Lab Assignment- 02

```
DELL@DESKTOP-8C9MINF d:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 13
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 statement.

MariaDB [(none)]> use lab_assignment_02;
Database changed
```

```
MariaDB [(none)]> use lab_assignment_02;
Database changed
MariaDB [lab_assignment_02]> 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)
    -> );
Query OK, 0 rows affected (0.008 sec)

MariaDB [lab_assignment_02]> 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)
```

```
MariaDB [(none)]> use lab_assignment_02;
Database changed
MariaDB [lab_assignment_02]> select * from Employee;
+-------------+------------+-----------+----------------------------+--------------+------------+--------+--------+----------------+------------+------------
----+
| employee_id | first_name | last_name | email                      | phone_number | hire_date  | job_id | salary | commission_pct | manager_id | department
_id |
+-------------+------------+-----------+----------------------------+--------------+------------+--------+--------+----------------+------------+------------
----+
| EMP001      | John       | Doe       | john.doe@example.com       | 123-456-7890 | 2022-01-15 | JOB001 | 50000  |          0.100 | MNG001     | DPT001
    |
| EMP002      | Jane       | Smith     | jane.smith@example.com     | 234-567-8901 | 2021-05-20 | JOB002 | 55000  |          0.150 | MNG002     | DPT005
    |
| EMP003      | Alice      | Brown     | alice.brown@example.com    | 345-678-9012 | 2023-03-10 | JOB003 | 60000  |          0.200 | MNG001     | DPT005
    |
| EMP004      | Bob        | Johnson   | bob.johnson@example.com    | 456-789-0123 | 2021-07-11 | JOB004 | 30000  |          0.050 | MNG002     | DPT007
    |
| EMP005      | Eve        | Davis     | eve.davis@example.com      | 567-890-1234 | 2022-08-22 | JOB005 | 45000  |          0.120 | MNG003     | DPT002
    |
| EMP006      | Chris      | Miller    | chris.miller@example.com   | 678-901-2345 | 2020-12-01 | JOB006 | 25000  |           NULL | MNG001     | DPT003
    |
| EMP007      | Sara       | Wilson    | sara.wilson@example.com    | 789-012-3456 | 2019-09-16 | JOB007 | 29000  |           NULL | MNG002     | DPT003
    |
| EMP008      | David      | Moore     | david.moore@example.com    | 890-123-4567 | 2021-11-05 | JOB008 | 35000  |          0.080 | MNG003     | DPT004
    |
| EMP009      | Linda      | Taylor    | linda.taylor@example.com   | 901-234-5678 | 2023-02-14 | JOB009 | 32000  |          0.110 | MNG001     | DPT004
    |
| EMP010      | James      | Anderson  | james.anderson@example.com | 012-345-6789 | 2022-06-28 | JOB010 | 25000  |          0.170 | MNG002     | DPT007
    |
+-------------+------------+-----------+----------------------------+--------------+------------+--------+--------+----------------+------------+------------
----+
10 rows in set (0.001 sec)
```

Question-1:

select first_name, last_name, email, phone_number, hire_date, department_id from Employee where hire_date = (select max(hire_date) from Employee);

```
MariaDB [lab_assignment_02]> select first_name, last_name, email, phone_number, hire_date, department_id from Employee w
here hire_date = (select max(hire_date) from Employee);
+------------+-----------+-------------------------+--------------+------------+---------------+
| first_name | last_name | email                   | phone_number | hire_date  | department_id |
+------------+-----------+-------------------------+--------------+------------+---------------+
| Alice      | Brown     | alice.brown@example.com | 345-678-9012 | 2023-03-10 | DPT005        |
+------------+-----------+-------------------------+--------------+------------+---------------+
1 row in set (0.001 sec)
```

Question- 2:

select first_name, last_name, employee_id, phone_number, salary, department_id from Employee l1 where l1.salary = (select min(l2.salary) from Employee l2 where l2.department_id = l1.department_id);

```
MariaDB [lab_assignment_02]> select first_name, last_name, employee_id, phone_number, salary, department_id from Employe
e l1 where l1.salary = (select min(l2.salary) from Employee l2 where l2.department_id = l1.department_id);
+------------+-----------+-------------+--------------+--------+---------------+
| first_name | last_name | employee_id | phone_number | salary | department_id |
+------------+-----------+-------------+--------------+--------+---------------+
| John       | Doe       | EMP001      | 123-456-7890 |  50000 | DPT001        |
| Jane       | Smith     | EMP002      | 234-567-8901 |  55000 | DPT005        |
| Eve        | Davis     | EMP005      | 567-890-1234 |  45000 | DPT002        |
| Chris      | Miller    | EMP006      | 678-901-2345 |  25000 | DPT003        |
| Linda      | Taylor    | EMP009      | 901-234-5678 |  32000 | DPT004        |
| James      | Anderson  | EMP010      | 012-345-6789 |  25000 | DPT007        |
+------------+-----------+-------------+--------------+--------+---------------+
6 rows in set (0.001 sec)
```

Question-3:

 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');

```
MariaDB [lab_assignment_02]> select first_name, last_name, employee_id, commission_pct, department_id from Employee wher
e 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 |
+------------+-----------+-------------+----------------+---------------+
| Bob        | Johnson   | EMP004      |          0.050 | DPT007        |
+------------+-----------+-------------+----------------+---------------+
1 row in set (0.004 sec)
```

Question-4:

select department_id, count(*) as total_employee from Employee where department_id not in (select department_id from Employee where salary > 30000) group by department_id;

OR—---------
Easy way:

select department_id, count(*) as total_employee from Employee where salary < 30000 group by department_id;

```
MariaDB [lab_assignment_02]>  select department_id, count(*) as total_employee from Employee where department_id not in
(select department_id from Employee where salary > 30000) group by department_id;
+---------------+----------------+
| department_id | total_employee |
+---------------+----------------+
| DPT003        |              2 |
| DPT007        |              2 |
+---------------+----------------+
2 rows in set (0.002 sec)
```

Question-5:

select department_id, job_id, commission_pct from Employee l1 where commission_pct < any (select commission_pct from Employee l2 where l1.department_id = l2.department_id);

```
MariaDB [lab_assignment_02]> select department_id, job_id, commission_pct from Employee l1 where commission_pct < any (s
elect commission_pct from Employee l2 where l1.department_id = l2.department_id);
+---------------+--------+----------------+
| department_id | job_id | commission_pct |
+---------------+--------+----------------+
| DPT005        | JOB002 |          0.150 |
| DPT007        | JOB004 |          0.050 |
| DPT004        | JOB008 |          0.080 |
+---------------+--------+----------------+
3 rows in set (0.001 sec)
```

Question-6:

select distinct manager_id from Employee l1 where not exists (select manager_id from Employee l2 where l2.manager_id = l1.manager_id and l2.salary < 3500);

OR——-------------
Easy way:

Select distinct manager_id from employee where salary > 3500;

```
MariaDB [lab_assignment_02]>  select distinct manager_id from Employee l1 where not exists (select manager_id from Emplo
yee l2 where l2.manager_id = l1.manager_id and l2.salary < 3500);
+------------+
| manager_id |
+------------+
| MNG001     |
| MNG002     |
| MNG003     |
+------------+
3 rows in set (0.001 sec)
```

Question-7:

select first_name, last_name, employee_id, email, salary, department_id, commission_pct from Employee l1 where l1.commission_pct = (select min(l2.commission_pct) from Employee l2 where l2.manager_id = l1.manager_id);

```
MariaDB [lab_assignment_02]> select first_name, last_name, employee_id, email, salary, department_id, commission_pct fro
m Employee l1 where l1.commission_pct  = (select min(l2.commission_pct) from Employee l2 where l2.manager_id = l1.manage
r_id);
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
| first_name | last_name | employee_id | email                   | salary | department_id | commission_pct |
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
| John       | Doe       | EMP001      | john.doe@example.com     |  50000 | DPT001        |          0.100 |
| Bob        | Johnson   | EMP004      | bob.johnson@example.com  |  30000 | DPT007        |          0.050 |
| David      | Moore     | EMP008      | david.moore@example.com  |  35000 | DPT004        |          0.080 |
+------------+-----------+-------------+-------------------------+--------+---------------+----------------+
3 rows in set (0.002 sec)
```

ClassWork_Lab02

```
XAMPP for Windows - mysql    ×    +    ∨

Setting environment for using XAMPP for Windows.
DELL@DESKTOP-8C9MINF e:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 8
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 statement.

MariaDB [(none)]> use classwork_lab02;
Database changed
MariaDB [classwork_lab02]> show tables;
+--------------------------+
| Tables_in_classwork_lab02 |
+--------------------------+
| lab_grades               |
+--------------------------+
1 row in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> INSERT INTO Lab_Grades values
    -> ('s001', 'Abir', 'CS', '1', 10, 18.5, 3.91, '2018-09-15'),
    -> ('s002', 'Nafis', 'CSE', '1', 12, 20, 3.86, '2018-08-15'),
    -> ('s003', 'Tasneem', 'CS', '1', 8, 18, 3.57, '2018-09-18'),
    -> ('s004', 'Nahid', 'ECE', '2', 7, 16.5, 3.25, '2018-08-20'),
    -> ('s005', 'Arafat', 'CS', '2', 11, 20, 4, '2018-09-13'),
    -> ('s006', 'Tasneem', 'CSE', '1', 12, 17.5, 3.7, '2018-08-15'),
    -> ('s007', 'Muhtadi', 'ECE', '1', 10, 19, 3.67, '2018-09-16');
Query OK, 7 rows affected (0.367 sec)
Records: 7  Duplicates: 0  Warnings: 0

MariaDB [classwork_lab02]> select * from lab_grades;
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| std_id | name    | major | section | days_present | project_marks | cgpa | submission_date |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| s001   | Abir    | CS    | 1       |           10 |         18.5 | 3.91 | 2018-09-15      |
| s002   | Nafis   | CSE   | 1       |           12 |           20 | 3.86 | 2018-08-15      |
| s003   | Tasneem | CS    | 1       |            8 |           18 | 3.57 | 2018-09-18      |
| s004   | Nahid   | ECE   | 2       |            7 |         16.5 | 3.25 | 2018-08-20      |
| s005   | Arafat  | CS    | 2       |           11 |           20 | 4.00 | 2018-09-13      |
| s006   | Tasneem | CSE   | 1       |           12 |         17.5 | 3.70 | 2018-08-15      |
| s007   | Muhtadi | ECE   | 1       |           10 |           19 | 3.67 | 2018-09-16      |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
7 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select min(cgpa)
    -> from lab_grades;
+-----------+
| min(cgpa) |
+-----------+
|      3.25 |
+-----------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select count(*) as total_students, avg(project_marks)
    -> from lab_grades;
+----------------+--------------------+
| total_students | avg(project_marks) |
+----------------+--------------------+
|              7 |               18.5 |
+----------------+--------------------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select count(std_id) as total_students, avg(project_marks)
    -> from lab_grades;
+----------------+--------------------+
| total_students | avg(project_marks) |
+----------------+--------------------+
|              7 |               18.5 |
+----------------+--------------------+
1 row in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select sum(days_present)
    -> from lab_grades;
+-------------------+
| sum(days_present) |
+-------------------+
|                70 |
+-------------------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select max(submission_date)
    -> from lab_grades;
+----------------------+
| max(submission_date) |
+----------------------+
| 2018-09-18           |
+----------------------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select min(cgpa), max(cgpa)
    -> from lab_grades
    -> group by major;
+-----------+-----------+
| min(cgpa) | max(cgpa) |
+-----------+-----------+
|      3.57 |      4.00 |
|      3.70 |      3.86 |
|      3.25 |      3.67 |
+-----------+-----------+
3 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    -> from lab_grades
    -> group by major;
+-------+-----------+-----------+
| major | min(cgpa) | max(cgpa) |
+-------+-----------+-----------+
| CS    |      3.57 |      4.00 |
| CSE   |      3.70 |      3.86 |
| ECE   |      3.25 |      3.67 |
+-------+-----------+-----------+
3 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select major, count(*) as total_students
    -> from lab_grades
    -> group by major;
+-------+----------------+
| major | total_students |
+-------+----------------+
| CS    |              3 |
| CSE   |              2 |
| ECE   |              2 |
+-------+----------------+
3 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    -> from lab_grades
    -> group by major
    -> having count(major) >= 2;
+-------+-----------+-----------+
| major | min(cgpa) | max(cgpa) |
+-------+-----------+-----------+
| CS    |      3.57 |      4.00 |
| CSE   |      3.70 |      3.86 |
| ECE   |      3.25 |      3.67 |
+-------+-----------+-----------+
3 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    ->  from lab_grades
    ->  group by major
    ->  having count(major) >= 3;
+-------+-----------+-----------+
| major | min(cgpa) | max(cgpa) |
+-------+-----------+-----------+
| CS    |      3.57 |      4.00 |
+-------+-----------+-----------+
1 row in set (0.002 sec)
```

```
MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    -> from lab_grades
    -> where submission date <= 2018-09-15
    -> group by major;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corr
on for the right syntax to use near 'date <= 2018-09-15
group by major' at line 3
MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    ->  from lab_grades
    ->  where submission_date <= 2018-09-15
    ->  group by major;
Empty set, 1 warning (0.001 sec)

MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    -> from lab_grades
    -> where submission_date <= '2018-09-15'
    -> group by major;
+-------+-----------+-----------+
| major | min(cgpa) | max(cgpa) |
+-------+-----------+-----------+
| CS    |      3.91 |      4.00 |
| CSE   |      3.70 |      3.86 |
| ECE   |      3.25 |      3.25 |
+-------+-----------+-----------+
3 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select major, min(cgpa), max(cgpa)
    -> from lab_grades
    -> ;
+-------+-----------+-----------+
| major | min(cgpa) | max(cgpa) |
+-------+-----------+-----------+
| CS    |      3.25 |      4.00 |
+-------+-----------+-----------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select major, min(cgpa) and max(cgpa)
    ->  from lab_grades
    ->  where submission_date <= '2018-09-15'
    ->  group by major;
+-------+-------------------------+
| major | min(cgpa) and max(cgpa) |
+-------+-------------------------+
| CS    |                       1 |
| CSE   |                       1 |
| ECE   |                       1 |
+-------+-------------------------+
3 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select name
    -> from lab_grades
    -> where project_marks = (select max(project_marks) from lab_grades);
+--------+
| name   |
+--------+
| Nafis  |
| Arafat |
+--------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]>  select name
    ->  from lab_grades
    ->  where project_marks = max(project_marks);
ERROR 1111 (HY000): Invalid use of group function
```

```
MariaDB [classwork_lab02]> select *
    -> from lab_grades
    -> where cgpa > any (select cgpa from lab_grades where major = 'CS');
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| std_id | name    | major | section | days_present | project_marks | cgpa | submission_date |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| s001   | Abir    | CS    | 1       |           10 |         18.5 | 3.91 | 2018-09-15      |
| s002   | Nafis   | CSE   | 1       |           12 |           20 | 3.86 | 2018-08-15      |
| s005   | Arafat  | CS    | 2       |           11 |           20 | 4.00 | 2018-09-13      |
| s006   | Tasneem | CSE   | 1       |           12 |         17.5 | 3.70 | 2018-08-15      |
| s007   | Muhtadi | ECE   | 1       |           10 |           19 | 3.67 | 2018-09-16      |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
5 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select *
    -> from lab_grades
    -> where major = 'CSE' and cgpa > any (select cgpa from lab_grades where major = 'CS');
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| std_id | name    | major | section | days_present | project_marks | cgpa | submission_date |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
| s002   | Nafis   | CSE   | 1       |           12 |           20 | 3.86 | 2018-08-15      |
| s006   | Tasneem | CSE   | 1       |           12 |         17.5 | 3.70 | 2018-08-15      |
+--------+---------+-------+---------+--------------+--------------+------+-----------------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]> --hello
MariaDB [classwork_lab02]> --this is comment
```

```
MariaDB [classwork_lab02]> select *
    -> from lab_grades
    -> where major = 'CSE' and project_marks > all (select project_marks from lab_grades where major = 'CS');
Empty set (0.001 sec)

MariaDB [classwork_lab02]> select name
    -> from lab_grades l1
    -> where l1.project_marks > any (select l2.project_marks from lab_grades l2 where l1.major = l2.major);
+---------+
| name    |
+---------+
| Abir    |
| Nafis   |
| Arafat  |
| Muhtadi |
+---------+
4 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select major
    -> from lab_grades l1
    -> where l1.cgpa < any (select l2.cgpa from lab_grades l2 where l2.cgpa = 3.7);
+-------+
| major |
+-------+
| CS    |
| ECE   |
| ECE   |
+-------+
```

```
MariaDB [classwork_lab02]> select distinct major
    -> from lab_grades l1
    -> where l1.cgpa < any (select l2.cgpa from lab_grades l2 where l2.cgpa = 3.7);
+-------+
| major |
+-------+
| CS    |
| ECE   |
+-------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select distinct major
    ->  from lab_grades
    ->  where cgpa < any (select cgpa from lab_grades where cgpa = 3.7);
+-------+
| major |
+-------+
| CS    |
| ECE   |
+-------+
2 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select distinct major
    -> from lab_grades l1
    -> where exists
    -> (select * from lab_grades l2 where l1.major = l2.major and l2.cgpa < 3.7);
+--------+
| major |
+--------+
| CS     |
| ECE    |
+--------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select name
    -> from lab_grades
    -> where project_marks = (select max(project_marks) from lab_grades);
+---------+
| name    |
+---------+
| Nafis   |
| Arafat  |
+---------+
2 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> --using exists
MariaDB [classwork_lab02]> select name
    -> from lab_grades l1
    -> where not exists
    -> (select * from lab_grades l2 where l1.std_id != l2.std_id and l2.project_marks > l1.project_marks);
+---------+
| name    |
+---------+
| Nafis   |
| Arafat  |
+---------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select name
    -> from lab_grades l1
    ->  where exists
    ->  (select * from lab_grades l2 where l1.std_id != l2.std_id and l2.project_marks > l1.project_marks);
+----------+
| name     |
+----------+
| Abir     |
| Tasneem  |
| Nahid    |
| Tasneem  |
| Muhtadi  |
+----------+
5 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select name
    -> from lab_grades l1
    ->  where not exists
    ->  (select * from lab_grades l2 where l1.std_id != l2.std_id and l2.project_marks < l1.project_marks);
+--------+
| name   |
+--------+
| Nahid  |
+--------+
1 row in set (0.001 sec)

MariaDB [classwork_lab02]> select name
    ->  from lab_grades l1
    ->  where not exists
    -> (select * from lab_grades l2 where l1.std_id != l2.std_id and l2.project_marks >= l1.project_marks);
Empty set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select name
    -> from lab_grades l1
    ->  where exists
    -> (select * from lab_grades l2 where l1.std_id != l2.std_id and l2.project_marks < l1.project_marks);
+---------+
| name    |
+---------+
| Abir    |
| Nafis   |
| Tasneem |
| Arafat  |
| Tasneem |
| Muhtadi |
+---------+
6 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select name
    -> from lab_grades
    -> where project_marks > all (select project_marks from lab_grades);
Empty set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select name
    ->  from lab_grades
    -> where project_marks >= all (select project_marks from lab_grades);
+--------+
| name   |
+--------+
| Nafis  |
| Arafat |
+--------+
2 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select count(*)
    -> from lab_grades
    -> group by major;
+----------+
| count(*) |
+----------+
|        3 |
|        2 |
|        2 |
+----------+
3 rows in set (0.001 sec)
```

```
MariaDB [classwork_lab02]> select major, count(*)
    -> from lab_grades
    -> group by major;
+-------+----------+
| major | count(*) |
+-------+----------+
| CS    |        3 |
| CSE   |        2 |
| ECE   |        2 |
+-------+----------+
3 rows in set (0.001 sec)

MariaDB [classwork_lab02]> select major
    -> from lab_grades l1
    -> where l1.major =;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds
on for the right syntax to use near '' at line 3
MariaDB [classwork_lab02]> select major
    -> from lab_grades
    -> group by major
    -> having count(*) >= all (select count(*) from lab_grades group by major);
+-------+
| major |
+-------+
| CS    |
+-------+
```