Individual Project Part 1

Report #2: Task 5
INSY 661

NOTE: All required SQL statements for Task 5 are saved in the plain text file: "Individual Project Part1_Report2_-Task5.sql"

There is also a .sql file called "Exported Tables from phpMyAdmin" that was included in my submission, it contains the table structure for tasks 1 to 5.

5) EXTERNAL DATA INTEGRATION AND RELATED QUERIES

CONTEXT AND PROCEDURE

In this section, external data from the province of Quebec on the number of COVID-19 cases per day in the province will be integrated into the La Ronde database. The COVID-19 data from Quebec is publicly available HERE. For the sake of demonstration, the COVID-19 data will be used to draw insights about how the number of cases per day in the province affected ticket sales at La Ronde. The new COVID-19 data will also be used to illustrate how La Ronde's management could adjust aspects of the park (e.g., facility capacity) based on the daily number of COVID-19 cases.

The COVID-19 data is real, but please note that since the La Ronde data is artificial, any trends that appear in the below analysis will not be representative of how people at La Ronde actually behaved during the pandemic. Additionally, it will be assumed that La Ronde remained open to customers during the pandemic. Below is a description of how the COVID-19 data was prepared and then integrated into the La Ronde database:

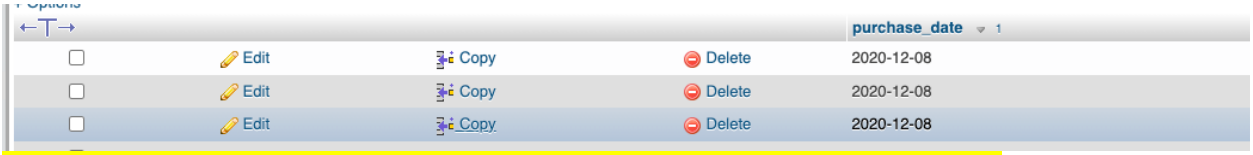
1. The COVID-19 data was downloaded as a csv file called QC_COVID_CASES, and each row was assigned a record_ID. See below:

	record_ID	record_date	in_lab	by_epi_link	active_cases
2	R1	2020-12-08 0:00	148229	8008	15897
3	R2	2020-12-07 0:00	146590	7991	15360
4	R3	2020-12-06 0:00	144993	7963	15108
5	R4	2020-12-05 0:00	143480	7940	14775
6	R5	2020-12-04 0:00	141855	7925	14306
7	R6	2020-12-03 0:00	140110	7904	13878

Column descriptions:

- **in_lab** represents the number of individuals in the province who are having COVID-19 test results processed.
- **by_epi_link** represents the number of individuals who have had exposure to a confirmed positive case or the same exposure as a confirmed positive case.
- **active_cases** is the total number of individuals who are COVID-19 positive in the province.

The decision was made to only analyse COVID-19 cases records from 2020-12-08 to the beginning of when Quebec started recording COVID-19 case data. This was because the most recent ticket sale recorded in the La Ronde database is 2020-12-08 (see below screen shot), and the goal is to investigate how COVID-19 cases could affect ticket sales.



Please see "Individual Project Part1_Report2_-Task5.sql" for SQL statements

2. A csv file called CASES_TICKETS was created to hold the data for the bridge entity between QC_COVID_CASES and Tickets (see ERD below for illustration). This csv file contains the following columns:

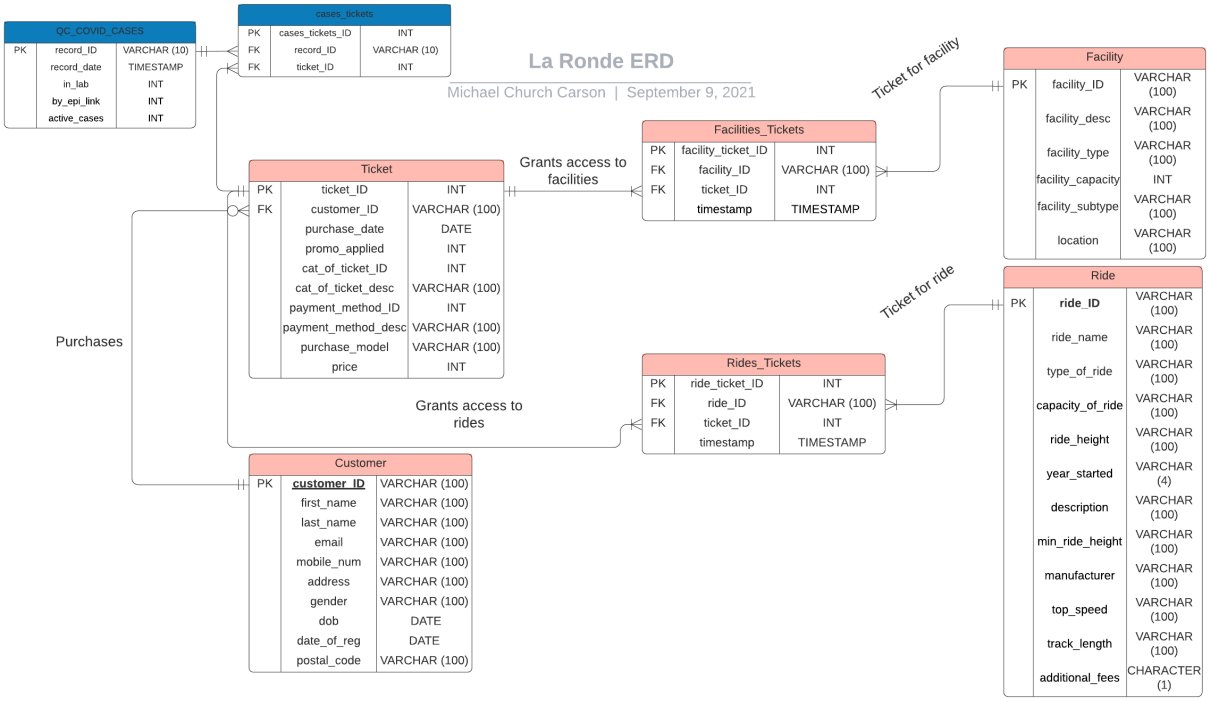
cases_ticket_ID	record_ID	ticket_ID
1	R1	189
2	R1	212
3	R1	580
4	R1	677
5	R1	946
6	R2	166

As the above screen shot demonstrates, this file is organized similarly to the FACILIITIES_TICKETS and RIDES_TICKETS files. There is an id column (cases_ticket_ID) and data from the QC_COVID_CASES and TICKET files. Note that each record_ID corresponds to a date (based on the record_date column value in the QC_COVID_CASES csv). For example, R1 corresponds to 2020-12-08. The ticket_IDs are the ID of the tickets that were purchased on that same date. Therefore, you can see in the above screenshot that there were five tickets (189, 212, 580, 677, and 946) that were purchased on 2020-12-08.

3. The exact same importing and populating procedure that was used in Report #1 for the La Ronde data was performed again with this new external data.

Please refer to "Individual Project Part1_Report2_-Task5.sql" to see the new DDL and SQL statements used to populate the new tables.

NEW ERD:



NEW RELATIONAL MODEL:

Customer (customer_ID, first_name, last_name, email, mobile_num, address, gender, dob, date_of_reg, postal_code)

Facility (facility_ID, facility_desc, facility_type, facility_capacity, facility_subtype, location)

Ride (ride_ID, ride_name, type_of_ride, capacity_of_ride, ride_height, year_started, description, min_ride_height, manufacturer, top_speed, track_length, additional_fees)

Ticket (ticket_ID, customer_ID, purchase_date, promo_applied, cat_of_ticket_ID, cat_of_ticket_desc, payment_method_ID, payment_method_desc, purchase_model, price)

Rides_Tickets (ride_ticket_ID, ride_ID, ticket_ID, timestamp)

Facilities_Tickets (facility_ticket_ID, facility_ID, ticket_ID, timestamp)

QC_COVID_CASES (record_ID, record_date, in_lab, by_epi_link, active_cases)

cases_tickets (cases_tickets_ID, record_ID, ticket_ID)

The below screenshot shows the database with the four new tables (two relational and two from imported csv files):

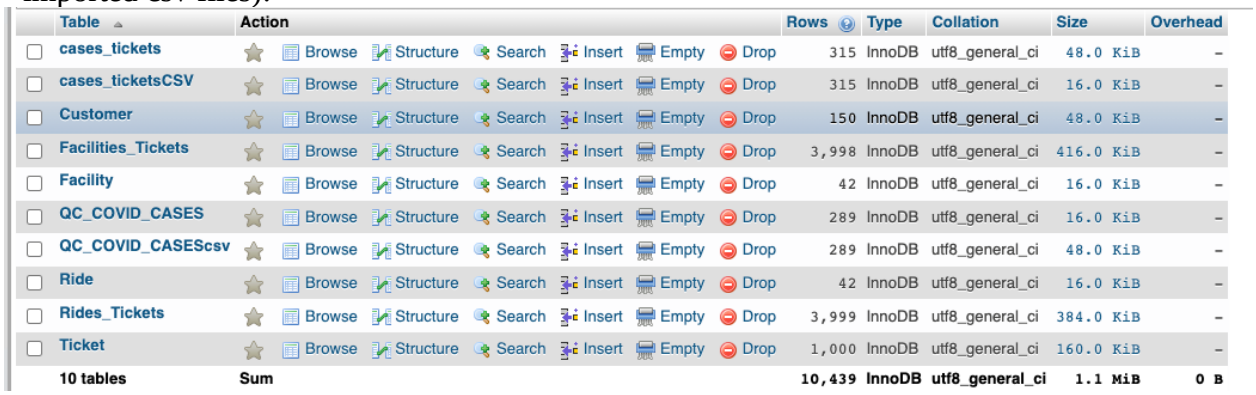


Table	Action	Rows	Type	Collation	Size	Overhead
cases_tickets	Browse Structure Search Insert Empty Drop	315	InnoDB	utf8_general_ci	48.0 KiB	-
cases_ticketsCSV	Browse Structure Search Insert Empty Drop	315	InnoDB	utf8_general_ci	16.0 KiB	-
Customer	Browse Structure Search Insert Empty Drop	150	InnoDB	utf8_general_ci	48.0 KiB	-
Facilities_Tickets	Browse Structure Search Insert Empty Drop	3,998	InnoDB	utf8_general_ci	416.0 KiB	-
Facility	Browse Structure Search Insert Empty Drop	42	InnoDB	utf8_general_ci	16.0 KiB	-
QC_COVID_CASES	Browse Structure Search Insert Empty Drop	289	InnoDB	utf8_general_ci	16.0 KiB	-
QC_COVID_CASEScsv	Browse Structure Search Insert Empty Drop	289	InnoDB	utf8_general_ci	48.0 KiB	-
Ride	Browse Structure Search Insert Empty Drop	42	InnoDB	utf8_general_ci	16.0 KiB	-
Rides_Tickets	Browse Structure Search Insert Empty Drop	3,999	InnoDB	utf8_general_ci	384.0 KiB	-
Ticket	Browse Structure Search Insert Empty Drop	1,000	InnoDB	utf8_general_ci	160.0 KiB	-
10 tables	Sum	10,439	InnoDB	utf8_general_ci	1.1 MiB	0 B

The below screenshot shows all 8 tables in the new relational schema.

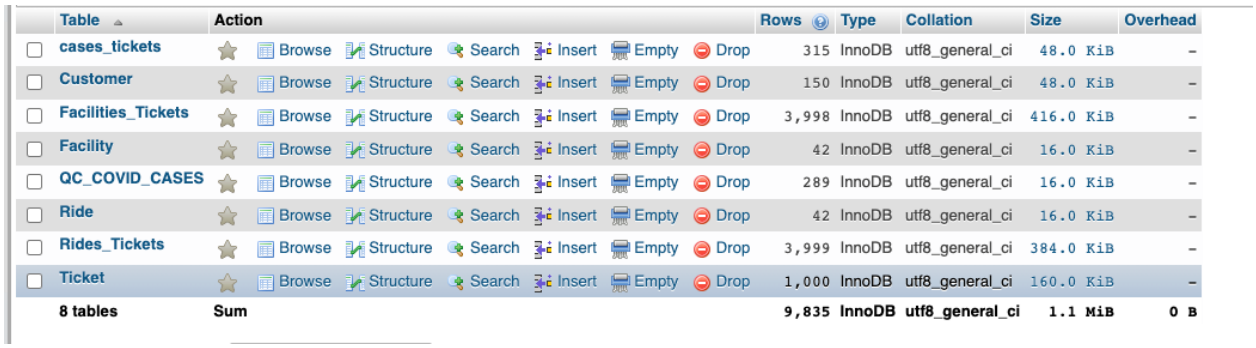


Table	Action	Rows	Type	Collation	Size	Overhead
cases_tickets	Browse Structure Search Insert Empty Drop	315	InnoDB	utf8_general_ci	48.0 KiB	-
Customer	Browse Structure Search Insert Empty Drop	150	InnoDB	utf8_general_ci	48.0 KiB	-
Facilities_Tickets	Browse Structure Search Insert Empty Drop	3,998	InnoDB	utf8_general_ci	416.0 KiB	-
Facility	Browse Structure Search Insert Empty Drop	42	InnoDB	utf8_general_ci	16.0 KiB	-
QC_COVID_CASES	Browse Structure Search Insert Empty Drop	289	InnoDB	utf8_general_ci	16.0 KiB	-
Ride	Browse Structure Search Insert Empty Drop	42	InnoDB	utf8_general_ci	16.0 KiB	-
Rides_Tickets	Browse Structure Search Insert Empty Drop	3,999	InnoDB	utf8_general_ci	384.0 KiB	-
Ticket	Browse Structure Search Insert Empty Drop	1,000	InnoDB	utf8_general_ci	160.0 KiB	-
8 tables	Sum	9,835	InnoDB	utf8_general_ci	1.1 MiB	0 B

5 QUERIES

Query 1:

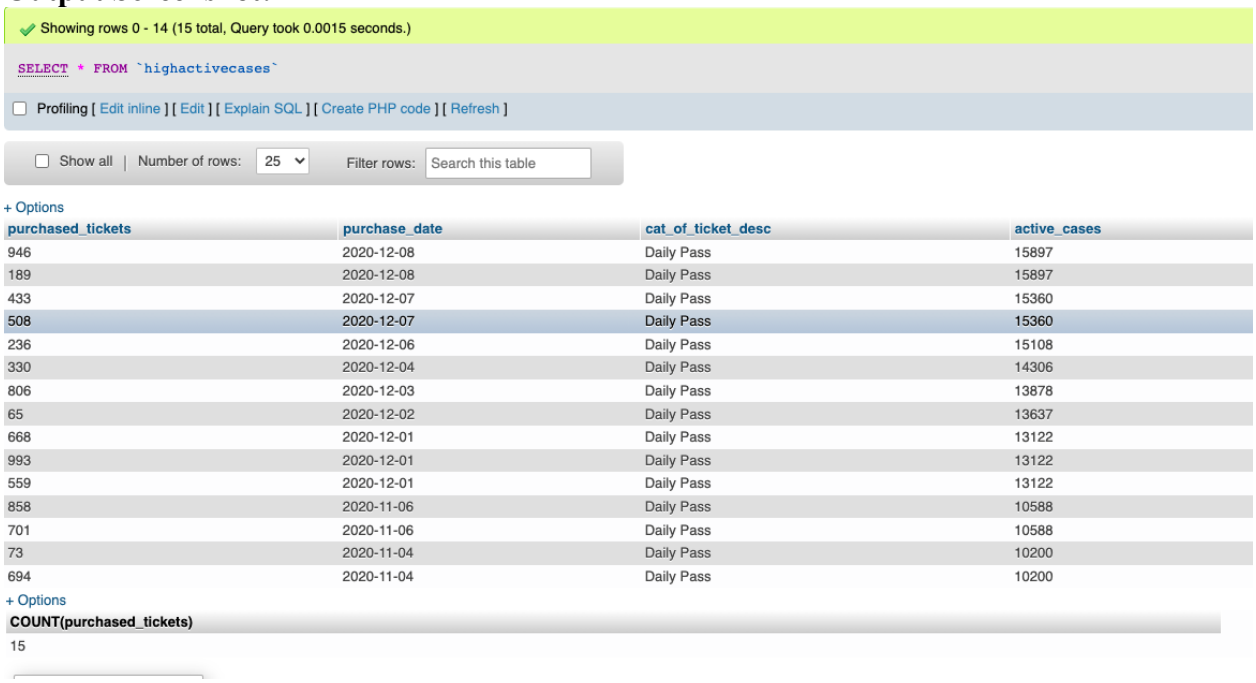
Objective: How many daily tickets were purchased when the daily active case count was over 10,000?

Code:

```
CREATE VIEW highactivecases AS
SELECT DISTINCT Ticket.ticket_ID as purchased_tickets, Ticket.purchase_date,
Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases
FROM Ticket, cases_tickets, QC_COVID_CASES
WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND
cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
QC_COVID_CASES.active_cases > 10000 AND
Ticket.cat_of_ticket_desc = "Daily Pass"
ORDER BY QC_COVID_CASES.active_cases DESC;
```

```
SELECT COUNT(purchased_tickets)
FROM highactivecases
```

Output Screenshot:



Showing rows 0 - 14 (15 total, Query took 0.0015 seconds.)

```
SELECT * FROM `highactivecases`
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

purchased_tickets	purchase_date	cat_of_ticket_desc	active_cases
946	2020-12-08	Daily Pass	15897
189	2020-12-08	Daily Pass	15897
433	2020-12-07	Daily Pass	15360
508	2020-12-07	Daily Pass	15360
236	2020-12-06	Daily Pass	15108
330	2020-12-04	Daily Pass	14306
806	2020-12-03	Daily Pass	13878
65	2020-12-02	Daily Pass	13637
668	2020-12-01	Daily Pass	13122
993	2020-12-01	Daily Pass	13122
559	2020-12-01	Daily Pass	13122
858	2020-11-06	Daily Pass	10588
701	2020-11-06	Daily Pass	10588
73	2020-11-04	Daily Pass	10200
694	2020-11-04	Daily Pass	10200

+ Options

COUNT(purchased_tickets)
15

From the above screenshots we can see that 15 daily tickets were purchased when the daily active case count was over 10,000.

Query 2:

Objective: Were customers still using the dinning facilities when the daily active case count was over 10,000?

Code:

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc,
QC_COVID_CASES.active_cases, facility_type, Facilities_Tickets.timestamp
FROM Ticket, cases_tickets, QC_COVID_CASES, Facilities_Tickets, Facility
WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND
cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND
Facilities_Tickets.facility_ID = Facility.facility_ID AND
Facility.facility_type = "Dinning" AND
QC_COVID_CASES.active_cases > 10000;
```

Output Screenshot:

Showing rows 0 - 24 (157 total, Query took 0.0024 seconds.)

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases, facility_type,
Facilities_Tickets.timestamp FROM Ticket, cases_tickets, QC_COVID_CASES, Facilities_Tickets, Facility WHERE Ticket.ticket_ID =
cases_tickets.ticket_ID AND cases_tickets.record_ID = QC_COVID_CASES.record_ID AND Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND
Facilities_Tickets.facility_ID = Facility.facility_ID AND Facility.facility_type = "Dinning" AND QC_COVID_CASES.active_cases > 10000
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> | Show all | Number of rows: 25 Filter rows: Search this table

+ Options

ticket_ID	purchase_date	cat_of_ticket_desc	active_cases	facility_type	timestamp
570	2020-12-04	Annual pass	14306	Dinning	2020-12-04 16:28:00
592	2020-11-05	Annual pass	10363	Dinning	2020-11-05 17:42:00
212	2020-12-08	Parking ticket	15897	Dinning	2020-12-08 01:03:00
73	2020-11-04	Daily Pass	10200	Dinning	2020-11-04 09:58:00
522	2020-12-03	Annual pass	13878	Dinning	2020-12-03 23:21:00
508	2020-12-07	Daily Pass	15360	Dinning	2020-12-07 10:28:00
160	2020-12-02	Annual pass	13637	Dinning	2020-12-02 02:00:00
441	2020-11-05	Annual pass	10363	Dinning	2020-11-05 18:46:00
806	2020-12-03	Daily Pass	13878	Dinning	2020-12-03 04:13:00
946	2020-12-08	Daily Pass	15897	Dinning	2020-12-08 08:52:00
701	2020-11-06	Daily Pass	10588	Dinning	2020-11-06 16:51:00
298	2020-11-06	Annual pass	10588	Dinning	2020-11-06 13:20:00

The above screenshot shows that even when the active case count was over 10,000, customers were still using the dinning facilities. In fact, tickets were scanned 157 times to enter dinning facilities when the active case count was over 10,000.

Query 3:

Objective: There were high daily active case counts in the most recent two months of the imported COVID-19 data (i.e., 2020-10-08 to 2020-12-08). As this period of high active cases progressed, did more customers decide to drive to La Ronde (i.e., purchase parking tickets)? Compare the number of parking tickets purchased in the first month of this period of high active cases, to the number of parking tickets purchased in the second month of this period of high active cases.
Assumption: customers are aware of the high number of active cases and considering this when deciding how to travel to La Ronde.

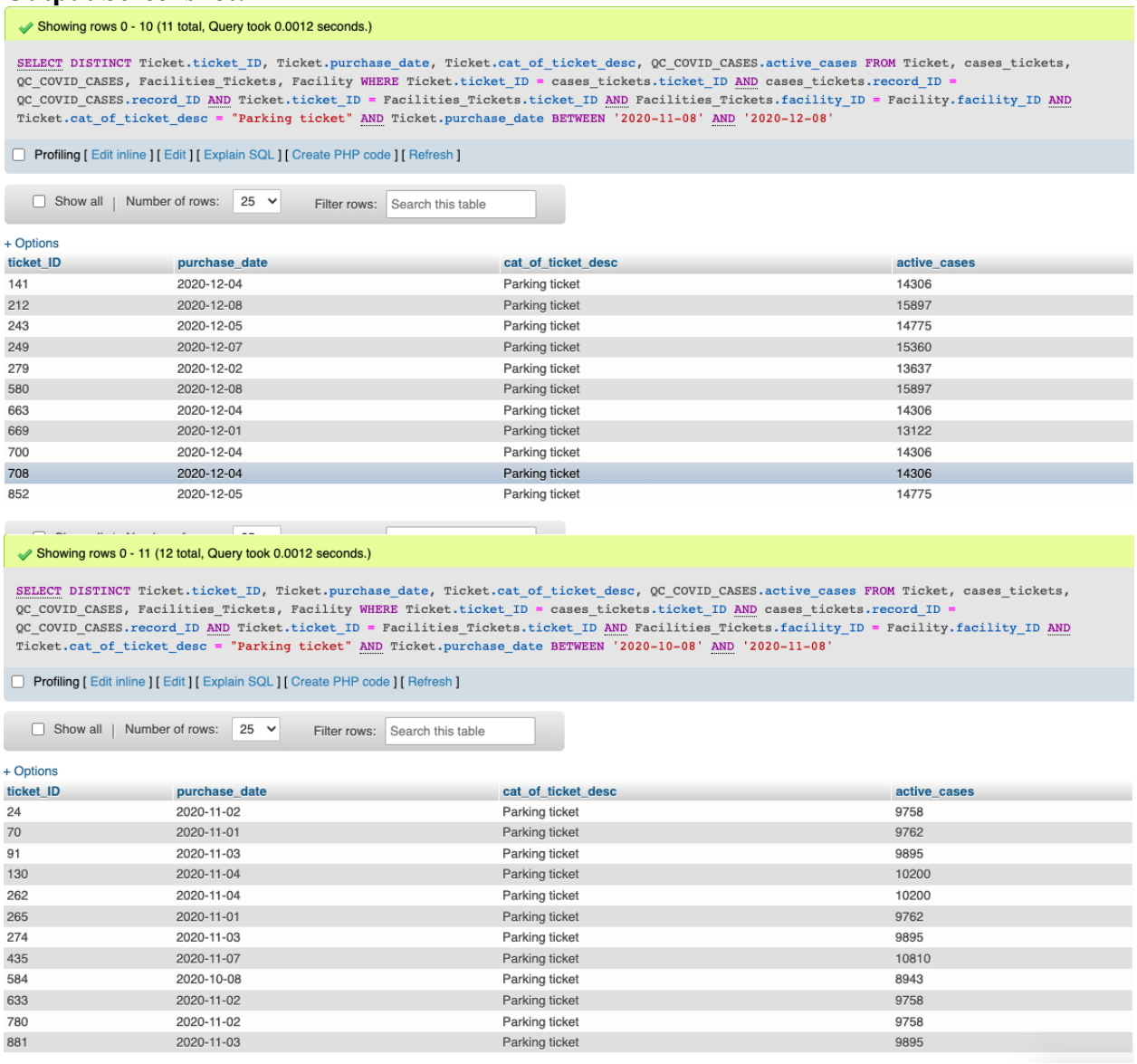
Code:

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc,
QC_COVID_CASES.active_cases
FROM Ticket, cases_tickets, QC_COVID_CASES, Facilities_Tickets, Facility
WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND
cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND
Facilities_Tickets.facility_ID = Facility.facility_ID AND
Ticket.cat_of_ticket_desc = "Parking ticket" AND
Ticket.purchase_date BETWEEN '2020-11-08' AND '2020-12-08';
```

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc,
QC_COVID_CASES.active_cases
FROM Ticket, cases_tickets, QC_COVID_CASES, Facilities_Tickets, Facility
WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND
```

cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND
Facilities_Tickets.facility_ID = Facility.facility_ID AND
Ticket.cat_of_ticket_desc = "Parking ticket" AND
Ticket.purchase_date BETWEEN '2020-10-08' AND '2020-11-08'

Output Screenshot:



Showing rows 0 - 10 (11 total, Query took 0.0012 seconds.)

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases FROM Ticket, cases_tickets,
QC_COVID_CASES, Facilities_Tickets, Facility WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND cases_tickets.record_ID =
QC_COVID_CASES.record_ID AND Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND Facilities_Tickets.facility_ID = Facility.facility_ID AND
Ticket.cat_of_ticket_desc = "Parking ticket" AND Ticket.purchase_date BETWEEN '2020-11-08' AND '2020-12-08'
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

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ticket_ID	purchase_date	cat_of_ticket_desc	active_cases
141	2020-12-04	Parking ticket	14306
212	2020-12-08	Parking ticket	15897
243	2020-12-05	Parking ticket	14775
249	2020-12-07	Parking ticket	15360
279	2020-12-02	Parking ticket	13637
580	2020-12-08	Parking ticket	15897
663	2020-12-04	Parking ticket	14306
669	2020-12-01	Parking ticket	13122
700	2020-12-04	Parking ticket	14306
708	2020-12-04	Parking ticket	14306
852	2020-12-05	Parking ticket	14775

Showing rows 0 - 11 (12 total, Query took 0.0012 seconds.)

```
SELECT DISTINCT Ticket.ticket_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases FROM Ticket, cases_tickets,
QC_COVID_CASES, Facilities_Tickets, Facility WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND cases_tickets.record_ID =
QC_COVID_CASES.record_ID AND Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND Facilities_Tickets.facility_ID = Facility.facility_ID AND
Ticket.cat_of_ticket_desc = "Parking ticket" AND Ticket.purchase_date BETWEEN '2020-10-08' AND '2020-11-08'
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

ticket_ID	purchase_date	cat_of_ticket_desc	active_cases
24	2020-11-02	Parking ticket	9758
70	2020-11-01	Parking ticket	9762
91	2020-11-03	Parking ticket	9895
130	2020-11-04	Parking ticket	10200
262	2020-11-04	Parking ticket	10200
265	2020-11-01	Parking ticket	9762
274	2020-11-03	Parking ticket	9895
435	2020-11-07	Parking ticket	10810
584	2020-10-08	Parking ticket	8943
633	2020-11-02	Parking ticket	9758
780	2020-11-02	Parking ticket	9758
881	2020-11-03	Parking ticket	9895

From the above outputs we can see that 12 parking tickets were purchased in the first month of this period of high active cases, and similarity, 11 were purchased in the second month. Therefore, over the course of this period of high active cases, customers do not seem to have decided to drive more often to La Ronde. (Remember: La Ronde data is artificial and therefore it is not actually going to reflect the preferences of people during this period of high active cases in Quebec.)

Query 4:

Objective: Quebec public health officials are investigating the impact that La Ronde had on the early stages of COVID-19 transmission in Quebec. To do so, they would like the names and contact information of all the customers who visited La Ronde during the early stages of the spread of COVID-19 in Quebec so that they can compare them to the names of the individuals who they know tested positive during this period.

Assumption: Let early stages of the spread of COVID-19 be when daily active cases were between 0 and 3000.

Code:

```
SELECT Customer.customer_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases, Customer.first_name, Customer.last_name, Customer.email, Customer.mobile_num
FROM Ticket, cases_tickets, QC_COVID_CASES, Customer
WHERE Customer.customer_ID = Ticket.customer_ID AND
Ticket.ticket_ID = cases_tickets.ticket_ID AND
cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
Ticket.cat_of_ticket_desc = "Daily Pass" AND
QC_COVID_CASES.active_cases BETWEEN 0 AND 3000;
```

Output Screenshot:

Showing rows 0 - 24 (61 total, Query took 0.0008 seconds.)

```
SELECT Customer.customer_ID, Ticket.purchase_date, Ticket.cat_of_ticket_desc, QC_COVID_CASES.active_cases, Customer.first_name, Customer.last_name,
Customer.email, Customer.mobile_num FROM Ticket, cases_tickets, QC_COVID_CASES, Customer WHERE Customer.customer_ID = Ticket.customer_ID AND
Ticket.ticket_ID = cases_tickets.ticket_ID AND cases_tickets.record_ID = QC_COVID_CASES.record_ID AND Ticket.cat_of_ticket_desc = "Daily Pass" AND
QC_COVID_CASES.active_cases BETWEEN 0 AND 3000
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> | Show all | Number of rows: 25 Filter rows: Search this table

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customer_ID	purchase_date	cat_of_ticket_desc	active_cases	first_name	last_name	email	mobile_num
CD0039	2020-08-13	Daily Pass	1730	Jae	Mathivon	jmathivon12@mediafire.com	495-694-8182
CD0091	2020-08-13	Daily Pass	1730	Candie	Brigdale	cbrigdale2i@cdc.gov	499-597-3865
CD0073	2020-08-07	Daily Pass	1945	Elwira	Tombleson	etombleson20@squarespace.com	547-129-9284
CD0070	2020-08-07	Daily Pass	1945	Merry	Wolford	mwolford1x@washington.edu	364-934-2064
CD0056	2020-08-07	Daily Pass	1945	Ernst	Baggally	ebaggally1j@yahoo.co.jp	561-799-3289
CD0067	2020-08-07	Daily Pass	1945	Teodoor	MacInerney	tmacinerney1u@vimeo.com	170-166-8868
CD0063	2020-08-03	Daily Pass	2053	Gwendolen	Bullard	gbullard1q@theguardian.com	304-658-6891
CD0069	2020-08-01	Daily Pass	2103	Humfried	Bealing	hbealing1w@istockphoto.com	820-593-2521
CD0009	2020-07-29	Daily Pass	2085	Florentia	McPhee	fmcphee8@mysql.com	771-748-3418
CD0014	2020-07-29	Daily Pass	2085	Jeannine	Lanchbery	jlanchberyd@i2i.jp	709-783-2705
CD0026	2020-07-28	Daily Pass	2085	Cherish	Mowbray	cmowbrayp@flavors.me	183-371-4635
CD0124	2020-07-27	Daily Pass	2108	Akim	Preddle	apreddle3f@amazon.co.uk	618-390-9266
CD0038	2020-07-27	Daily Pass	2108	Elliott	Le Grys	elegrys11@photobucket.com	556-186-6648
CD0018	2020-07-25	Daily Pass	2105	Darell	Legendre	dlegendreh@webeden.co.uk	168-482-8859
CD0103	2020-07-22	Daily Pass	1990	Addie	Garratty	agarratty2u@1688.com	836-899-0440
CD0013	2020-07-22	Daily Pass	1990	Rik	Heppenspall	rheppenspallc@nsw.gov.au	179-711-7905
CD0066	2020-07-21	Daily Pass	1953	Elijah	Ruperto	eruperto1t@walmart.com	271-444-1535
CD0076	2020-07-21	Daily Pass	1953	Tomasina	Knatt	tknatt23@list-manage.com	156-265-6381
CD0083	2020-07-21	Daily Pass	1953	Colver	Jira	cjira2a@harvard.edu	921-737-1976

The above screenshot shows a partial output with the names and contact information of customers who visited La Ronde when daily active cases were between 0 and 3000.

Query 5:

Objective: Suppose that on days when the total active number of cases in Quebec is over 10,000, the government requires indoor capacity to be reduced by 20%. Show how many of La Ronde's facilities would have had to reduce their capacity by 20% and then what their capacity would have become after the 20% reduction.

Assumption: Facility capacity refers to the maximum number of people who can use the indoor part of a facility at one time.

Code:

```
CREATE VIEW capacity_rule AS
SELECT QC_COVID_CASES.record_date as highcases, QC_COVID_CASES.active_cases, Facility.facility_capacity as cap, Facility.facility_desc
FROM QC_COVID_CASES, cases_tickets, Ticket, Facilities_Tickets, Facility
WHERE Ticket.ticket_ID = cases_tickets.ticket_ID AND
cases_tickets.record_ID = QC_COVID_CASES.record_ID AND
Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND
Facilities_Tickets.facility_ID = Facility.facility_ID AND
QC_COVID_CASES.active_cases > 10000
ORDER BY QC_COVID_CASES.record_date DESC;

SELECT COUNT(DISTINCT facility_desc)
FROM capacity_rule;

SELECT DISTINCT facility_desc, cap*0.8
FROM capacity_rule
```

Output Screenshot:

Showing rows 0 - 24 (193 total, Query took 0.0128 seconds.)

```
#CREATE VIEW capacity_rule AS SELECT QC_COVID_CASES.record_date as highcases, QC_COVID_CASES.active_cases, Facility.facility_capacity as cap,
Facility.facility_desc FROM QC_COVID_CASES, cases_tickets, Ticket, Facilities_Tickets, Facility WHERE Ticket.ticket_ID = cases_tickets.ticket_ID
AND cases_tickets.record_ID = QC_COVID_CASES.record_ID AND Ticket.ticket_ID = Facilities_Tickets.ticket_ID AND Facilities_Tickets.facility_ID =
Facility.facility_ID AND QC_COVID_CASES.active_cases > 10000 ORDER BY QC_COVID_CASES.record_date DESC
```

[Edit inline] [Edit] [Create PHP code]

1 > >> | Show all | Number of rows: 25 Filter rows: Search this table

+ Options

highcases	active_cases	cap	facility_desc
2020-12-08 00:00:00	15897	20	Amir
2020-12-08 00:00:00	15897	20	Popcorn & Cie
2020-12-08 00:00:00	15897	20	Yo! Chine
2020-12-08 00:00:00	15897	20	Subway
2020-12-08 00:00:00	15897	20	Popcorn & Cie
2020-12-08 00:00:00	15897	20	Marchand Du Village
2020-12-08 00:00:00	15897	20	Pizza Ronde 1
2020-12-08 00:00:00	15897	20	Rolopan 2
2020-12-08 00:00:00	15897	20	Au Comptoir Frais
2020-12-08 00:00:00	15897	20	Au Comptoir Frais
2020-12-08 00:00:00	15897	20	Halte Gourmande - Au Bol
2020-12-08 00:00:00	15897	20	Marchand Du Village
2020-12-08 00:00:00	15897	20	La Centrale Burgers & Frites

COUNT(DISTINCT facility_desc)
37

+ Options

facility_desc	cap*0.8
Emporium	16.0
Marchand Du Village	16.0
Photo Goliath	16.0
Carrousel Du Bonbon	16.0
Château Du Bonbon	16.0
Boutique Du Far West	16.0
Boutique Spirale	16.0
Boutique Splash	16.0
Yo! Chine	16.0
Fines Poutines Express	16.0
Fines Poutines Plus	16.0
La Centrale Burgers & Frites	16.0
Pizza Ronde 1	16.0
Pizza Ronde 2	16.0
Pizza Ronde 3	16.0
Poulet Etc.	16.0
Restaurant Lafleur	16.0
Subway	16.0
Dippin' Dots	16.0
Moozoo 1	16.0
Moozoo 2	16.0
Moozoo 3	16.0
Queues De Castor 1	16.0
Queues De Castor 2	16.0
Queues De Castor 3	16.0

facility_desc	cap*0.8
Rolopan 1	16.0
Rolopan 2	16.0
Au Comptoir Frais	16.0
Halte Gourmande - Au Bol	16.0
Halte Gourmande - Le Marché	16.0
Sabra	16.0
Amir	16.0
Mucho Nacho Churros	16.0
Park Opening Celebration	160.0
Saloon	16.0
Popcorn & Cie	16.0
Bar Rouge	16.0

The first screenshot shows a VIEW that was created of all the facilities that were visited by customers (ticket scanned) on days when the active case count in the province was over 10,000. The second screenshot counts the number of distinct facilities in the VIEW and demonstrates that 37 (or all) of La Ronde's facilities would have had to reduce their capacity by 20% at some point during the period captured by the COVID-19 data. The last two screenshots show that reducing capacity by 20% would mean that every facility would have had a capacity of 16, expect for the Park Opening Celebration facility, which would have had a capacity of 160.