ASSIGNMENT-1

Abdullah Tahir Khurshid

P19-0067

QUESTION-1:

```
MariaDB [employees]> select *
    -> from employees
    -> where lower(last_name like "%a%" or last_name like "%e%" or last_name like "%i%" or last_name like "%o%" or last_
name like "%u%")  limit 15;
+--------+------------+------------+-----------+--------+------------+
| emp_no | birth_date | first_name | last_name | gender | hire_date  |
+--------+------------+------------+-----------+--------+------------+
|  10001 | 1953-09-02 | Georgi     | Facello   | M      | 1986-06-26 |
|  10002 | 1964-06-02 | Bezalel    | Simmel    | F      | 1985-11-21 |
|  10003 | 1959-12-03 | Parto      | Bamford   | M      | 1986-08-28 |
|  10004 | 1954-05-01 | Chirstian  | Koblick   | M      | 1986-12-01 |
|  10005 | 1955-01-21 | Kyoichi    | Maliniak  | M      | 1989-09-12 |
|  10006 | 1953-04-20 | Anneke     | Preusig   | F      | 1989-06-02 |
|  10007 | 1957-05-23 | Tzvetan    | Zielinski | F      | 1989-02-10 |
|  10008 | 1958-02-19 | Saniya     | Kalloufi  | M      | 1994-09-15 |
|  10009 | 1952-04-19 | Sumant     | Peac      | F      | 1985-02-18 |
|  10010 | 1963-06-01 | Duangkaew  | Piveteau  | F      | 1989-08-24 |
|  10011 | 1953-11-07 | Mary       | Sluis     | F      | 1990-01-22 |
|  10012 | 1960-10-04 | Patricio   | Bridgland | M      | 1992-12-18 |
|  10013 | 1963-06-07 | Eberhardt  | Terkki    | M      | 1985-10-20 |
|  10014 | 1956-02-12 | Berni      | Genin     | M      | 1987-03-11 |
|  10015 | 1959-08-19 | Guoxiang   | Nooteboom | M      | 1987-07-02 |
+--------+------------+------------+-----------+--------+------------+
15 rows in set (0.025 sec)
```

QUESTION-2:

```
MariaDB [employees]> SELECT GENDER , COUNT(GENDER) FROM EMPLOYEES GROUP BY GENDER  ;
+--------+---------------+
| GENDER | COUNT(GENDER) |
+--------+---------------+
| M      |        179973 |
| F      |        120051 |
+--------+---------------+
2 rows in set (0.513 sec)
```

QUESTION-3:

```
MariaDB [employees]> select emp_no, sum(salary) as total from salaries where emp_no in (10001,401829) group by emp_no;
+--------+---------+
| emp_no | total   |
+--------+---------+
|  10001 | 1281612 |
| 401829 |  441457 |
+--------+---------+
2 rows in set (0.021 sec)
```

QUESTION-4:

```
MariaDB [employees]> select emp_no, first_name, last_name, salary from employees natural join salaries where salary = (s
elect min(salary) from salaries);
+--------+------------+-----------+--------+
| emp_no | first_name | last_name | salary |
+--------+------------+-----------+--------+
| 401786 | Sachar     | Nicolson  | 38942  |
+--------+------------+-----------+--------+
1 row in set (0.027 sec)
```

QUESTION-5:

```
on for the right syntax to use near    at line 4
MariaDB [employees]> SELECT EMP_NO , FIRST_NAME , LAST_NAME ,COUNT(DEPT_NO) FROM EMPLOYEES NATURAL JOIN DEPT_EMP GROUP B
Y EMP_NO HAVING COUNT(DEPT_NO)>=2 LIMIT 10 ;
+---------+------------+-------------+----------------+
| EMP_NO  | FIRST_NAME | LAST_NAME   | COUNT(DEPT_NO) |
+---------+------------+-------------+----------------+
|   10010 | Duangkaew  | Piveteau    |              2 |
|   10018 | Kazuhide   | Peha        |              2 |
|   10029 | Otmar      | Herbst      |              2 |
|   10040 | Weiyi      | Meriste     |              2 |
|   10050 | Yinghua    | Dredge      |              2 |
|   10060 | Breannda   | Billingsley |              2 |
|   10070 | Reuven     | Garigliano  |              2 |
|   10080 | Premal     | Baek        |              2 |
|   10088 | Jungsoon   | Syrzycki    |              2 |
|   10098 | Sreekrishna| Servieres   |              2 |
+---------+------------+-------------+----------------+
10 rows in set (0.001 sec)
```

QUESTION:6

```
MariaDB [employees]> select emp_no, first_name, last_name, salary from employees natural join salaries order by salary desc limit
1,2;
+---------+------------+-----------+--------+
| emp_no  | first_name | last_name | salary |
+---------+------------+-----------+--------+
| 201777  | Wonhee     | Perl      | 110796 |
| 401801  | Subhash    | Baek      | 110589 |
+---------+------------+-----------+--------+
2 rows in set (0.001 sec)
```

Question:7

```
MariaDB [employees]> select first_name,last_name, dept_name from employees natural join dept_emp natural join departmen
s order by emp_no limit 20;
+------------+------------+--------------------+
| first_name | last_name  | dept_name          |
+------------+------------+--------------------+
| Georgi     | Facello    | Development        |
| Bezalel    | Simmel     | Sales              |
| Parto      | Bamford    | Production         |
| Chirstian  | Koblick    | Production         |
| Kyoichi    | Maliniak   | Human Resources    |
| Anneke     | Preusig    | Development        |
| Tzvetan    | Zielinski  | Research           |
| Saniya     | Kalloufi   | Development        |
| Sumant     | Peac       | Quality Management |
| Duangkaew  | Piveteau   | Quality Management |
| Duangkaew  | Piveteau   | Production         |
| Mary       | Sluis      | Customer Service   |
| Patricio   | Bridgland  | Development        |
| Eberhardt  | Terkki     | Human Resources    |
| Berni      | Genin      | Development        |
| Guoxiang   | Nooteboom  | Research           |
| Kazuhito   | Cappelletti| Sales              |
| Cristinel  | Bouloucos  | Marketing          |
| Kazuhide   | Peha       | Development        |
| Kazuhide   | Peha       | Production         |
+------------+------------+--------------------+
20 rows in set (0.007 sec)
```

QUESTION : 8

```
MariaDB [employees]> select emp_no, first_name, last_name, salary from employees natural join salaries order by salary desc limit 2,1;
+--------+------------+-----------+--------+
| emp_no | first_name | last_name | salary |
+--------+------------+-----------+--------+
| 401801 | Subhash    | Baek      | 110589 |
+--------+------------+-----------+--------+
1 row in set (0.002 sec)
```

QUESTION:9

```
MariaDB [employees]> select *from dept_emp where emp_no= "10023";
+--------+---------+------------+------------+
| emp_no | dept_no | from_date  | to_date    |
+--------+---------+------------+------------+
|  10023 | d005    | 1999-09-27 | 9999-01-01 |
+--------+---------+------------+------------+
1 row in set (0.001 sec)

MariaDB [employees]> delete from employees where emp_no= "10023";
Query OK, 1 row affected (0.190 sec)
```

QUESTION : 10

```
MariaDB [employees]> delete from employees where hire_date > '1999-12-31';
Query OK, 13 rows affected (0.690 sec)
```

QUESTION 11:

UPDATE TITLES SET TITLE="PROJECT MANAGER" WHERE EMP_NO=10068;

QUESTION : 12

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| dept_no   | char(4)     | NO   | PRI | NULL    |       |
| dept_name | varchar(40) | NO   | UNI | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
2 rows in set (0.108 sec)
```

QUESTION 13:

```
on for the right syntax to use near  (00) not null  at line 2
MariaDB [employees]> alter table departments
    -> modify column dept_name varchar(60) not null;
Query OK, 0 rows affected (0.146 sec)
Records: 0  Duplicates: 0  Warnings: 0
```
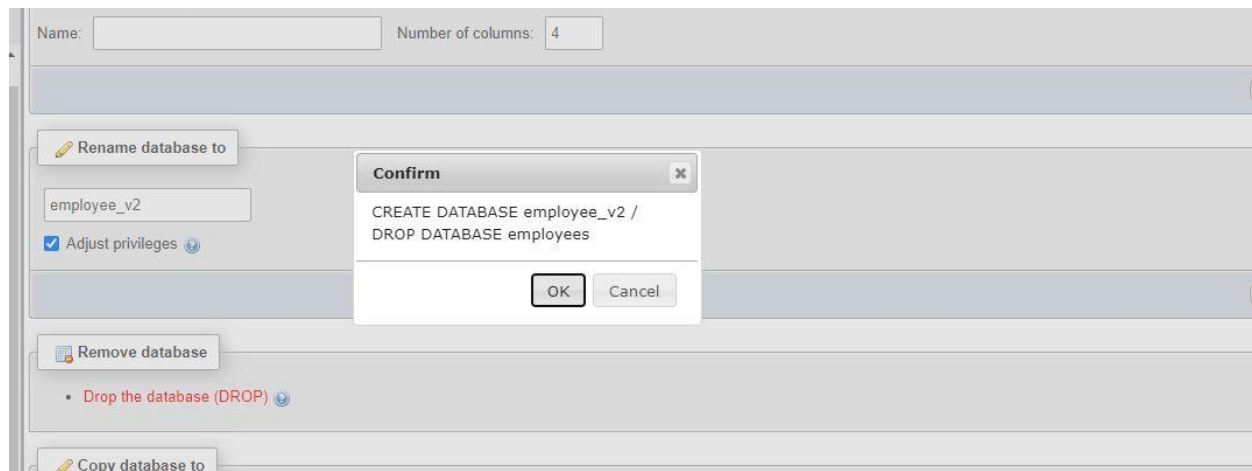
QUESTION 14:

```
MariaDB [employees]> show tables;
+----------------------+
| Tables_in_employees |
+----------------------+
| departments          |
| dept_emp             |
| dept_manager         |
| employees            |
| salaries             |
| titles               |
+----------------------+
6 rows in set (0.001 sec)

MariaDB [employees]> ALTER TABLE titles RENAME TO job_description;
Query OK, 0 rows affected (0.123 sec)

MariaDB [employees]> show tables;
+----------------------+
| Tables_in_employees |
+----------------------+
| departments          |
| dept_emp             |
| dept_manager         |
| employees            |
| job_description      |
| salaries             |
+----------------------+
```

QUESTION 15

Name: [   ]   Number of columns: [4]

✎ Rename database to

[employee_v2]

☑ Adjust privileges ❓

Confirm   ✖

CREATE DATABASE employee_v2 /
DROP DATABASE employees

[OK] [Cancel]

🗐 Remove database

• Drop the database (DROP) ❓

✎ Copy database to

```
MariaDB [(none)]> use employee_v2
Database changed
MariaDB [employee_v2]>

MariaDB [employee_v2]> drop database employee_v2;
Query OK, 6 rows affected (2.283 sec)
```

QUESTION #2

CREATE DATABASE school_system;

USE school_system;

CREATE TABLE groups (

group_id INT NOT NULL,

group_name VARCHAR(14) NOT NULL,

PRIMARY KEY(group_id)

);

CREATE TABLE students (

student_id INT   NOT NULL,

first_name VARCHAR(14)   NOT NULL,

last_name   VARCHAR(16)   NOT NULL,

group_id INT   NOT NULL,

FOREIGN KEY (group_id) REFERENCES groups (group_id) ON DELETE CASCADE,

PRIMARY KEY (student_id)

);

```sql
CREATE TABLE subjects(
    subject_id INT    NOT NULL,
    title VARCHAR(14) NOT NULL,
    PRIMARY KEY(subject_id)
);


CREATE TABLE marks(
    mark_id INT      NOT NULL,
    student_id INT NOT NULL,
    subject_id INT    NOT NULL,
    date DATE         NOT NULL,
    mark INT   NOT NULL,
    FOREIGN KEY (student_id) REFERENCES students (student_id) ON DELETE CASCADE,
    FOREIGN KEY (subject_id) REFERENCES subjects (subject_id) ON DELETE CASCADE,
    PRIMARY KEY(mark_id)
);


CREATE TABLE teachers(
    teacher_id INT    NOT NULL,
    first_name VARCHAR(16) NOT NULL,
    last_name VARCHAR(16) NOT NULL,
    PRIMARY KEY(teacher_id)
```

);

CREATE TABLE subjectnteacher(

  subject_id INT   NOT NULL,

  teacher_id INT   NOT NULL,

  group_id INT   NOT NULL,

  FOREIGN KEY (subject_id) REFERENCES subjects (subject_id) ON DELETE CASCADE,

  FOREIGN KEY (teacher_id) REFERENCES teachers (teacher_id) ON DELETE CASCADE,

  FOREIGN KEY (group_id)   REFERENCES groups (group_id) ON DELETE CASCADE

);

```
MariaDB [(none)]> source C:\Users\abdul\Desktop\assign.sql
Query OK, 1 row affected (0.001 sec)

Database changed
Query OK, 0 rows affected (0.283 sec)

Query OK, 0 rows affected (0.425 sec)

Query OK, 0 rows affected (0.385 sec)

Query OK, 0 rows affected (0.232 sec)

Query OK, 0 rows affected (0.588 sec)
```