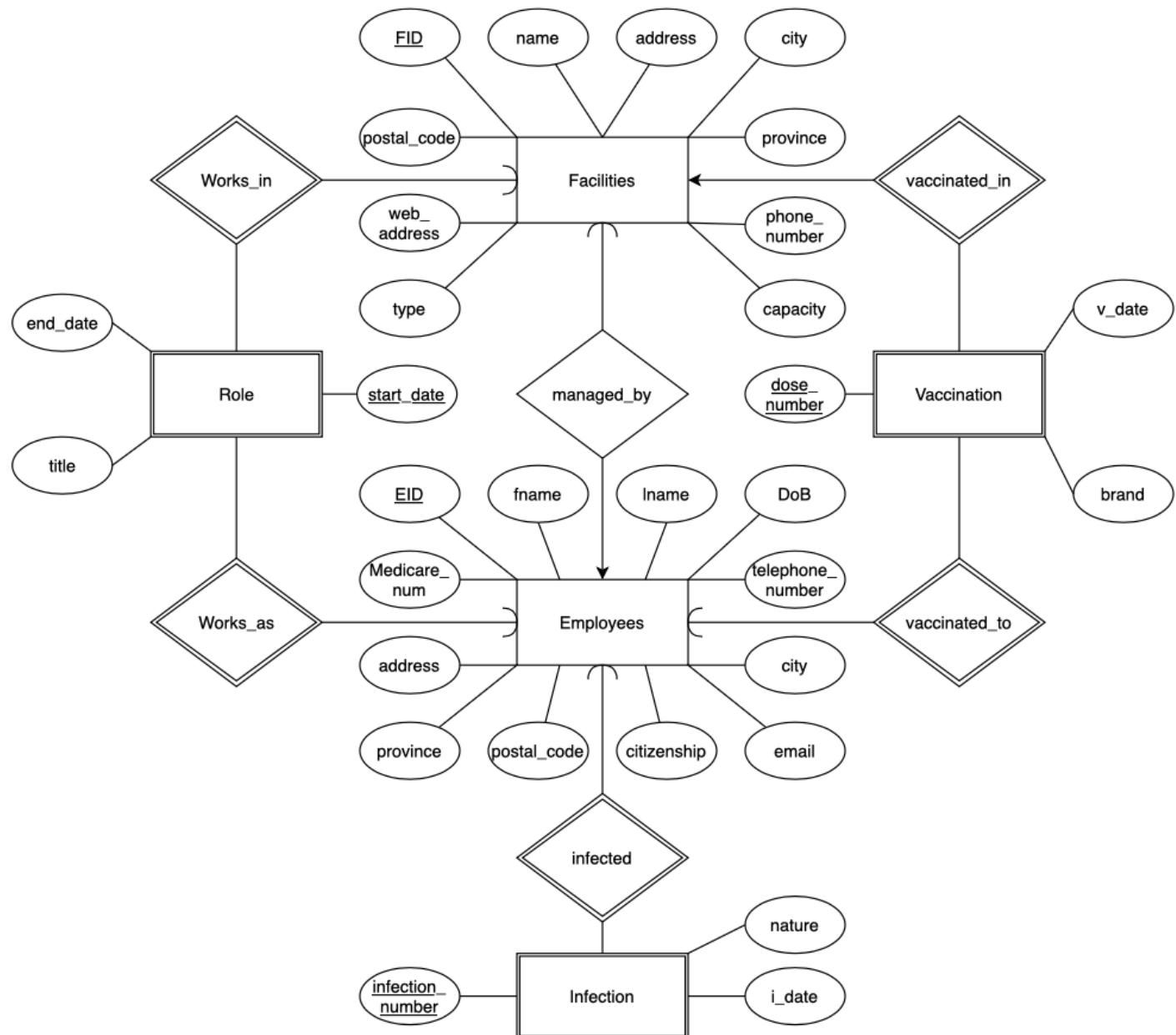


COMP 5531 Warm-up Project Report

1. E/R diagram

Health Facility Employee Status Tracking System (HFESTS)



2. The SQL statements formulated and used to create the database.

Facilities(FID, Name, Address, City, Province, Postal_Code, Phone_Number, Web_Address, Type, Capacity)

```
CREATE TABLE Facilities (
    FID INT PRIMARY KEY AUTO_INCREMENT,
    FName VARCHAR(50) NOT NULL,
    Address VARCHAR(100),
    City VARCHAR(50),
    Province VARCHAR(2),
    Postal_Code VARCHAR(10),
    Phone_Number VARCHAR(20),
    Web_Address VARCHAR(50),
    Type ENUM('hospital', 'CLSC', 'clinic', 'pharmacy', 'special
installment') NOT NULL,
    Capacity INT);
```

Employees(EID, FName, LName, DoB, Medicare_Number, Telephone_Number, Address, City, Province, Postal_code, Citizenship, Email)

```
CREATE TABLE Employees(
    EID INT PRIMARY KEY AUTO_INCREMENT,
    FName VARCHAR(50) NOT NULL,
    LName VARCHAR(50) NOT NULL,
    DoB DATE,
    Medicare_Number INT NOT NULL UNIQUE,
    Telephone_Number VARCHAR(20),
    Address VARCHAR(100),
    City VARCHAR(50),
    Province VARCHAR(2),
    Postal_Code VARCHAR(10),
    Citizenship VARCHAR(50),
    Email VARCHAR(50));
```

Roles(EID, FID, Type, Start_Date, End_Date)

```
CREATE TABLE Roles(
    EID INT,
    FID INT,
    Title ENUM ('nurse', 'doctor', 'pharmacist', 'receptionist',
'administrative personnel', 'security personnel', 'regular employee') DEFAULT
'regular employee',
    Start_Date Date NOT NULL,
```

```
End_Date DATE,  
PRIMARY KEY(EID, FID, Start_Date),  
FOREIGN KEY (EID) REFERENCES Employees(EID),  
FOREIGN KEY (FID) REFERENCES Facilities(FID));
```

Managed_by(FID, EID)

```
CREATE TABLE Managed_by(  
    FID INT PRIMARY KEY,  
    EID INT,  
    FOREIGN KEY (EID) REFERENCES Employees(EID),  
    FOREIGN KEY (FID) REFERENCES Facilities(FID));
```

Vaccination(EID, FID, Dose Number, Brand, V_date)

```
CREATE TABLE Vaccination(  
    EID INT,  
    FID INT NOT NULL,  
    Dose_Number INT AUTO_INCREMENT,  
    Brand VARCHAR(30),  
    V_Date DATE,  
    PRIMARY KEY(EID, Dose_number),  
    FOREIGN KEY (EID) REFERENCES Employees(EID),  
    FOREIGN KEY (FID) REFERENCES Facilities(FID)  
)ENGINE=MyISAM;
```

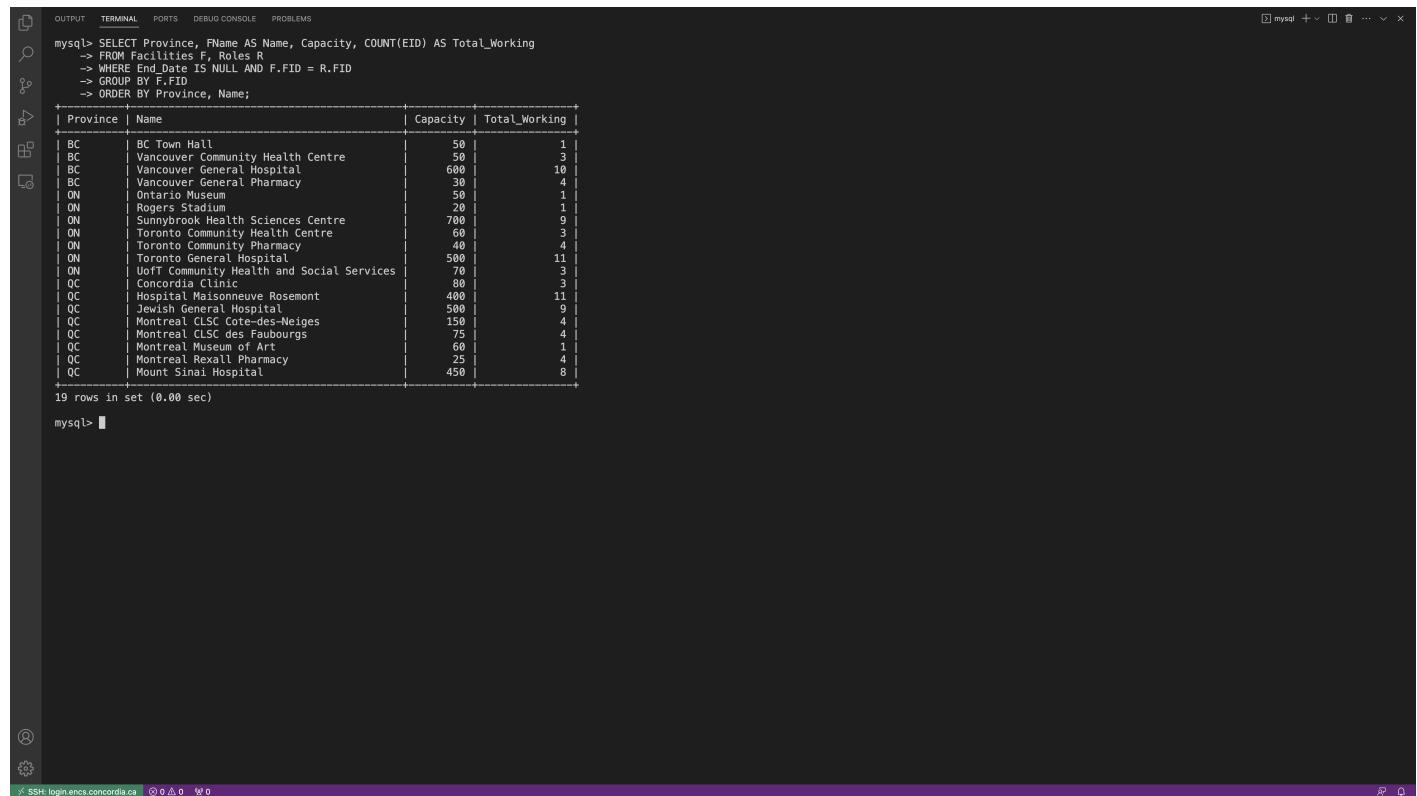
Infection(EID, Infection Number, Nature, I_date)

```
CREATE TABLE Infection(  
    EID INT,  
    Infection_Number INT AUTO_INCREMENT,  
    Nature VARCHAR(30),  
    I_Date DATE,  
    PRIMARY KEY(EID, Infection_Number),  
    FOREIGN KEY (EID) REFERENCES Employees(EID)  
)ENGINE=MyISAM;
```

3. The SQL statements formulated to express the required queries and transactions mentioned.

- i) For every facility in the system, get the province name where the facility is located, the facility name, the maximum number of employees that the facility needs to operate, and the total number of employees currently working for the facility.

```
SELECT Province, FName AS Name, Capacity, COUNT(EID) AS Total_Working
FROM Facilities F, Roles R
WHERE End_Date IS NULL AND F.FID = R.FID
GROUP BY F.FID
ORDER BY Province, Name;
```



```
mysql> SELECT Province, FName AS Name, Capacity, COUNT(EID) AS Total_Working
-> FROM Facilities F, Roles R
-> WHERE End_Date IS NULL AND F.FID = R.FID
-> GROUP BY F.FID
-> ORDER BY Province, Name;
+-----+-----+-----+-----+
| Province | Name | Capacity | Total_Working |
+-----+-----+-----+-----+
| BC     | BC Town Hall          | 50       | 1           |
| BC     | Vancouver Community Health Centre | 50       | 3           |
| BC     | Vancouver General Hospital | 600      | 10          |
| BC     | Vancouver General Pharmacy | 30       | 4           |
| ON     | Ontario Museum          | 50       | 1           |
| ON     | Rogers Stadium          | 20       | 1           |
| ON     | Sunnybrook Health Sciences Centre | 700      | 9           |
| ON     | Toronto Community Health Centre | 60       | 3           |
| ON     | Toronto Community Pharmacy | 40       | 4           |
| ON     | Toronto General Hospital | 500      | 11          |
| ON     | UofT Community Health and Social Services | 70       | 3           |
| QC     | Concordia Clinic        | 80       | 3           |
| QC     | Hospital Maisonneuve Rosemont | 400      | 11          |
| QC     | Jewish General Hospital | 500      | 9           |
| QC     | Montreal CLSC Cote-des-Neiges | 150      | 4           |
| QC     | Montreal CLSC des Faubourgs | 75       | 4           |
| QC     | Montreal Museum of Art   | 60       | 1           |
| QC     | Montreal Rexall Pharmacy | 25       | 4           |
| QC     | Mount Sinai Hospital    | 450      | 8           |
+-----+-----+-----+-----+
19 rows in set (0.00 sec)

mysql> 
```

The screenshot shows a MySQL terminal window with the following details:

- Toolbar:** OUTPUT, TERMINAL, PORTS, DEBUG CONSOLE, PROBLEMS.
- Query:** The user has run the provided SQL query to select facilities from the Facilities and Roles tables where the end date is null, grouped by facility ID (FID), and ordered by province and name.
- Result:** A table is displayed with columns: Province, Name, Capacity, and Total_Working. The table contains 19 rows of data, showing various facilities across BC, ON, and QC provinces, along with their names, capacities, and the count of employees currently working.
- Bottom Status Bar:** Shows the connection as SSH: login.encts.concordia.ca, and other terminal status indicators.

- ii) For every province, give the total number of facilities for each type of facility. Results should include province name, facility type, and total number of facilities for that type. Results should be displayed in ascending order by province name, then by total number of each type of facility.

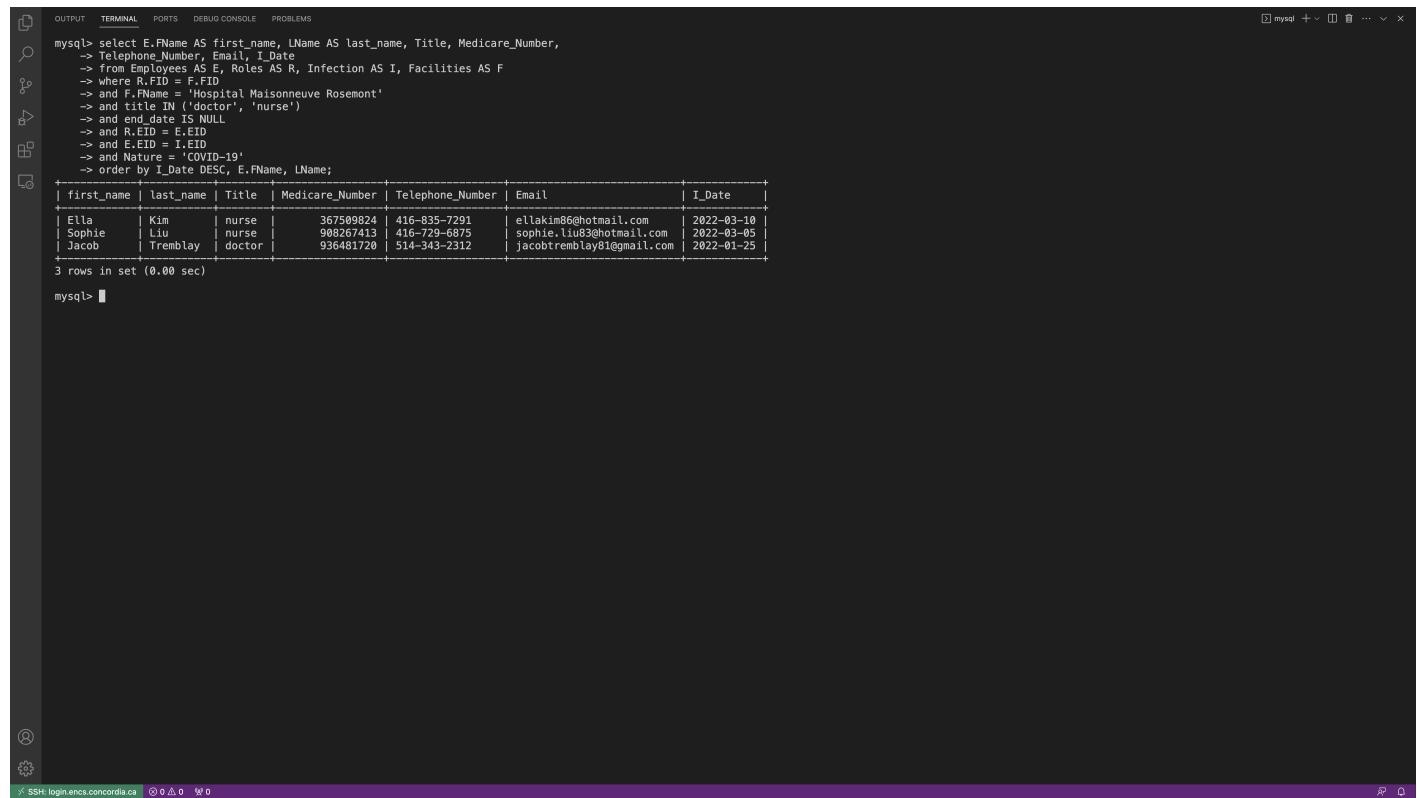
```
SELECT Province, Type, COUNT(Type)
FROM Facilities
GROUP BY Province, Type
ORDER BY Province, COUNT(Type);
```

Province	Type	COUNT(Type)
BC	hospital	1
BC	clinic	1
BC	pharmacy	1
BC	special installment	1
ON	pharmacy	1
ON	hospital	2
ON	clinic	2
ON	special installment	2
QC	clinic	1
QC	pharmacy	1
QC	special installment	1
QC	CLSC	2
QC	hospital	3

13 rows in set (0.00 sec)

- iii) For the facility "Hospital Maisonneuve Rosemont", give the details of all the nurses and doctors who are currently working and got infected at least once with COVID-19. Details include employee's first-name, last-name, role (nurse or doctor), Medicare card number, telephone-number, email address, and date of infection. Results should be displayed sorted in descending order by date of infection, then ascending order by first name, then ascending order by last name.

```
select E.FName AS first_name, LName AS last_name, Title, Medicare_Number,
Telephone_Number, Email, I_Date
from Employees AS E, Roles AS R, Infection AS I, Facilities AS F
where R.FID = F.FID
and F.FName = 'Hospital Maisonneuve Rosemont'
and title IN ('doctor', 'nurse')
and end_date IS NULL
and R.EID = E.EID
and E.EID = I.EID
and Nature = 'COVID-19'
order by I_Date DESC, E.FName, LName;
```



The screenshot shows a MySQL terminal window within a dark-themed IDE interface. The terminal tab is active, displaying the following SQL query and its results:

```
mysql> select E.FName AS first_name, LName AS last_name, Title, Medicare_Number,
-> Telephone_Number, Email, I_Date
-> from Employees AS E, Roles AS R, Infection AS I, Facilities AS F
-> where R.FID = F.FID
-> and F.FName = 'Hospital Maisonneuve Rosemont'
-> and title IN ('doctor', 'nurse')
-> and end_date IS NULL
-> and R.EID = E.EID
-> and E.EID = I.EID
-> and Nature = 'COVID-19'
-> order by I_Date DESC, E.FName, LName;
3 rows in set (0.00 sec)

mysql> ■
```

The results of the query are displayed in a table:

first_name	last_name	Title	Medicare_Number	Telephone_Number	Email	I_Date
Ela	Kim	nurse	367589824	416-835-7291	elakim86@hotmail.com	2022-03-10
Sophie	Liu	nurse	908267413	416-729-6875	sophie.liu83@hotmail.com	2022-03-05
Jacob	Tremblay	doctor	936481720	514-343-2312	jacobtremblay81@gmail.com	2022-01-25

At the bottom of the terminal window, the status bar shows: SSH: login.ecs.concordia.ca | 0 0 △ 0 0 0 0

- iv) For the facility "Hospital Maisonneuve Rosemont", give the details of all the employees who are currently working and have never been vaccinated and have never been infected by COVID-19. Details include employee's first-name, last-name, role (nurse, doctor, etc.), Medicare card number, telephone-number, and email address. Results should be displayed sorted in ascending order by role, then by first name, then by last name.

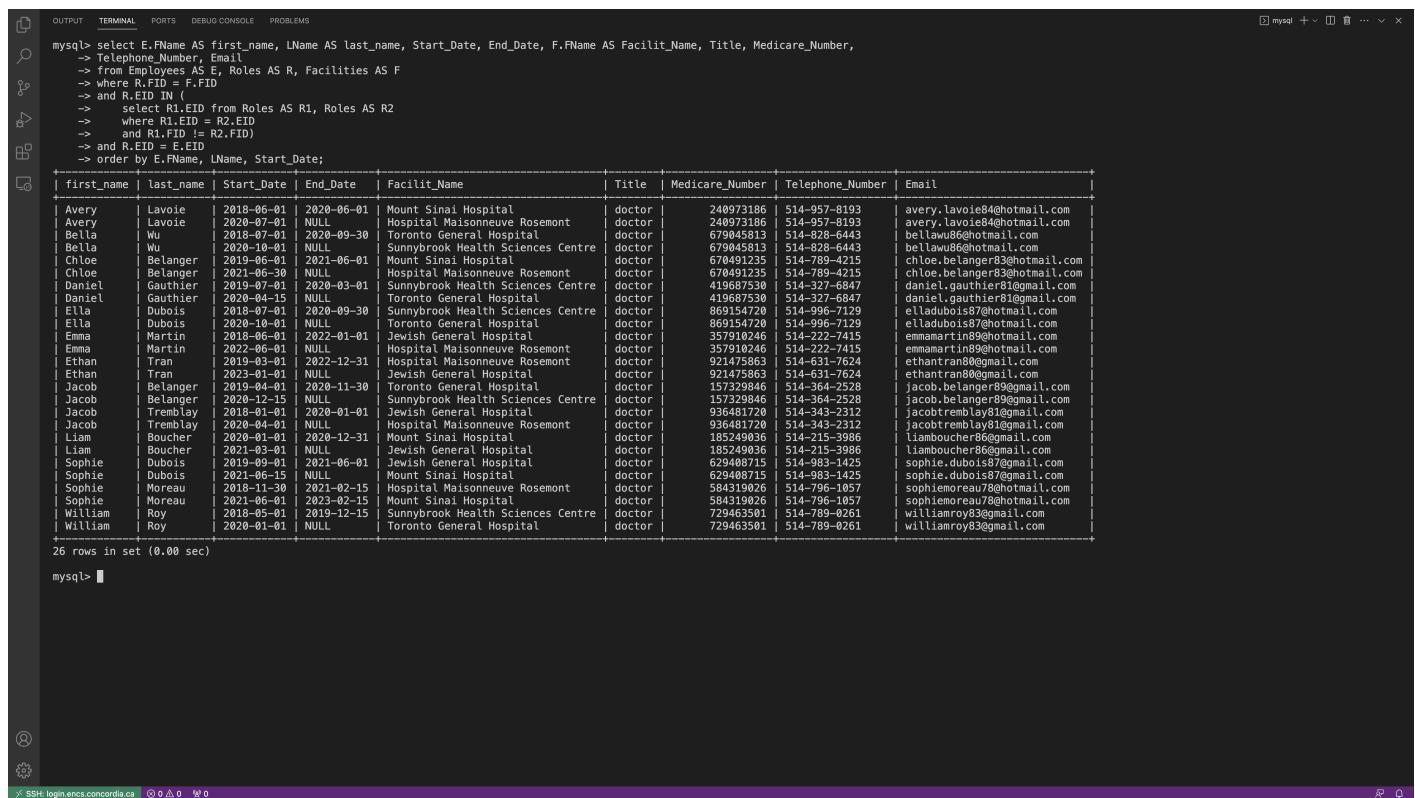
```
select E.FName AS first_name, LName AS last_name, Title, Medicare_Number,
Telephone_Number, Email
from Employees AS E, Roles AS R, Facilities AS F
where R.FID = F.FID
and F.FName = 'Hospital Maisonneuve Rosemont'
and end_date IS NULL
and R.EID = E.EID
and E.EID NOT IN (
    select EID from Infection
    where Nature = 'COVID-19')
and E.EID NOT IN (
    select EID from Vaccination)
order by CAST>Title AS CHAR, E.FName, LName;
```

```
mysql> select E.FName AS first_name, LName AS last_name, Title, Medicare_Number, Telephone_Number, Email
-> from Employees AS E, Roles AS R, Facilities AS F
-> where R.FID = F.FID
-> and F.FName = 'Hospital Maisonneuve Rosemont'
-> and end_date IS NULL
-> and R.EID = E.EID
-> and E.EID NOT IN (
->     select EID from Infection
->     where Nature = 'COVID-19')
-> and E.EID NOT IN (
->     select EID from Vaccination)
-> order by CAST>Title AS CHAR, E.FName, LName;
+-----+-----+-----+-----+-----+
| first_name | last_name | Title | Medicare_Number | Telephone_Number | Email
+-----+-----+-----+-----+-----+
| Hailey     | Nguyen    | administrative personnel | 206739148 | 514-499-2769 | halley.nguyen82@hotmail.com
| Avery      | Lavole    | doctor   | 240973186 | 514-957-8193 | avery.lavole84@hotmail.com
| Jacob      | Park      | nurse    | 752148930 | 416-624-8190 | jacob.park8@gmail.com
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> 
```

v) Give details of employees who worked in at least two different facilities. Details include employee's first-name, last-name, start date, end date, facility name, role (nurse, doctor, etc.), Medicare card number, telephone-number, and email address. Results should be displayed sorted in ascending order by first name, then by last name, then by start date.

```
select E.FName AS first_name, LName AS last_name, Start_Date, End_Date,
F.FName AS Facilit_Name, Title, Medicare_Number, Telephone_Number, Email
from Employees AS E, Roles AS R, Facilities AS F
where R.FID = F.FID
and R.EID IN (
    select R1.EID from Roles AS R1, Roles AS R2
    where R1.EID = R2.EID
    and R1.FID != R2.FID)
and R.EID = E.EID
order by E.FName, LName, Start_Date;
```



The screenshot shows the MySQL Workbench interface with the query results displayed in a table. The table has columns: first_name, last_name, Start_Date, End_Date, Facilit_Name, Title, Medicare_Number, Telephone_Number, and Email. The results show multiple rows of data, each representing an employee's work history across different facilities. The table is scrollable, and the bottom status bar indicates 26 rows were found in 0.00 seconds.

first_name	last_name	Start_Date	End_Date	Facilit_Name	Title	Medicare_Number	Telephone_Number	Email
Avery	Lavoie	2018-05-01	2020-06-01	Mount Sinai Hospital	doctor	240973186	514-957-8103	avery.lavoie84@hotmail.com
Avery	Lavoie	2020-07-01	NULL	Hospital Maisonneuve Rosemont	doctor	240973186	514-957-8103	avery.lavoie84@hotmail.com
Bella	Wu	2019-07-01	2020-09-30	Toronto General Hospital	doctor	679045813	514-828-6443	bellawu86@hotmail.com
Bella	Wu	2020-10-01	NULL	Sunnybrook Health Sciences Centre	doctor	679045813	514-828-6443	bellawu86@hotmail.com
Chloe	Belanger	2019-06-01	2021-06-01	Mount Sinai Hospital	doctor	679491235	514-789-4215	chloe.belanger83@hotmail.com
Chloe	Belanger	2021-06-30	NULL	Hospital Maisonneuve Rosemont	doctor	679491235	514-789-4215	chloe.belanger83@hotmail.com
Daniel	Gauthier	2019-07-01	2020-03-01	Sunnybrook Health Sciences Centre	doctor	419687530	514-327-6847	daniel.gauthier8@gmail.com
Daniel	Gauthier	2020-04-15	NULL	Toronto General Hospital	doctor	419687530	514-327-6847	daniel.gauthier8@gmail.com
Ella	Dubois	2018-07-01	2020-09-30	Sunnybrook Health Sciences Centre	doctor	869154720	514-996-7129	elladubois87@hotmail.com
Ella	Dubois	2020-10-01	NULL	Toronto General Hospital	doctor	869154720	514-996-7129	elladubois87@hotmail.com
Emma	Martin	2019-03-01	2022-01-01	Jewish General Hospital	doctor	357918246	514-222-7415	emmamartin189@gmail.com
Emma	Martin	2022-06-01	NULL	Hospital Maisonneuve Rosemont	doctor	357918246	514-222-7415	emmamartin189@gmail.com
Ethan	Tran	2019-03-01	2022-12-31	Hospital Maisonneuve Rosemont	doctor	921475863	514-631-7624	ethantran80@gmail.com
Ethan	Tran	2023-01-01	NULL	Jewish General Hospital	doctor	921475863	514-631-7624	ethantran80@gmail.com
Jacob	Belanger	2019-04-01	2020-11-30	Toronto General Hospital	doctor	157329846	514-364-2528	jacob.belanger89@gmail.com
Jacob	Belanger	2020-12-15	NULL	Sunnybrook Health Sciences Centre	doctor	157329846	514-364-2528	jacob.belanger89@gmail.com
Jacob	Tremblay	2018-01-01	2020-01-01	Jewish General Hospital	doctor	936481720	514-343-2312	jacobtremblay8@gmail.com
Jacob	Tremblay	2020-04-01	NULL	Hospital Maisonneuve Rosemont	doctor	936481720	514-343-2312	jacobtremblay8@gmail.com
Liam	Boucher	2020-01-01	2020-12-31	Mount Sinai Hospital	doctor	185249836	514-215-3986	liamboucher86@gmail.com
Liam	Boucher	2020-03-01	NULL	Jewish General Hospital	doctor	185249836	514-215-3986	liamboucher86@gmail.com
Sophie	Dubois	2019-06-01	2022-06-01	Jewish General Hospital	doctor	629408715	514-983-1425	sophiedubois78@gmail.com
Sophie	Dubois	2021-06-15	NULL	Mount Sinai Hospital	doctor	629408715	514-983-1425	sophiedubois78@gmail.com
Sophie	Moreau	2018-11-30	2021-02-15	Hospital Maisonneuve Rosemont	doctor	584319826	514-796-1057	sophiemoreau79@hotmail.com
Sophie	Moreau	2021-06-01	2023-02-15	Mount Sinai Hospital	doctor	584319826	514-796-1057	sophiemoreau79@hotmail.com
William	Roy	2018-05-01	2019-12-15	Sunnybrook Health Sciences Centre	doctor	729463501	514-789-0261	williamroy83@gmail.com
William	Roy	2020-01-01	NULL	Toronto General Hospital	doctor	729463501	514-789-0261	williamroy83@gmail.com

26 rows in set (0.00 sec)

mysql> █

- vi) For every vaccine type, give the total number of doses taken by employees in the system. Results should be displayed sorted in descending order by total number of doses.

```
SELECT Brand, COUNT(Brand) AS Total_Doses
FROM Vaccination
GROUP BY Brand
ORDER BY COUNT(Brand) DESC;
+-----+-----+
| Brand | Total_Doses |
+-----+-----+
| Pfizer | 52 |
| Moderna | 51 |
| AstraZeneca | 44 |
| Johnson&Johnson | 31 |
+-----+
4 rows in set (0.00 sec)
```

- vii) For every infection type in the system, give the total number of employees infected by that type in each province. Results should be displayed sorted in ascending order by infection type, then in descending order by total number of infections.

```
SELECT Nature, Province, COUNT(DISTINCT I.EID) AS Total_Number
FROM Infection AS I, Employees AS E
WHERE I.EID=E.EID
GROUP BY Nature, Province
ORDER BY CAST(Nature AS CHAR), COUNT(DISTINCT I.EID) DESC;
+-----+-----+-----+
| Nature | Province | Total_Number |
+-----+-----+-----+
| COVID-19 | ON | 13 |
| COVID-19 | QC | 7 |
| COVID-19 | BC | 5 |
| Delta Variant | QC | 15 |
| Delta Variant | ON | 13 |
| Delta Variant | BC | 6 |
| Influenza | ON | 30 |
| Influenza | QC | 26 |
| Influenza | BC | 16 |
| Omicron Variant | ON | 12 |
| Omicron Variant | QC | 9 |
| Omicron Variant | BC | 6 |
+-----+-----+-----+
12 rows in set (0.00 sec)
```

viii) For every employee in the system who is currently working and got infected at least 3 times, give the employee's first-name, last-name, start date, facility name, role (nurse, doctor, etc.), Medicare card number, telephone-number, email address, and the total number of infections. Results should be displayed sorted in descending order by total number of infections, then by first name, then by last name.

```
select E.FName AS first_name, LName AS last_name, Start_Date, F.FName AS Facility_Name, Title, Medicare_Number, Telephone_Number, Email,
MAX(Infestation_Number) AS Total_Infestation
from Employees AS E, Roles AS R, Infestation AS I, Facilities AS F
where R.FID = F.FID
and End_Date IS NULL
and R.EID = E.EID
and E.EID = I.EID
and Infestation_Number > 2
group by I.EID
order by MAX(Infestation_Number) DESC, E.FName, E.LName;
```

The screenshot shows the MySQL Workbench interface with the following details:

- Toolbar:** OUTPUT, TERMINAL, PORTS, DEBUG CONSOLE, PROBLEMS.
- Terminal:** Shows the executed SQL query and its execution plan.
- Table Output:** A result table with columns: first_name, last_name, Start_Date, Facility_Name, Title, Medicare_Number, Telephone_Number, Email, and Total_Infestation.
- Data:** The table contains 10 rows of data, each representing an employee with their details and the total number of infections they have had.

first_name	last_name	Start_Date	Facility_Name	Title	Medicare_Number	Telephone_Number	Email	Total_Infestation
Amy	Kim	2018-02-01	Jewish General Hospital	administrative personnel	329408122	514-716-4592	amykim89@hotmail.com	4
Ava	Kim	2020-05-15	Mount Sinai Hospital	nurse	518246703	416-593-2094	avakim84@hotmail.com	3
Ava	Martin	2018-10-01	Ontario Museum	administrative personnel	290139176	514-781-8345	avamarlin81@hotmail.com	3
Chloe	Liu	2021-08-15	Montreal Rexall Pharmacy	pharmacist	435197862	416-593-2784	chloeliu89@hotmail.com	3
Ellie	Kim	2019-01-01	Hospital Maisonneuve Rosemont	nurse	367509624	416-854-2557	ellie.kim85@gmail.com	3
Jacob	Bélanger	2020-12-15	Sunnybrook Health Sciences Centre	doctor	157395613	514-64-2520	jacob.belanger85@gmail.com	3
Jacob	Kim	2019-06-14	Hospital Maisonneuve Rosemont	regular employee	427859613	514-318-7964	jacob.kim84@gmail.com	5
Olivia	Lee	2018-08-01	Concordia Clinic	nurse	628940175	416-543-0058	oliviialee80@gmail.com	3
Olivia	Roy	2021-02-15	Vancouver General Hospital	doctor	270159374	514-386-2560	oliviariroy80@gmail.com	3
William	Liu	2021-01-19	Montreal CLSC des Faubourgs	receptionist	485901276	604-218-5692	williamliu83@gmail.com	3

10 rows in set (0.00 sec)

4. Populate each table in the database with at least ten representative and appropriate tuples.

```
mysql> select * from Facilities;
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| FID | FName | Address | City | Province | Postal_Code | Phone_Number | Web_Address | Type | Capacity |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1001 | Toronto General Hospital | 200 Elizabeth St | Toronto | ON | M5G 2C4 | 416-340-3935 | www.uhn.ca/TGH | hospital | 500 |
| 1002 | Sunnybrook Health Sciences Centre | 2075 Bayview Ave | Toronto | ON | M4N 3M5 | 416-388-6200 | sunnybrook.ca | hospital | 700 |
| 1003 | Hospital Sainte-rose Rosemont | 7000 Ste-Catherine St | Montreal | QC | H3V 1T9 | 514-383-8520 | www.montsainte-rose.com | hospital | 400 |
| 1004 | Mount Sinai Hospital | 4281 Rue Ontario Est | Montreal | QC | H3V 1T2 | 514-251-8383 | www.mountsinai.on.ca | hospital | 450 |
| 1005 | Jewish General Hospital | 3755 Chemin de la Côte-Sainte-Catherine | Montreal | QC | H3T 1E2 | 514-340-8222 | www.jgh.ca | hospital | 500 |
| 1006 | Vancouver General Hospital | 899 W 12th Ave | Vancouver | BC | V5Z 1M9 | 604-875-4111 | vch.ca | hospital | 600 |
| 1007 | Montreal CLSC Cote-des-Neiges | 5700 Cote-des-Neiges Rd | Montreal | QC | H3T 2A2 | 514-731-8531 | www.cssscdn.qc.ca | CLSC | 150 |
| 1008 | Montreal CLSC des Faubourgs | 1250 Rue Sanguinet | Montreal | QC | H2X 3E7 | 514-527-2361 | www.csscdelamontagne.qc.ca | CLSC | 75 |
| 1009 | Toronto Community Health Centre | 165 Bathurst St | Toronto | ON | M5V 2R4 | 416-703-8480 | www.torontochn.org | clinic | 60 |
| 1010 | UofT Community Health and Social Services | 76 Grenville St | Toronto | ON | M5S 1B2 | 416-323-6400 | www.uoftchs.ca | clinic | 70 |
| 1011 | Vancouver Community Health Centre | 1081 Burrard St | Vancouver | BC | V6Z 1Y6 | 604-633-2600 | www.vancouverchc.ca | clinic | 50 |
| 1012 | Concordia Clinic | 950 Beaumont Ave | Montreal | QC | H3V 1W3 | 514-385-5700 | www.concordiaclinic.ca | clinic | 80 |
| 1013 | London Drugs Pharmacy | 835 St. Léonard | Westmount | QC | H3Z 1A9 | 604-475-7474 | www.londondrugs.ca | pharmacy | 30 |
| 1014 | Toronto Community Pharmacy | 260 Augusta Ave | Toronto | ON | M5T 2L9 | 416-599-9783 | www.torontopharm.ca | pharmacy | 40 |
| 1015 | Montreal Rexall Pharmacy | 1500 Atwater Ave | Montreal | QC | H3Z 1X5 | 514-231-3316 | www.rexall.ca/montreal | pharmacy | 25 |
| 1016 | Rogers Stadium | 100 Queen St W | Toronto | ON | M5H 2N2 | 416-867-9790 | www.queenwest.com | special installment | 20 |
| 1017 | BC Town Hall | 3777 Kingsway | Vancouver | BC | V5R 5M4 | 604-436-2211 | www.metropolisatmetrotown.com | special installment | 50 |
| 1018 | Ontario Museum | 150 Bloor St W | Toronto | ON | M5S 2X9 | 416-413-6868 | www.museumtoronto.com | special installment | 50 |
| 1019 | Montreal Museum of Art | 1535 Chemin de la Côte-Sainte-Catherine | Montreal | QC | H2V 2J7 | 514-345-3511 | www.mma.ca | special installment | 60 |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
19 rows in set (0.00 sec)

mysql> select * from Managed_by;
+----+-----+
| FID | EID |
+----+-----+
| 1005 | 123005 |
| 1006 | 123006 |
| 1007 | 123007 |
| 1008 | 123008 |
| 1009 | 123009 |
| 1010 | 123010 |
| 1011 | 123011 |
| 1012 | 123012 |
| 1013 | 123013 |
| 1014 | 123014 |
| 1015 | 123015 |
| 1016 | 123016 |
| 1017 | 123017 |
| 1018 | 123018 |
| 1019 | 123019 |
| 1020 | 123020 |
| 1021 | 123021 |
| 1022 | 123022 |
| 1004 | 123023 |
+----+-----+
19 rows in set (0.00 sec)

mysql>
```

Employees:

```
mysql> select * from Employees;
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| EID | FName | LName | DoB | Medicare_Number | Telephone_Number | Address | City | Province | Postal_Code | Citizenship | Email |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 123001 | Emily Wong | 1960-05-19 | 46590764 | 416-238-4191 | 29 Prince Andrew Pl | Toronto | ON | M9N 3R4 | Canada | emilywong90@gmail.com |
| 123002 | Justin Trudeau | 1971-07-21 | 871324523 | 514-229-6824 | 51 Rue du Génie | Toronto | ON | M2P 2Z2 | Canada | justintrudder89@gmail.com |
| 123003 | Laura M. | 1963-03-22 | 438765461 | 514-449-6701 | 12 Rue de l'Acadie | Montreal | QC | H2W 1L8 | Canada | laura.ng.83@outlook.com |
| 123004 | Francois Legault | 1957-05-26 | 923607068 | 514-643-2001 | 2075 Rue Jollette | Montreal | QC | H1W 3A1 | Canada | f.legault@mail.com |
| 123005 | Amy Kim | 1969-07-15 | 329408122 | 514-716-4592 | 8361 Rue Saint-Denis | Montreal | QC | H2P 2H8 | Canada | amykim99@hotmail.com |
| 123006 | Kevin Green | 1972-12-07 | 589314958 | 604-498-7562 | 2455 Bellevue Ave | Vancouver | BC | V7V 1E1 | Canada | kevingreen82@gmail.com |
| 123007 | Sophia Xu | 1964-06-17 | 232437141 | 514-548-7456 | 3255 Rue de Rouen | Montreal | QC | H1W 1N7 | Canada | sophia.xu84@outlook.com |
| 123008 | William Wilson | 1968-03-04 | 137752902 | 514-309-5441 | 1625 Avenue Victoria | Montreal | QC | H3Z 2M6 | Canada | williamwilson88@gmail.com |
| 123009 | Rachel Brown | 1965-09-21 | 861474289 | 514-825-7369 | 3083 Rue de Breslay | Montreal | QC | H4C 1L4 | Canada | rachelbrown85@hotmail.com |
| 123010 | John Anderson | 1968-05-15 | 660582991 | 514-447-8960 | 830 Rue Saint-Marc | Montreal | QC | H3H 2G2 | Canada | john.anderson78@outlook.com |
| 123011 | Oliver Chang | 1967-12-01 | 294723580 | 514-679-5838 | 5035 Rue Fabre | Montreal | QC | H2J 3W6 | Canada | oliverchang87@gmail.com |
| 123012 | Julie Liu | 1971-01-15 | 685914760 | 514-449-9218 | 6710 Avenue des Erables | Montreal | QC | H2G 2K1 | Canada | julie.liu87@hotmail.com |
| 123013 | Jacob Smith | 1973-05-25 | 841694728 | 514-052-7003 | 1630 Rue Sainte-Catherine | Montreal | QC | H3V 1H4 | Canada | jacobsmith87@hotmail.com |
| 123014 | Eliza Lee | 1969-08-22 | 617349823 | 514-746-3912 | 2585 Rue Fleury E | Montreal | QC | H2B 1L3 | Canada | eliza.lee79@hotmail.com |
| 123015 | Andrew Wong | 1976-07-29 | 698572183 | 514-657-1186 | 4187 Rue de la Roche | Montreal | QC | H2J 3H3 | Canada | andrewwong86@gmail.com |
| 123016 | Grace Chen | 1972-01-08 | 838547192 | 514-842-6970 | 4415 Avenue Wilson | Montreal | QC | H4A 2V1 | Canada | grace.chen82@hotmail.com |
| 123017 | David Zhang | 1969-04-14 | 1221919425 | 514-381-0964 | 6425 Rue Saint-Hubert | Montreal | QC | H2S 2M2 | Canada | david.zhang89@gmail.com |
| 123018 | Ava Martin | 1971-11-18 | 290139176 | 514-781-8345 | 2883 Rue Jean-Talon E | Montreal | QC | H1V 4N9 | Canada | avamartin81@hotmail.com |
| 123019 | Lucas Gagnon | 1974-08-06 | 812093475 | 514-253-0184 | 2934 Rue Ontario E | Montreal | QC | H2K 1T7 | Canada | lucasgagnon84@gmail.com |
| 123020 | Isabella Lavoie | 1968-02-16 | 243997150 | 416-897-5602 | 9 Craydon Ave | Toronto | ON | M1M 1Y5 | Canada | isabella.lavoie78@hotmail.com |
| 123021 | Nathan Chen | 1965-01-24 | 5187474926 | 416-436-2758 | 32 Southwell Dr | Toronto | ON | M1A 3A9 | Canada | nathanchen85@gmail.com |
| 123022 | Hayley Nguyen | 1973-02-13 | 286179435 | 514-449-2070 | 4830 Rue du Verdun | Montreal | QC | H4G 1U1 | Canada | hayley.nguyen82@hotmail.com |
| 123023 | Daniel Belanger | 1958-09-19 | 351065784 | 514-358-2270 | 1895 Avenue Rosemont | Montreal | QC | H3V 1T1 | Canada | daniel.belanger82@hotmail.com |
| 123024 | Bella Wu | 1986-06-10 | 679945813 | 514-828-6443 | 2259 Rue Jolicoeur | Montreal | QC | H4E 1Y4 | Canada | bella.wu86@hotmail.com |
| 123025 | Jacob Belanger | 1989-05-09 | 157320846 | 514-364-2528 | 5018 Rue Saint-Hubert | Montreal | QC | H2I 2V7 | Canada | jacob.belanger80@gmail.com |
| 123026 | Sophia Guérin | 1979-12-18 | 601928347 | 514-562-7369 | 3845 Avenue du Parc | Montreal | QC | H2V 4H4 | Canada | sophia.guerin79@hotmail.com |
| 123027 | William Roy | 1983-08-14 | 729463501 | 514-789-0261 | 2165 Rue Saint-Jacques | Montreal | QC | H3J 1H4 | Canada | williamroy83@gmail.com |
| 123028 | Ella Dubois | 1987-03-22 | 869154720 | 514-996-7129 | 3651 Rue de Bordeaux | Montreal | QC | H2K 1Z7 | Canada | elladubois87@hotmail.com |
| 123029 | Daniel Gauthier | 1981-11-27 | 419687530 | 514-327-6847 | 1086 Avenue Beaumont | Montreal | QC | H3P 2V6 | Canada | daniel.gauthier81@gmail.com |
| 123030 | Sophie Moreau | 1978-04-09 | 564319296 | 514-796-1057 | 3729 Rue Clark | Montreal | QC | H2X 2S5 | Canada | sophiemoreau78@hotmail.com |
| 123031 | Ethan Tran | 1980-06-27 | 921475866 | 514-631-7624 | 5223 Rue de la Roche | Montreal | QC | H2J 3T7 | Canada | ethantran80@gmail.com |
| 123032 | Layla Latifi | 1984-04-05 | 240078105 | 514-873-8193 | 2595 Rue Desjardins | Montreal | QC | H3V 1L1 | Canada | laylatifi84@gmail.com |
| 123033 | Liam Boucher | 1988-02-18 | 185240936 | 514-215-3986 | 3593 Rue de la Montagne | Montreal | QC | H3G 2A7 | Canada | liamboucher88@gmail.com |
| 123034 | Chloe Belanger | 1983-03-26 | 670491235 | 514-789-4215 | 3329 Rue Sherbrooke Ouest | Montreal | QC | H3C 1J4 | Canada | chloe.belanger83@hotmail.com |
| 123035 | Jacob Tremblay | 1981-08-08 | 936481720 | 514-343-2312 | 1071 Rue Sainte-Catherine E | Montreal | QC | H2L 2G2 | Canada | jacobtremblay81@gmail.com |
| 123036 | Emma Martin | 1989-01-10 | 357910246 | 514-222-7415 | 1450 Rue Sherbrooke Ouest | Montreal | QC | H3G 1K4 | Canada | emma.martin89@hotmail.com |
| 123037 | Sophie Dubois | 1987-06-04 | 629408715 | 514-983-1425 | 6000 Avenue Victoria | Montreal | QC | H4V 169 | Canada | sophie.dubois87@gmail.com |
| 123038 | Noah Gagnon | 1985-04-12 | 837059421 | 514-696-7184 | 1954 Rue Ontario E | Montreal | QC | H2K 1T5 | Canada | noahgagnon85@hotmail.com |
| 123039 | Olivia Roy | 1980-12-20 | 270159374 | 514-386-2560 | 3901 Rue Wellington | Montreal | QC | H4G 1V6 | Canada | oliviaryo80@gmail.com |
| 123040 | Ethan Desjardins | 1978-07-17 | 354991672 | 514-423-6098 | 4250 Rue de Bulion | Montreal | QC | H2W 2E8 | Canada | ethanedesjardins78@hotmail.com |
| 123041 | Aiden Liu | 1982-04-08 | 785192465 | 514-873-9652 | 5480 Chemin de la Côte-Saint-Luc | Montreal | QC | H3X 2C4 | Canada | aiden.liu82@hotmail.com |
| 123042 | Avery Chen | 1985-07-15 | 416390745 | 514-873-8075 | 3505 Avenue de la Montagne | Montreal | QC | H2J 3P9 | Canada | averychen85@gmail.com |
| 123043 | Cole Park | 1981-11-20 | 918423703 | 514-701-5700 | 1023 Rue Sainte-Marc | Montreal | QC | H3H 2C5 | Canada | colepark81@gmail.com |
| 123044 | Eliza Wong | 1981-07-06 | 326795184 | 514-215-7493 | 8201 Rue de La Roche | Montreal | QC | H2E 2E1 | Canada | elizawong81@gmail.com |
| 123045 | Ethan Kim | 1983-02-14 | 576901324 | 514-668-9082 | 6701 Rue Saint-Urbain | Montreal | QC | H2S 3H8 | Canada | ethankim83@hotmail.com |
| 123046 | Isabella Lee | 1989-05-19 | 145832069 | 416-729-5836 | 9 Amersham Cres | Toronto | ON | M9R 3P5 | Canada | isabellalee89@gmail.com |
| 123047 | Jacob Park | 1987-10-01 | 793024681 | 416-543-0978 | 37 Coldstream Ave | Toronto | ON | M2N 4M7 | Canada | jacobpark87@hotmail.com |
| 123048 | Sophia Kim | 1980-08-11 | 620437851 | 416-787-9520 | 6 Goodwill Ave | Toronto | ON | M1K 3S3 | Canada | sophiakim80@gmail.com |
| 123049 | William Lee | 1984-03-25 | 156824973 | 416-289-6093 | 22 Forest Manor Rd | Toronto | ON | M2J 1M2 | Canada | williamlee84@gmail.com |
| 123050 | Olivia Kim | 1981-12-29 | 742813956 | 416-974-3852 | 2 Harewood Ave | Toronto | ON | M6M 2H6 | Canada | oliviakim81@gmail.com |
| 123051 | Sophie Lee | 1983-01-16 | 908267413 | 416-729-6875 | 2 Parnham Cr | Toronto | ON | M1B 4G4 | Canada | sophie.lee83@gmail.com |
| 123052 | Cole Park | 1981-07-06 | 752913700 | 514-873-8075 | 1023 Rue Sainte-Marc | Montreal | QC | H3H 2C5 | Canada | colepark81@gmail.com |
| 123053 | Eliza Kim | 1986-06-11 | 367509824 | 416-835-7291 | 75 Eastwood Ave | Toronto | ON | M1N 3A8 | Canada | elizakim86@hotmail.com |
| 123054 | Noah Lee | 1981-07-12 | 489276531 | 416-328-5721 | 29 Kinghorn Ave | Toronto | ON | M4B 1K4 | Canada | noahlee81@gmail.com |
| 123055 | Ava Kim | 1984-09-07 | 518246783 | 416-593-2094 | 134 Belgravia Ave | Toronto | ON | M6E 2M2 | Canada | avakim84@hotmail.com |
+----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
50 rows in set (0.00 sec)
```

```

mysql> select * from Roles;
+-----+-----+-----+-----+-----+
| EID  | FID  | Title | Start_Date | End_Date |
+-----+-----+-----+-----+-----+
| 123001 | 1001 | administrative personnel | 2018-10-01 | 2028-07-31 |
| 123002 | 1002 | administrative personnel | 2019-06-01 | 2028-05-15 |
| 123003 | 1003 | administrative personnel | 2018-02-15 | 2028-12-01 |
| 123004 | 1004 | administrative personnel | 2018-01-01 | 2028-04-30 |
| 123005 | 1005 | administrative personnel | 2018-02-01 | NULL |
| 123006 | 1006 | administrative personnel | 2020-03-01 | NULL |
| 123007 | 1007 | administrative personnel | 2019-03-01 | NULL |
| 123008 | 1008 | administrative personnel | 2021-01-15 | NULL |
| 123009 | 1009 | administrative personnel | 2021-01-15 | NULL |
| 123010 | 1010 | administrative personnel | 2019-12-01 | NULL |
| 123011 | 1011 | administrative personnel | 2020-04-15 | NULL |
| 123012 | 1012 | administrative personnel | 2019-09-15 | NULL |
| 123013 | 1013 | administrative personnel | 2019-03-10 | NULL |
| 123014 | 1014 | administrative personnel | 2019-06-15 | NULL |
| 123015 | 1015 | administrative personnel | 2019-05-15 | NULL |
| 123016 | 1016 | administrative personnel | 2019-04-15 | NULL |
| 123017 | 1017 | administrative personnel | 2021-02-01 | NULL |
| 123018 | 1018 | administrative personnel | 2018-10-01 | NULL |
| 123019 | 1019 | administrative personnel | 2018-09-15 | NULL |
| 123020 | 1020 | administrative personnel | 2018-08-01 | NULL |
| 123021 | 1021 | administrative personnel | 2020-06-01 | NULL |
| 123022 | 1022 | administrative personnel | 2021-01-01 | NULL |
| 123023 | 1004 | administrative personnel | 2020-06-15 | NULL |
| 123024 | 1001 | doctor | 2018-07-01 | 2028-09-30 |
| 123024 | 1002 | doctor | 2020-10-01 | NULL |
| 123025 | 1001 | doctor | 2019-04-01 | 2028-11-30 |
| 123025 | 1002 | doctor | 2020-12-15 | NULL |
| 123026 | 1001 | doctor | 2019-07-01 | 2028-03-01 |
| 123026 | 1001 | doctor | 2020-04-15 | NULL |
| 123027 | 1001 | doctor | 2019-05-01 | 2019-12-15 |
| 123028 | 1001 | doctor | 2020-10-01 | NULL |
| 123028 | 1002 | doctor | 2018-07-01 | 2028-09-30 |
| 123029 | 1001 | doctor | 2020-04-15 | NULL |
| 123029 | 1002 | doctor | 2019-07-01 | 2028-03-01 |
| 123030 | 1003 | doctor | 2018-11-30 | 2021-02-15 |
| 123030 | 1004 | doctor | 2021-06-01 | 2023-02-15 |
| 123031 | 1003 | doctor | 2019-03-01 | 2022-12-31 |
| 123031 | 1003 | doctor | 2019-05-01 | 2021-01-10 |
| 123032 | 1003 | doctor | 2020-07-01 | NULL |
| 123032 | 1004 | doctor | 2019-06-01 | 2028-06-01 |
| 123033 | 1004 | doctor | 2020-01-01 | 2028-12-31 |
| 123033 | 1005 | doctor | 2021-03-01 | NULL |
| 123034 | 1003 | doctor | 2021-06-30 | NULL |
| 123034 | 1004 | doctor | 2019-06-01 | 2021-06-01 |
| 123035 | 1003 | doctor | 2020-04-01 | NULL |
| 123035 | 1005 | doctor | 2018-01-01 | 2028-01-01 |
| 123036 | 1003 | doctor | 2022-06-01 | NULL |
| 123036 | 1004 | doctor | 2021-06-15 | NULL |
| 123037 | 1005 | doctor | 2019-09-01 | 2021-06-01 |
| 123038 | 1006 | doctor | 2019-04-01 | 2028-05-30 |
| 123038 | 1006 | doctor | 2020-12-15 | NULL |
| 123039 | 1006 | doctor | 2019-07-01 | 2028-03-01 |
| 123039 | 1006 | doctor | 2021-02-15 | NULL |

```

```

mysql> select * from Infection;
+-----+-----+-----+-----+
| EID  | Infection_Number | Nature | t_Date |
+-----+-----+-----+-----+
| 123001 | 1 | COVID-19 | 2020-12-05 |
| 123001 | 2 | COVID-19 | 2020-12-10 |
| 123001 | 3 | Delta Variant | 2020-12-20 |
| 123001 | 4 | Omicron Variant | 2021-01-10 |
| 123002 | 1 | Omicron Variant | 2021-01-10 |
| 123002 | 2 | Influenza | 2021-01-15 |
| 123004 | 1 | Delta Variant | 2021-01-20 |
| 123004 | 2 | Delta Variant | 2021-02-25 |
| 123004 | 3 | Delta Variant | 2021-03-05 |
| 123005 | 1 | Influenza | 2021-03-10 |
| 123005 | 2 | Delta Variant | 2021-03-10 |
| 123005 | 3 | Delta Variant | 2021-04-01 |
| 123005 | 4 | Delta Variant | 2021-05-01 |
| 123006 | 1 | Delta Variant | 2021-06-05 |
| 123006 | 2 | Influenza | 2021-06-15 |
| 123008 | 1 | Influenza | 2021-08-20 |
| 123008 | 2 | Delta Variant | 2021-09-01 |
| 123009 | 1 | Influenza | 2021-10-20 |
| 123009 | 2 | Delta Variant | 2021-10-25 |
| 123010 | 1 | Omicron Variant | 2021-11-05 |
| 123011 | 2 | COVID-19 | 2021-11-15 |
| 123012 | 1 | Delta Variant | 2021-11-20 |
| 123012 | 2 | Influenza | 2021-11-25 |
| 123013 | 1 | Omicron Variant | 2021-12-05 |
| 123013 | 2 | Influenza | 2021-12-05 |
| 123014 | 1 | Influenza | 2021-12-10 |
| 123014 | 2 | Delta Variant | 2021-12-10 |
| 123015 | 1 | COVID-19 | 2021-12-15 |
| 123015 | 2 | Influenza | 2021-12-20 |
| 123016 | 1 | Influenza | 2021-12-20 |
| 123016 | 2 | Delta Variant | 2021-12-20 |
| 123017 | 1 | Omicron Variant | 2021-12-25 |
| 123018 | 1 | Influenza | 2021-12-25 |
| 123018 | 2 | Delta Variant | 2021-12-25 |
| 123018 | 3 | Omicron Variant | 2021-12-25 |
| 123019 | 1 | Influenza | 2021-12-25 |
| 123019 | 2 | Delta Variant | 2021-12-30 |
| 123020 | 1 | COVID-19 | 2021-12-30 |
| 123020 | 2 | Omicron Variant | 2022-01-05 |
| 123021 | 1 | Omicron Variant | 2022-01-05 |
| 123023 | 2 | Influenza | 2022-01-05 |
| 123024 | 1 | Influenza | 2022-01-05 |
| 123024 | 2 | Delta Variant | 2022-01-10 |
| 123025 | 1 | COVID-19 | 2022-01-10 |
| 123025 | 2 | Influenza | 2022-01-10 |
| 123025 | 3 | Delta Variant | 2022-01-10 |
| 123026 | 1 | Influenza | 2022-01-10 |
| 123029 | 1 | Delta Variant | 2022-01-15 |
| 123029 | 2 | Influenza | 2022-01-15 |
| 123030 | 1 | Influenza | 2022-01-15 |
| 123030 | 2 | Omicron Variant | 2022-01-15 |
| 123033 | 1 | Omicron Variant | 2022-01-20 |
| 123033 | 2 | Influenza | 2022-01-20 |
| 123034 | 1 | Influenza | 2022-01-20 |
| 123034 | 2 | Delta Variant | 2022-01-25 |

```

OUTPUT TERMINAL PORTS DEBUG CONSOLE PROBLEMS

```
mysql> select * from Vaccination;
```

EID	FID	Dose_Number	Brand	V_Date
123001	1003	1	Pfizer	2020-09-15
123002	1001	1	Moderna	2020-10-15
123004	1002	1	AstraZeneca	2020-10-20
123001	1004	2	Johnson&Johnson	2020-11-05
123002	1002	2	Pfizer	2020-11-15
123004	1005	2	Moderna	2020-11-15
123005	1005	1	AstraZeneca	2020-11-20
123007	1001	1	Moderna	2020-12-05
123003	1005	1	Johnson&Johnson	2020-12-10
123005	1002	2	Pfizer	2020-12-10
123001	1003	1	Moderna	2020-12-22
123009	1006	1	AstraZeneca	2020-12-30
123011	1002	1	Pfizer	2021-01-01
123012	1007	1	Moderna	2021-01-05
123009	1003	2	AstraZeneca	2021-01-05
123013	1004	1	Johnson&Johnson	2021-01-05
123014	1001	1	Pfizer	2021-01-05
123017	1006	1	Moderna	2021-01-10
123018	1007	1	Pfizer	2021-01-15
123019	1006	2	Moderna	2021-01-15
123021	1005	1	AstraZeneca	2021-01-18
123021	1010	1	Johnson&Johnson	2021-01-15
123014	1011	2	Pfizer	2021-01-15
123019	1006	2	Moderna	2021-01-18
123023	1008	1	Johnson&Johnson	2021-01-18
123015	1012	1	AstraZeneca	2021-01-18
123018	1006	2	Pfizer	2021-01-20
123006	1014	2	Pfizer	2021-01-21
123024	1005	1	Moderna	2021-01-22
123025	1011	1	AstraZeneca	2021-01-22
123026	1006	1	Johnson&Johnson	2021-01-30
123027	1001	1	Moderna	2021-02-01
123021	1004	2	Johnson&Johnson	2021-02-03
123024	1008	2	Moderna	2021-02-03
123029	1019	1	Pfizer	2021-02-05
123030	1007	1	Pfizer	2021-02-07
123027	1012	2	Moderna	2021-02-10
123031	1001	1	AstraZeneca	2021-02-10
123028	1005	1	Pfizer	2021-02-10
123030	1006	1	AstraZeneca	2021-02-18
123017	1011	2	Moderna	2021-02-14
123026	1005	2	Johnson&Johnson	2021-02-15
123033	1011	2	AstraZeneca	2021-02-17
123034	1007	1	Pfizer	2021-02-20
123034	1004	2	Pfizer	2021-02-20
123035	1006	1	AstraZeneca	2021-02-22
123007	1011	2	Moderna	2021-02-22
123036	1006	1	Johnson&Johnson	2021-02-27
123035	1009	2	AstraZeneca	2021-02-28
123021	1012	2	Pfizer	2021-02-28
123017	1014	3	Moderna	2021-03-01
123037	1008	1	Johnson&Johnson	2021-03-01
123038	1012	1	Pfizer	2021-03-01
123039	1013	1	AstraZeneca	2021-03-02
123008	1005	1	Pfizer	2021-03-03

SSH: login@enccs.concordia.ca

5. For each relation R created in your database, report the result of the following SQL statement: `SELECT COUNT(*) FROM R;`

```
SELECT COUNT(*) FROM Facilities;
+-----+
| COUNT(*) |
+-----+
|      19   |
+-----+
SELECT COUNT(*) FROM Employees;
+-----+
| COUNT(*) |
+-----+
|      100  |
+-----+
SELECT COUNT(*) FROM Roles;
+-----+
| COUNT(*) |
+-----+
|      117  |
+-----+
SELECT COUNT(*) FROM Managed_by;
+-----+
| COUNT(*) |
+-----+
|      19   |
+-----+
SELECT COUNT(*) FROM Infection;
+-----+
| COUNT(*) |
+-----+
|      166  |
+-----+
SELECT COUNT(*) FROM Vaccination;
+-----+
| COUNT(*) |
+-----+
|      177  |
+-----+
```