amp; Output in Shell)</b>	<pre>MariaDB [company_22301242]&gt; select department_id,count(employee_id) from employee group by department_id having max(salary)&lt;=30000; Empty set (0.001 sec)</pre>
<b>No 5 Query (as Plain Text)</b>	select distinct e1.department_id, e1.job_id, e1.commission_pct from Employee e1 join Employee e2 on e1.department_id=e2.department_id and e1.commission_pct<e2.commission_pct;
<b>No 5 SS (of Query &amp; Output in Shell)</b>	<pre>MariaDB [company_22301242]&gt; select distinct e1.department_id, e1.job_id, e1.commission_pct from Employee e1 join Employee e2 on e1.department_id=e2.department_id and e1.commission_pct&lt;e2.commission_pct; +-----+-----+-----+   department_id   job_id   commission_pct   +-----+-----+-----+   DPT004          JOB002   0.080              DPT002          JOB001   0.100              DPT001          JOB004   0.090              DPT007          JOB005   0.070            +-----+-----+-----+ 4 rows in set (0.001 sec)</pre>
<b>No 6 Query (as Plain Text)</b>	select distinct manager_id from Employee e1 where exists(select*from Employee e2 where e2.manager_id=e1.manager_id and e2.salary<3500);
<b>No 6 SS (of Query &amp; Output in Shell)</b>	<pre>MariaDB [company_22301242]&gt; select distinct manager_id from Employee e1 where exists(select*from Employee e2 where e2.manager_id= e1.manager_id and e2.salary&lt;3500); Empty set (0.001 sec)</pre>
<b>No 7 Query (as Plain Text)</b>	select distinct e1.first_name, e1.last_name, e1.employee_id, e1.email, e1.salary, e1.department_id, e1.commission_pct from Employee e1 join Employee e2 on e1.manager_id = e2.manager_id and e1.commission_pct<e2.commission_pct;

No 7 SS  
(of Query & Output  
in Shell)

```
MariaDB [company_22301242]> select distinct e1.first_name, e1.last_name, e1.employee_id, e1.email, e1.salary, e1.department_id, e1.commission_pct from Employee e1 join Employee
e2 on e1.manager_id = e2.manager_id and e1.commission_pct<e2.commission_pct;
+-----+-----+-----+-----+-----+-----+-----+
| first_name | last_name | employee_id | email | salary | department_id | commission_pct |
+-----+-----+-----+-----+-----+-----+-----+
| GAZI FAHMID | ERAZ | EMP004 | gazi.fahmid.eraz@g.bracu.ac.bd | 55000 | DPT001 | 0.090 |
| CHOWDHURY ASEER | RUTHBAH | EMP010 | chowdhury.aseer.ruthbah@g.bracu.ac.bd | 57000 | DPT001 | 0.095 |
| RAKIB | HASAN | EMP005 | rakib.hasan1@g.bracu.ac.bd | 40000 | DPT007 | 0.070 |
| MUHAMMAD SADMAN | NOOR | EMP009 | muhammad.sadman.noor@g.bracu.ac.bd | 52000 | DPT002 | 0.110 |
| FAHIM IBN | MIZAN | EMP003 | fahim.ibn.mizan@g.bracu.ac.bd | 60000 | DPT005 | 0.120 |
| MD. SABBIR | AKON | EMP001 | md.sabbir.akon@g.bracu.ac.bd | 50000 | DPT002 | 0.100 |
| MD. SHOYEB | ISLAM | EMP002 | md.shoyeb.islam@g.bracu.ac.bd | 45000 | DPT004 | 0.080 |
| RASHED UL | ISLAM | EMP008 | rashed.ul.islam@g.bracu.ac.bd | 48000 | DPT004 | 0.100 |
+-----+-----+-----+-----+-----+-----+-----+
8 rows in set (0.001 sec)
```