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19p-0085

DATABASE LAB EXAM

Section: B

Question # 01:

1):

```
MariaDB [hr]> select salary from employees order by salary desc limit 3,1;
+----------+
| salary   |
+----------+
| 14000.00 |
+----------+
1 row in set (0.001 sec)
```

10):

```
MariaDB [hr]> select first_name,last_name from emp_details_view natural join locations where city='Toronto';
+------------+-----------+
| first_name | last_name |
+------------+-----------+
| Michael    | Hartstein |
| Pat        | Fay       |
+------------+-----------+
2 rows in set (0.004 sec)
```

9):

```
MariaDB [hr]> select first_name,last_name from employees natural join departments where department_name='Finance';
+-------------+-----------+
| first_name  | last_name |
+-------------+-----------+
| Daniel      | Faviet    |
| John        | Chen      |
| Ismael      | Sciarra   |
| Jose Manuel | Urman     |
| Luis        | Popp      |
+-------------+-----------+
5 rows in set (0.001 sec)
```

7):

```
MariaDB [hr]> select first_name,last_name,job_title from employees natural join departments natural join jobs where department_id=20;
+------------+-----------+------------------------+
| first_name | last_name | job_title              |
+------------+-----------+------------------------+
| Pat        | Fay       | Marketing Representative |
+------------+-----------+------------------------+
1 row in set (0.002 sec)

MariaDB [hr]>
```

4):

```
MariaDB [hr]> select first_name,last_name from employees where salary > '2500.00' or salary >'11500.00';
+--------------+--------------+
| first_name   | last_name    |
+--------------+--------------+
| Steven       | King         |
| Neena        | Kochhar      |
| Lex          | De Haan      |
| Alexander    | Hunold       |
| Bruce        | Ernst        |
| David        | Austin       |
| Valli        | Pataballa    |
| Diana        | Lorentz      |
| Nancy        | Greenberg    |
| Daniel       | Faviet       |
| John         | Chen         |
| Ismael       | Sciarra      |
| Jose Manuel  | Urman        |
| Luis         | Popp         |
| Den          | Raphaely     |
| Alexander    | Khoo         |
| Shelli       | Baida        |
| Sigal        | Tobias       |
| Guy          | Himuro       |
| Matthew      | Weiss        |
| Adam         | Fripp        |
| Payam        | Kaufling     |
| Shanta       | Vollman      |
| Kevin        | Mourgos      |
| Julia        | Nayer        |
| Irene        | Mikkilineni  |
| Laura        | Bissot       |
| Mozhe        | Atkinson     |
| Jason        | Mallin       |
| Michael      | Rogers       |
| Renske       | Ladwig       |
| Stephen      | Stiles       |
| John         | Seo          |
| Trenna       | Rajs         |
| Curtis       | Davies       |
| Randall      | Matos        |
| John         | Russell      |
| Karen        | Partners     |
| Alberto      | Errazuriz    |
| Gerald       | Cambrault    |
| Eleni        | Zlotkey      |
| Peter        | Tucker       |
| David        | Bernstein    |
| Peter        | Hall         |
```

12):

```
ERROR 1111 (HY000): Invalid use of group function
MariaDB [hr]> select count(employee_id), department_name from employees natural join departments where employee_id <102;
+--------------------+-----------------+
| count(employee_id) | department_name |
+--------------------+-----------------+
|                  1 | Executive       |
+--------------------+-----------------+
1 row in set (0.001 sec)
```

5):

select first_name ,last_name from employees where salary > (select avg(salary) from employees natural join departments group by department_name);

6):

```
ERROR 1242 (21000): Subquery returns more than 1 row
MariaDB [hr]> select  first_name,last_name, max(salary) from employees natural join departments group by department_name;
+------------+-----------+-------------+
| first_name | last_name | max(salary) |
+------------+-----------+-------------+
| William    | Gietz     |     8300.00 |
| Neena      | Kochhar   |    17000.00 |
| Daniel     | Faviet    |     9000.00 |
| Bruce      | Ernst     |     6000.00 |
| Pat        | Fay       |     6000.00 |
| Alexander  | Khoo      |     3100.00 |
| Peter      | Tucker    |    10000.00 |
| Laura      | Bissot    |     4200.00 |
+------------+-----------+-------------+
8 rows in set (0.001 sec)
```

Question # 02:

```
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that
MariaDB [hr]> create table person(
    -> id int(10) primary key not null,
    -> email varchar(40));
Query OK, 0 rows affected (0.030 sec)

MariaDB [hr]> insert into person values(1,'john@example.com');
Query OK, 1 row affected (0.004 sec)

MariaDB [hr]> insert into person values(1,'bob@example.com');
ERROR 1062 (23000): Duplicate entry '1' for key 'PRIMARY'
MariaDB [hr]> insert into person values(2,'bob@example.com');
Query OK, 1 row affected (0.002 sec)

MariaDB [hr]> insert into person values(3,'john@example.com');
Query OK, 1 row affected (0.001 sec)

MariaDB [hr]> select * from person;
+----+------------------+
| id | email            |
+----+------------------+
|  1 | john@example.com |
|  2 | bob@example.com  |
|  3 | john@example.com |
+----+------------------+
3 rows in set (0.000 sec)

MariaDB [hr]>
```

Delete Query:

```
MariaDB [hr]> delete from person where email='john@example.com' and id >1;
Query OK, 1 row affected (0.002 sec)

MariaDB [hr]> select * from person;
+----+-----------------+
| id | email           |
+----+-----------------+
|  1 | bob@example.com |
|  2 | bob@example.com |
+----+-----------------+
2 rows in set (0.000 sec)
```

13):

select first_name, last_name , job_title,department_name, city, region_name from employees natural join departments natural join jobs natural join locations natural join countries natural join regions;

11):

16)

```
MariaDB [hr]> select department_id, location_id ,department_name from departments;
+---------------+-------------+----------------------+
| department_id | location_id | department_name      |
+---------------+-------------+----------------------+
|            10 |        1700 | Administration       |
|            20 |        1800 | Marketing            |
|            30 |        1700 | Purchasing           |
|            40 |        2400 | Human Resources      |
|            50 |        1500 | Shipping             |
|            60 |        1400 | IT                   |
|            70 |        2700 | Public Relations     |
|            80 |        2500 | Sales                |
|            90 |        1700 | Executive            |
|           100 |        1700 | Finance              |
|           110 |        1700 | Accounting           |
|           120 |        1700 | Treasury             |
|           130 |        1700 | Corporate Tax        |
|           140 |        1700 | Control And Credit   |
|           150 |        1700 | Shareholder Services |
|           160 |        1700 | Benefits             |
|           170 |        1700 | Manufacturing        |
|           180 |        1700 | Construction         |
|           190 |        1700 | Contracting          |
|           200 |        1700 | Operations           |
|           210 |        1700 | IT Support           |
|           220 |        1700 | NOC                  |
|           230 |        1700 | IT Helpdesk          |
|           240 |        1700 | Government Sales     |
|           250 |        1700 | Retail Sales         |
|           260 |        1700 | Recruiting           |
|           270 |        1700 | Payroll              |
+---------------+-------------+----------------------+
27 rows in set (0.001 sec)
```

Question 2:

2: Procedures:

```
MariaDB [hr]> select * from regions;
+-----------+-----------------------+
| region_id | region_name           |
+-----------+-----------------------+
|         1 | Europe                |
|         2 | Americas              |
|         3 | Asia                  |
|         4 | Middle East and Africa |
+-----------+-----------------------+
4 rows in set (0.001 sec)

MariaDB [hr]> delimiter $$
MariaDB [hr]> create procedure regions()
    -> begin
    -> insert into regions values (5,'Polland');
    -> end$$
Query OK, 0 rows affected (0.004 sec)

MariaDB [hr]> call regions$$
Query OK, 1 row affected (0.002 sec)

MariaDB [hr]>
```

Countries Procedure:

```
MariaDB [hr]> delimiter $$
MariaDB [hr]> create procedure countries()
    -> begin
    -> insert into countries values ('ZK','Polland',9);
    -> end$$
Query OK, 0 rows affected (0.005 sec)

MariaDB [hr]> call countries$$
```

2):

Create view asjid as select phone_number,first_name,last_name ,max_salary from
employees natural join jobs where job_id='sh_clerk'or job_id='pu_clerk' or job_id='st_clerk'
order by max_salary desc$$

```
MariaDB [hr]> create view asjid as select phone_number,first_name,last_name ,max_salary from employees natural join jobs where job_id='sh_clerk'or job_id='pu_clerk' or job_id='st_clerk' order by max_salary desc$
$
Query OK, 0 rows affected (0.004 sec)

MariaDB [hr]> select * from asjid$$
+--------------+------------+------------+------------+
| phone_number | first_name | last_name  | max_salary |
+--------------+------------+------------+------------+
| 515.127.4562 | Alexander  | Khoo       |       5500 |
| 515.127.4563 | Shelli     | Baida      |       5500 |
| 515.127.4564 | Sigal      | Tobias     |       5500 |
| 515.127.4565 | Guy        | Himuro     |       5500 |
| 515.127.4566 | Karen      | Colmenares |       5500 |
| 650.507.9876 | Winston    | Taylor     |       5500 |
| 650.507.9877 | Jean       | Fleaur     |       5500 |
| 650.507.9878 | Martha     | Sullivan   |       5500 |
| 650.507.9879 | Girard     | Geoni      |       5500 |
| 650.509.1876 | Nandita    | Sarchand   |       5500 |
| 650.509.2876 | Alexis     | Bull       |       5500 |
| 650.509.3876 | Julia      | Dellinger  |       5500 |
| 650.509.4876 | Anthony    | Cabrio     |       5500 |
```

515.127.4564	Sigal	Tobias	5500
515.127.4565	Guy	Himuro	5500
515.127.4566	Karen	Colmenares	5500
650.507.9876	Winston	Taylor	5500
650.507.9877	Jean	Fleaur	5500
650.507.9878	Martha	Sullivan	5500
650.507.9879	Girard	Geoni	5500
650.509.1876	Nandita	Sarchand	5500
650.509.2876	Alexis	Bull	5500
650.509.3876	Julia	Dellinger	5500
650.509.4876	Anthony	Cabrio	5500
650.505.1876	Kelly	Chung	5500
650.505.2876	Jennifer	Dilly	5500
650.505.3876	Timothy	Gates	5500
650.505.4876	Randall	Perkins	5500
650.501.1876	Sarah	Bell	5500
650.501.2876	Britney	Everett	5500
650.501.3876	Samuel	McCain	5500
650.501.4876	Vance	Jones	5500
650.507.9811	Alana	Walsh	5500
650.507.9822	Kevin	Feeney	5500
650.507.9833	Donald	OConnell	5500
650.507.9844	Douglas	Grant	5500
650.124.1214	Julia	Nayer	5000
650.124.1224	Irene	Mikkilineni	5000
650.124.1334	James	Landry	5000
650.124.1434	Steven	Markle	5000
650.124.5234	Laura	Bissot	5000
650.124.6234	Mozhe	Atkinson	5000
650.124.7234	James	Marlow	5000
650.124.8234	TJ	Olson	5000
650.127.1934	Jason	Mallin	5000
650.127.1834	Michael	Rogers	5000
650.127.1734	Ki	Gee	5000
650.127.1634	Hazel	Philtanker	5000
650.121.1234	Renske	Ladwig	5000
650.121.2034	Stephen	Stiles	5000
650.121.2019	John	Seo	5000
650.121.1834	Joshua	Patel	5000
650.121.8009	Trenna	Rajs	5000
650.121.2994	Curtis	Davies	5000
650.121.2874	Randall	Matos	5000
650.121.2004	Peter	Vargas	5000

```
+--------------+------------+------------+------------+
45 rows in set (0.001 sec)
```

3):

```
MariaDB [hr]> select first_name,last_name ,max_salary from employees natural join jobs where job_id='sh_clerk'or job_id=
'pu_clerk' or job_id='st_clerk' order by max_salary desc$$_
+------------+------------+------------+
| first_name | last_name  | max_salary |
+------------+------------+------------+
| Alexander  | Khoo       |       5500 |
| Shelli     | Baida      |       5500 |
| Sigal      | Tobias     |       5500 |
| Guy        | Himuro     |       5500 |
| Karen      | Colmenares |       5500 |
| Winston    | Taylor     |       5500 |
| Jean       | Fleaur     |       5500 |
| Martha     | Sullivan   |       5500 |
| Girard     | Geoni      |       5500 |
| Nandita    | Sarchand   |       5500 |
```

14):

```
MariaDB [hr]> select min(salary) from employees natural join departments group by department_id having min(salary)<5000;
    -> $$
+-------------+
| min(salary) |
+-------------+
|     2500.00 |
|     2100.00 |
|     4200.00 |
+-------------+
3 rows in set (0.001 sec)

MariaDB [hr]>
```

```
Peter         | Hall         |
Christopher   | Olsen        |
Nanette       | Cambrault    |
Oliver        | Tuvault      |
Janette       | King         |
Patrick       | Sully        |
Allan         | McEwen       |
Lindsey       | Smith        |
Louise        | Doran        |
Sarath        | Sewall       |
Clara         | Vishney      |
Danielle      | Greene       |
Mattea        | Marvins      |
David         | Lee          |
Sundar        | Ande         |
Amit          | Banda        |
Lisa          | Ozer         |
Harrison      | Bloom        |
Tayler        | Fox          |
William       | Smith        |
Elizabeth     | Bates        |
Sundita       | Kumar        |
Ellen         | Abel         |
Alyssa        | Hutton       |
Jonathon      | Taylor       |
Jack          | Livingston   |
Kimberely     | Grant        |
Charles       | Johnson      |
Winston       | Taylor       |
Jean          | Fleaur       |
Girard        | Geoni        |
Nandita       | Sarchand     |
Alexis        | Bull         |
Julia         | Dellinger    |
Anthony       | Cabrio       |
Kelly         | Chung        |
Jennifer      | Dilly        |
Timothy       | Gates        |
Sarah         | Bell         |
Britney       | Everett      |
Samuel        | McCain       |
Vance         | Jones        |
Alana         | Walsh        |
Kevin         | Feeney       |
Donald        | OConnell     |
Douglas       | Grant        |
Jennifer      | Whalen       |
Michael       | Hartstein    |
Pat           | Fay          |
```

```
| Pat         | Fay         |
| Susan       | Mavris      |
| Hermann     | Baer        |
| Shelley     | Higgins     |
| William     | Gietz       |
+-------------+-------------+
96 rows in set (0.001 sec)
```