

## Queries

1. The list of all airlines for a given airport.

```
select AIRPORT_NAME, AIRLINE_NAME, FLIGHT_TYPE from AIRPORT_AIRLINE
natural join AIRLINE
natural join CITY
where AIRPORT_NAME = 'Los Angeles International Airport';
```

#	AIRPORT_NAME	AIRLINE_NAME	FLIGHT_TYPE
1	Los Angeles International Airport	Southwest Airlines	Domestic
2	Los Angeles International Airport	JetBlue Airways	Local
3	Los Angeles International Airport	United Airlines	Local
4	Los Angeles International Airport	Hollywood_Airlines	Local
5	Los Angeles International Airport	Gamma_Airlines	International

2. The list of all flights for a given airline. Sorted by:
  - a. starting location

#	AIRLINE_NAME	ARRIVAL_AIRPORT	DEPARTURE_AIRPORT	FLIGHT_CREW_NAME	FLIGHT_DATE	FLIGHT_DEPARTURE_TIME	FINAL_ARRIVAL_TIME
1	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	United_flyers	2020-04-26	13:31:00	15:00:00
2	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-06	10:00:00	14:00:00
3	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-04	11:31:00	15:00:00
4	Gamma_Airlines	Shanghai Pudong International Airport	Los Angeles International Airport	International Flyers	1996-08-23	15:00:00	22:00:00
5	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	Hollywood_flyers	2020-05-01	13:00:00	14:00:00
6	Gamma_Airlines	Hartsfield-Jackson Atlanta International Airp...	Los Angeles International Airport	The Southerners	2020-04-27	04:45:00	09:00:00
7	Gamma_Airlines	O'Hare International Airport	Los Angeles International Airport	The Southerners	2020-04-26	07:35:00	11:31:00
8	Gamma_Airlines	Dubai International Airport	Tokyo Haneda Airport	Tango	2020-05-06	15:10:00	23:00:00
9	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-06	15:00:00	22:00:00
10	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-01	10:31:00	14:31:00

- b. destination

```
select AIRLINE_NAME, ARRIVAL_AIRPORT, DEPARTURE_AIRPORT, FLIGHT_CREW_NAME,
FLIGHT_DATE, FLIGHT_DEPARTURE_TIME, FINAL_ARRIVAL_TIME from FLIGHT inner join
FLIGHT_SCHEDULE
on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
inner join AIRPORT_AIRLINE
on DEPARTURE_AIRPORT = AIRPORT_AIRLINE.AIRPORT_NAME
inner join AIRLINE on
AIRPORT_AIRLINE.AID = AIRLINE.AID
where AIRLINE_NAME = 'Gamma_Airlines'
order by ARRIVAL_AIRPORT;
```

#	AIRLINE_NAME	ARRIVAL_AIRPORT	DEPARTURE_AIRPORT	FLIGHT_CREW_NAME	FLIGHT_DATE	FLIGHT_DEPARTURE_TIME	FINAL_ARRIVAL_TIME
1	Gamma_Airlines	Dubai International Airport	Tokyo Haneda Airport	Tango	2020-05-06	15:10:00	23:00:00
2	Gamma_Airlines	Hartsfield-Jackson Atlanta International Airp...	Los Angeles International Airport	The Southerners	2020-04-27	04:45:00	09:00:00
3	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-06	15:00:00	22:00:00
4	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-01	10:31:00	14:31:00
5	Gamma_Airlines	O'Hare International Airport	Los Angeles International Airport	The Southerners	2020-04-26	07:35:00	11:31:00
6	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	United_flyers	2020-04-26	13:31:00	15:00:00
7	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	Hollywood_flyers	2020-05-01	13:00:00	14:00:00
8	Gamma_Airlines	Shanghai Pudong International Airport	Los Angeles International Airport	International Flyers	1996-08-23	15:00:00	22:00:00
9	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-06	10:00:00	14:00:00
10	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-04	11:31:00	15:00:00

- c. longest flight

```

select AIRLINE_NAME, ARRIVAL_AIRPORT, DEPARTURE_AIRPORT, FLIGHT_CREW_NAME,
FLIGHT_DATE, FLIGHT_DEPARTURE_TIME, FINAL_ARRIVAL_TIME, {fn
TIMESTAMPDIFF(SQL_TSI_MINUTE, FLIGHT.FLIGHT_DEPARTURE_TIME,
Flight.FINAL_ARRIVAL_TIME)} as time_difference_in_minutes
from FLIGHT inner join FLIGHT_SCHEDULE
on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
inner join AIRPORT_AIRLINE
on DEPARTURE_AIRPORT = AIRPORT_AIRLINE.AIRPORT_NAME
inner join AIRLINE on
AIRPORT_AIRLINE.AID = AIRLINE.AID
where AIRLINE_NAME = 'Gamma_Airlines'
order by {fn TIMESTAMPDIFF(SQL_TSI_MINUTE, FLIGHT.FLIGHT_DEPARTURE_TIME,
Flight.FINAL_ARRIVAL_TIME)} desc;

```

select AIRLINE\_NAME, ARR... X

Max. rows: 100 | Fetched Rows: 10

Matching Rows: 1

#	AIRLINE_NAME	ARRIVAL_AIRPORT	DEPARTURE_AIRPORT	FLIGHT_CREW_NAME	FLIGHT_DATE	FLIGHT_DEPARTURE_TIME	FINAL_ARRIVAL_TIME	TIME_DIFFERENCE_IN_MINUTES
1	Gamma_Airlines	Dubai International Airport	Tokyo Haneda Airport	Tango	2020-05-06	15:10:00	23:00:00	470
2	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-06	15:00:00	22:00:00	420
3	Gamma_Airlines	Shanghai Pudong International Airport	Los Angeles International Airport	International Flyers	1996-08-23	15:00:00	22:00:00	420
4	Gamma_Airlines	Hartfield-Jackson Atlanta International Airport	Los Angeles International Airport	The Southerners	2020-04-27	04:45:00	09:00:00	255
5	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-01	10:31:00	14:31:00	240
6	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-06	10:00:00	14:00:00	240
7	Gamma_Airlines	O'Hare International Airport	Los Angeles International Airport	The Southerners	2020-04-26	07:35:00	11:31:00	236
8	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-04	11:31:00	15:00:00	209
9	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	United Flyers	2020-04-26	13:01:00	15:00:00	89
10	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	Hollywood Flyers	2020-05-01	13:00:00	14:00:00	60

d. shortest flight.

```

select AIRLINE_NAME, ARRIVAL_AIRPORT, DEPARTURE_AIRPORT,
FLIGHT_CREW_NAME,
FLIGHT_DATE, FLIGHT_DEPARTURE_TIME, FINAL_ARRIVAL_TIME, {fn
TIMESTAMPDIFF(SQL_TSI_MINUTE, FLIGHT.FLIGHT_DEPARTURE_TIME,
Flight.FINAL_ARRIVAL_TIME)} as time_difference_in_minutes
from FLIGHT inner join FLIGHT_SCHEDULE
on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
inner join AIRPORT_AIRLINE
on DEPARTURE_AIRPORT = AIRPORT_AIRLINE.AIRPORT_NAME
inner join AIRLINE on
AIRPORT_AIRLINE.AID = AIRLINE.AID
where AIRLINE_NAME = 'Gamma_Airlines'
order by {fn TIMESTAMPDIFF(SQL_TSI_MINUTE,
FLIGHT.FLIGHT_DEPARTURE_TIME, Flight.FINAL_ARRIVAL_TIME)};

```

#	AIRLINE_NAME	ARRIVAL_AIRPORT	DEPARTURE_AIRPORT	FLIGHT_CREW_NAME	FLIGHT_DATE	FLIGHT_DEPARTURE_TIME	FINAL_ARRIVAL_TIME	TIME_DIFFERENCE_IN_MINUTES
1	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	Hollywood Flyers	2020-05-01	13:00:00	14:00:00	60
2	Gamma_Airlines	San Diego International Airport	Los Angeles International Airport	United Flyers	2020-04-26	13:01:00	15:00:00	89
3	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-04	11:31:00	15:00:00	209
4	Gamma_Airlines	O'Hare International Airport	Los Angeles International Airport	The Southerners	2020-04-26	07:35:00	11:31:00	236
5	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-01	10:31:00	14:31:00	240
6	Gamma_Airlines	Tokyo Haneda Airport	Los Angeles International Airport	International Flyers	2020-05-06	10:00:00	14:00:00	240
7	Gamma_Airlines	Hartfield-Jackson Atlanta International Airport	Los Angeles International Airport	The Southerners	2020-04-27	04:45:00	09:00:00	255
8	Gamma_Airlines	Los Angeles International Airport	Tokyo Haneda Airport	International Flyers	2020-05-06	15:00:00	22:00:00	420
9	Gamma_Airlines	Shanghai Pudong International Airport	Los Angeles International Airport	International Flyers	1996-08-23	15:00:00	22:00:00	420
10	Gamma_Airlines	Dubai International Airport	Tokyo Haneda Airport	Tango	2020-05-06	15:10:00	23:00:00	470

3. Flights that charge for extras (water, etc.)

```

select FLIGHT_DEPARTURE_TIME, FINAL_ARRIVAL_TIME, FLIGHT_CREW_NAME,
FLIGHT_DATE, ARRIVAL_AIRPORT, DEPARTURE_AIRPORT, CHARGE_TYPE,
CHARGE_AMOUNT
from FLIGHT
inner join FLIGHT_SCHEDULE on
FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
inner join CHARGED_FLIGHT on
FLIGHT_SCHEDULE.FSID = CHARGED_FLIGHT.FSID
inner join CHARGE on
CHARGED_FLIGHT.FSID = CHARGE.FSID;

```

#	FLIGHT_DEPARTURE_TIME	FINAL_ARRIVAL_TIME	FLIGHT_CREW_NAME	FLIGHT_DATE	ARRIVAL_AIRPORT	DEPARTURE_AIRPORT	CHARGE_TYPE	CHARGE_AMOUNT
1	07:35:00	11:31:00	The Southerners	2020-04-26	O'Hare International Airport	Los Angeles International Airport	Pilows	10.00
2	04:45:00	09:00:00	The Southerners	2020-04-27	Hartsfield-Jackson Atlanta International Airport	Los Angeles International Airport	Blankets	3.00
3	13:00:00	14:00:00	Hollywood_flyers	2020-05-01	San Diego International Airport	Los Angeles International Airport	Water	2.50
4	13:00:00	14:00:00	Hollywood_flyers	2020-05-01	San Diego International Airport	Los Angeles International Airport	Blankets	3.50
5	13:00:00	14:00:00	Hollywood_flyers	2020-05-01	San Diego International Airport	Los Angeles International Airport	Pilows	5.50
6	13:31:00	15:00:00	United_flyers	2020-04-26	San Diego International Airport	Los Angeles International Airport	Water	4.25
7	16:32:00	18:00:00	United_flyers	2020-04-26	Los Angeles International Airport	San Diego International Airport	Blankets	5.00

4. The crew roster for each flight for each airline

```

select FLIGHT.FSID, all_crew.*, DEPARTURE_AIRPORT, ARRIVAL_AIRPORT,
FINAL_ARRIVAL_TIME, FLIGHT_DEPARTURE_TIME from FLIGHT_SCHEDULE
inner join
FLIGHT
on FLIGHT_SCHEDULE.FSID = FLIGHT.FSID
inner join
(
select FLIGHT_CREW.FLIGHT_CREW_NAME, FIRST_NAME, LAST_NAME, EMAIL,
AIRLINE_NAME, 'Pilot' as occupation
from FLIGHT_CREW inner join PILOT on
FLIGHT_CREW.FLIGHT_CREW_NAME = PILOT.FLIGHT_CREW_NAME
inner join CREW_MEMBER on
PILOT.CMID = CREW_MEMBER.CMID
inner join AIRLINE on
CREW_MEMBER.AID = AIRLINE.AID
union
select FLIGHT_CREW.FLIGHT_CREW_NAME, FIRST_NAME, LAST_NAME, EMAIL,
AIRLINE_NAME, 'Co_pilot' as occupation
from FLIGHT_CREW inner join CO_PILOT on
FLIGHT_CREW.FLIGHT_CREW_NAME = CO_PILOT.FLIGHT_CREW_NAME
inner join CREW_MEMBER on
CO_PILOT.CMID = CREW_MEMBER.CMID
inner join AIRLINE on
CREW_MEMBER.AID = AIRLINE.AID
union
select FLIGHT_CREW.FLIGHT_CREW_NAME, FIRST_NAME, LAST_NAME, EMAIL,
AIRLINE_NAME, 'Navigator' as occupation
from FLIGHT_CREW inner join NAVIGATOR on
FLIGHT_CREW.FLIGHT_CREW_NAME = NAVIGATOR.FLIGHT_CREW_NAME
inner join CREW_MEMBER on

```

```

NAVIGATOR.CMID = CREW_MEMBER.CMID
inner join AIRLINE on
CREW_MEMBER.AID = AIRLINE.AID
union
select FLIGHT_CREW.FLIGHT_CREW_NAME, FIRST_NAME, LAST_NAME, EMAIL,
AIRLINE_NAME,'flight_attendant' as occupation
from FLIGHT_CREW inner join FLIGHT_ATTENDANT on
FLIGHT_ATTENDANT.FLIGHT_CREW_NAME =
FLIGHT_CREW.FLIGHT_CREW_NAME
inner join CREW_MEMBER on
FLIGHT_ATTENDANT.CMID = CREW_MEMBER.CMID
inner join AIRLINE on
CREW_MEMBER.AID = AIRLINE.AID
) as all_crew
on all_crew.flight_crew_name = FLIGHT.FLIGHT_CREW_NAME
order by FSID, occupation;

```

1	1001 The Southerners	Jule	Anderson	jule@south.com	Southwest Airlines	Co_pilot
2	1001 The Southerners	Ian	McFellow	ian@south.com	Southwest Airlines	Navigator
3	1001 The Southerners	Andrew	Perez	andy@south.com	Southwest Airlines	Pilot
4	1001 The Southerners	Kendrick	Williams	kwil@south.com	Southwest Airlines	flight_attendant
5	1001 The Southerners	Cole	Hart	chart@south.com	Southwest Airlines	flight_attendant
6	1002 The Southerners	Jule	Anderson	jule@south.com	Southwest Airlines	Co_pilot
7	1002 The Southerners	Ian	McFellow	ian@south.com	Southwest Airlines	Navigator
8	1002 The Southerners	Andrew	Perez	andy@south.com	Southwest Airlines	Pilot
9	1002 The Southerners	Kendrick	Williams	kwil@south.com	Southwest Airlines	flight_attendant
10	1002 The Southerners	Cole	Hart	chart@south.com	Southwest Airlines	flight_attendant

5. The trips that are available if you do make one stop over

```

select first_trip.fsid as first_flight_taken, first_trip.flight_date as first_flight_date,
first_trip.departure_airport as starting_location, first_trip.arrival_airport as intermediate_location,
first_trip.flight_departure_time as first_flight_departure_time,
first_trip.FINAL_ARRIVAL_TIME as first_flight_arrival_time,
next_trip.fsid as available_flight, next_trip.arrival_airport as end_location,
next_trip.flight_date as second_trip_flight_date, next_trip.flight_departure_time as
second_trip_departure_time,
next_trip.final_arrival_time as second_trip_arriving_time from
(SELECT FLIGHT_SCHEDULE.FSID,
AIRLINE.AIRLINE_NAME,FLIGHT_SCHEDULE.ARRIVAL_AIRPORT,
FLIGHT_SCHEDULE.DEPARTURE_AIRPORT, FLIGHT.FLIGHT_DATE,
flight.FINAL_ARRIVAL_TIME, FLIGHT.FLIGHT_DEPARTURE_TIME
from FLIGHT_SCHEDULE natural join Flight natural join PILOT natural join CREW_MEMBER
natural join AIRLINE) as first_trip
inner join (select FLIGHT_SCHEDULE.fsid, AIRLINE.airline_name,
FLIGHT_SCHEDULE.arrival_airport,
flight_schedule.departure_airport, flight.flight_date, flight.final_arrival_time, flight.flight_departure_time
from FLIGHT_SCHEDULE natural join flight natural join pilot natural join crew_member natural join
airline) as next_trip
on first_trip.arrival_airport = next_trip.departure_airport
where next_trip.flight_date >= first_trip.flight_date
and first_trip.final_arrival_time < next_trip.flight_departure_time
order by first_trip.departure_airport;

```

select first\_trip\_id as... X

Max. rows: 100 | Fetched Rows: 5

Matching Rows:

#	FIRST_FLIGHT_TAKEN	FIRST_FLIGHT_DATE	STARTING_LOCATION	INTERMEDIATE_LOCATION	FIRST_FLIGHT_DEPARTURE_TIME	FIRST_FLIGHT_ARRIVAL_TIME	AVAILABLE_FLIGHT	END_LOCATION	SECOND_TRIP_FLIGHT_DATE	SECOND_TRIP_DEPARTURE
1		1010/2020-04-26	Los Angeles International Airport	San Diego International Airport	13:31:00	15:00:00		1011 Los Angeles International Airport	2020-04-26	16:32:00
2		100005/2020-05-06	Los Angeles International Airport	Tokyo Haneda Airport	10:00:00	14:00:00		100007 Dubai International Airport	2020-05-06	15:10:00
3		100005/2020-05-06	Los Angeles International Airport	Tokyo Haneda Airport	10:00:00	14:00:00		100006 Los Angeles International Airport	2020-05-06	15:00:00
4		100004/2020-05-04	Los Angeles International Airport	Tokyo Haneda Airport	11:31:00	15:00:00		100007 Dubai International Airport	2020-05-06	15:10:00
5		100001/1996-08-23	Shanghai Pudong International Airport	Los Angeles International Airport	10:00:00	14:00:00		100002 Shanghai Pudong International Airport	1996-08-23	15:00:00

Output

## 6. Management reports of mifly information:

### a. arriving flights per city

```
select CITY_NAME, count(*) as arrival_flights from FLIGHT_SCHEDULE
inner join AIRPORT on
FLIGHT_SCHEDULE.ARRIVAL_AIRPORT = AIRPORT.AIRPORT_NAME
inner join CITY on
CITY.CID = AIRPORT.CID
group by CITY_NAME
order by arrival_flights desc;
```

select CITY\_NAME, count(\*... X

Max. rows: 100 | Fetched Rows: 11 |

#	CITY_NAME	ARRIVAL_FLIGHTS
1	Ōta	4
2	Los Angeles	4
3	San Diego	2
4	Garhoud	2
5	Washington D.C	1
6	Salt Lake City	1
7	Pudong	1
8	Philadelphia	1
9	Denver	1
10	Chicago	1
11	Atlanta	1

### b. departing flights per city

```
select CITY_NAME, count(*) as departure_flights from FLIGHT_SCHEDULE
inner join AIRPORT on
FLIGHT_SCHEDULE.DEPARTURE_AIRPORT = AIRPORT.AIRPORT_NAME
inner join CITY on
CITY.CID = AIRPORT.CID
group by CITY_NAME
order by departure_flights desc;
```

select CITY\_NAME, count(\*... X

Max. rows: 100 | Fetched Rows: 9

#	CITY_NAME	DEPARTURE_FLIGHTS
1	Los Angeles	8
2	Öta	3
3	San Diego	2
4	Seattle	1
5	Pudong	1
6	Portland	1
7	Haarlemmermeer	1
8	Dallas	1
9	Baltimore	1

- c. list of airlines in each service category
- ```
select AIRLINE_NAME, FLIGHT_TYPE
from AIRLINE order by FLIGHT_TYPE
```



select AIRLINE\_NAME, FLIG... X

Max. rows: 100 | Fetched Rows: 19 |

| #  | AIRLINE_NAME            | FLIGHT_TYPE   |
|----|-------------------------|---------------|
| 1  | Southwest Airlines      | Domestic      |
| 2  | Delta Air Lines         | Domestic      |
| 3  | American Airlines       | Domestic      |
| 4  | Delta_Airlines          | Domestic      |
| 5  | California_Airlines     | Domestic      |
| 6  | CheapTickets            | Domestic      |
| 7  | Emirates                | International |
| 8  | Virgin Atlantic Airways | International |
| 9  | All Nippon Airways      | International |
| 10 | Theta_Airlines          | International |
| 11 | Gamma_Airlines          | International |
| 12 | Psi_Airlines            | International |
| 13 | United Airlines         | Local         |
| 14 | Spirit Airlines         | Local         |
| 15 | JetBlue Airways         | Local         |
| 16 | Compton_Airlines        | Local         |
| 17 | Sunny_Cali_Airlines     | Local         |
| 18 | Socal_Airlines          | Local         |
| 19 | Hollywood_Airlines      | Local         |

- d. crews that fly multiple flights in a single day
- ```

SELECT FLIGHT_CREW_NAME, FLIGHT_DATE, count(FLIGHT_DATE) as
number_of_flights
from FLIGHT
group by FLIGHT_CREW_NAME, FLIGHT_DATE
having count(FLIGHT_DATE) > 1;

```

SELECT FLIGHT\_CREW\_NAME, ... X

Max. rows: 100 | Fetched Rows: 3 |

#	FLIGHT_CREW_NAME	FLIGHT_DATE	NUMBER_OF_FLIGHTS
1	International Flyers	1996-08-23	2
2	International Flyers	2020-05-06	2
3	United_flyers	2020-04-26	2

7. A list of all incident reports by flight
- ```

select FLIGHT.FSID, FLIGHT_DATE, INCIDENT_TYPE, SEVERITY_AMOUNT,
ARRIVAL_AIRPORT, DEPARTURE_AIRPORT from FLIGHT
inner join INCIDENT_REPORT on
FLIGHT.FSID = INCIDENT_REPORT.FSID
inner join FLIGHT_SCHEDULE on
FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
order by FLIGHT.FSID;

```

select FLIGHT.FSID, FLIGHT... X

| Max. rows: 100   Fetched Rows: 6 |        |             |               |                 |                                         |                                       |
|----------------------------------|--------|-------------|---------------|-----------------|-----------------------------------------|---------------------------------------|
| #                                | FSID   | FLIGHT_DATE | INCIDENT_TYPE | SEVERITY_AMOUNT | ARRIVAL_AIRPORT                         | DEPARTURE_AIRPORT                     |
| 1                                | 10007  | 2020-05-06  | Praise        |                 | 5 Dubai International Airport           | Tokyo Haneda Airport                  |
| 2                                | 10007  | 2020-05-06  | Injury        |                 | 2 Dubai International Airport           | Tokyo Haneda Airport                  |
| 3                                | 100001 | 1996-08-23  | Praise        |                 | 5 Los Angeles International Airport     | Shanghai Pudong International Airport |
| 4                                | 100002 | 1996-08-23  | Praise        |                 | 3 Shanghai Pudong International Airport | Los Angeles International Airport     |
| 5                                | 100005 | 2020-05-06  | Injury        |                 | 1 Tokyo Haneda Airport                  | Los Angeles International Airport     |
| 6                                | 100006 | 2020-05-06  | Praise        |                 | 2 Los Angeles International Airport     | Tokyo Haneda Airport                  |

8. Flights that are scheduled to depart in three days

```

SELECT FLIGHT_DATE, FLIGHT_CREW_NAME, FLIGHT_DEPARTURE_TIME,
FINAL_ARRIVAL_TIME, ARRIVAL_AIRPORT, DEPARTURE_AIRPORT

```

```

from FLIGHT

```

```

inner join FLIGHT_SCHEDULE

```

```

on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID

```

```

WHERE {fn TIMESTAMPDIFF(SQL_TSI_DAY, CURRENT_DATE,
FLIGHT.FLIGHT_DATE)} = 3;

```

SELECT FLIGHT\_DATE, FLIGH... X

| Max. rows: 100   Fetched Rows: 3 |             |                      |                       |                    |                                   |                                   |
|----------------------------------|-------------|----------------------|-----------------------|--------------------|-----------------------------------|-----------------------------------|
| #                                | FLIGHT_DATE | FLIGHT_CREW_NAME     | FLIGHT_DEPARTURE_TIME | FINAL_ARRIVAL_TIME | ARRIVAL_AIRPORT                   | DEPARTURE_AIRPORT                 |
| 1                                | 2020-05-06  | International Flyers | 10:00:00              | 14:00:00           | Tokyo Haneda Airport              | Los Angeles International Airport |
| 2                                | 2020-05-06  | International Flyers | 15:00:00              | 22:00:00           | Los Angeles International Airport | Tokyo Haneda Airport              |
| 3                                | 2020-05-06  | Tango                | 15:10:00              | 23:00:00           | Dubai International Airport       | Tokyo Haneda Airport              |

9. All flights that arrived in the busiest airport in the last week

```

SELECT FLIGHT.FLIGHT_DEPARTURE_TIME, FLIGHT.FINAL_ARRIVAL_TIME,
FLIGHT.FLIGHT_CREW_NAME,

```



```
FLIGHT.FLIGHT_DATE, FLIGHT_SCHEDULE.DEPARTURE_AIRPORT,
FLIGHT_SCHEDULE.ARRIVAL_AIRPORT
```

```
from FLIGHT natural join FLIGHT_SCHEDULE
```

```
where ARRIVAL_AIRPORT = (
```

```
select arrivals.arrival_airport from (select ARRIVAL_AIRPORT, count(*) as
number_of_arrivals from FLIGHT_SCHEDULE
```

```
group by ARRIVAL_AIRPORT) as arrivals
```

```
inner join (select DEPARTURE_AIRPORT, count(*) as number_of_departures
from FLIGHT_SCHEDULE
```

```
group by DEPARTURE_AIRPORT) as departures on
```

```
arrivals.arrival_airport = departure_airport
```

```
where number_of_arrivals + number_of_departures >= all(
```

```
select arrivals.number_of_arrivals + number_of_departures as total
```

```
from (select ARRIVAL_AIRPORT, count(*) as number_of_arrivals from
FLIGHT_SCHEDULE
```

```
group by ARRIVAL_AIRPORT) as arrivals
```

```
inner join (select DEPARTURE_AIRPORT, count(*) as number_of_departures
from FLIGHT_SCHEDULE
```

```
group by DEPARTURE_AIRPORT) as departures on
```

```
arrivals.arrival_airport = departure_airport))
```

```
AND TIMESTAMP(FLIGHT.FLIGHT_DATE, CURRENT_TIME) BETWEEN {fn
TIMESTAMPADD(SQL_TSI_DAY, -12, CURRENT_DATE)} AND {fn
TIMESTAMPADD(SQL_TSI_DAY, -6, CURRENT_DATE)};
```

| SELECT FLIGHT.FLIGHT_DEPA... X   |                       |                    |                  |             |                                 |                                   |
|----------------------------------|-----------------------|--------------------|------------------|-------------|---------------------------------|-----------------------------------|
| Max. rows: 100   Fetched Rows: 1 |                       |                    |                  |             |                                 |                                   |
| #                                | FLIGHT_DEPARTURE_TIME | FINAL_ARRIVAL_TIME | FLIGHT_CREW_NAME | FLIGHT_DATE | DEPARTURE_AIRPORT               | ARRIVAL_AIRPORT                   |
| 1                                | 16:32:00              | 18:00:00           | United_flyers    | 2020-04-26  | San Diego International Airport | Los Angeles International Airport |
|                                  |                       |                    |                  |             |                                 |                                   |
|                                  |                       |                    |                  |             |                                 |                                   |
|                                  |                       |                    |                  |             |                                 |                                   |

```
select FLIGHT_DATE, FLIGHT_CREW_NAME, FLIGHT.FLIGHT_DEPARTURE_TIME,
FLIGHT.FINAL_ARRIVAL_TIME,

FLIGHT_SCHEDULE.ARRIVAL_TIME, FLIGHT_SCHEDULE.DEPARTURE_TIME,
ARRIVAL_AIRPORT, DEPARTURE_AIRPORT

from FLIGHT

inner join FLIGHT_SCHEDULE

on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID

where {fn TIMESTAMPDIFF(SQL_TSI_MINUTE,
FLIGHT_SCHEDULE.DEPARTURE_TIME, FLIGHT.FLIGHT_DEPARTURE_TIME)} >
30;
```

select FLIGHT\_DATE, FLIGHT\_CREW\_NAME, FLIGHT\_DEPARTURE\_TIME, FINAL\_ARRIVAL\_TIME, ARRIVAL\_TIME, DEPARTURE\_TIME, ARRIVAL\_AIRPORT, DEPARTURE\_AIRPORT

Max. rows: 100 | Fetched Rows: 6

| # | FLIGHT_DATE | FLIGHT_CREW_NAME     | FLIGHT_DEPARTURE_TIME | FINAL_ARRIVAL_TIME | ARRIVAL_TIME | DEPARTURE_TIME | ARRIVAL_AIRPORT                                  | DEPARTURE_AIRPORT                 |
|---|-------------|----------------------|-----------------------|--------------------|--------------|----------------|--------------------------------------------------|-----------------------------------|
| 1 | 2020-04-26  | The Southerners      | 07:35:00              | 11:31:00           | 11:00:00     | 07:00:00       | O'Hare International Airport                     | Los Angeles International Airport |
| 2 | 2020-04-27  | The Southerners      | 04:45:00              | 09:00:00           | 08:30:00     | 04:00:00       | Hartsfield-Jackson Atlanta International Airport | Los Angeles International Airport |
| 3 | 2020-05-01  | International Flyers | 10:31:00              | 14:31:00           | 14:00:00     | 10:00:00       | Los Angeles International Airport                | Tokyo Haneda Airport              |
| 4 | 2020-05-04  | International Flyers | 11:31:00              | 15:00:00           | 14:00:00     | 10:00:00       | Tokyo Haneda Airport                             | Los Angeles International Airport |
| 5 | 2020-04-26  | United Flyers        | 13:31:00              | 15:00:00           | 15:00:00     | 13:00:00       | San Diego International Airport                  | Los Angeles International Airport |
| 6 | 2020-04-26  | United Flyers        | 16:32:00              | 18:00:00           | 18:00:00     | 15:30:00       | Los Angeles International Airport                | San Diego International Airport   |

```
SELECT * FROM AIRPLANE where -{fn TIMESTAMPDIFF(SQL_TSI_YEAR,  
CURRENT_DATE, AIRPLANE.DATE_MANUFACTURED)} > 30;
```

| # | MANUFACTURER     | MODEL_NUMBER | PASSENGER_MAXIMUM | TAIL_NUMBER | PLANE_NAME | DATE_MANUFACTURED | AID  |
|---|------------------|--------------|-------------------|-------------|------------|-------------------|------|
| 1 | Textron Aviation | 304          | 80                | NBC         | Unit       | 1971-01-01        | 8    |
| 2 | AMC MRO          | 420          | 42                | 420         | Mary Jane  | 1975-04-20        | 4    |
| 3 | Boeing           | 600          | 500               | 100         | Blue jet   | 1944-08-23        | 200  |
| 4 | Raytheon         | 744          | 600               | 200         | The Beast  | 1932-07-23        | 1000 |
|   |                  |              |                   |             |            |                   |      |

b.How many retired pilots per airline

```
select AIRLINE_NAME, STATE_NAME, CITY_NAME, count(*) as number_of_pilots
```

```
from PILOT
```

```
inner join CREW_MEMBER on
```

```
PILOT.CMID = CREW_MEMBER.CMID
```

```
inner join AIRLINE
```

```
on CREW_MEMBER.AID = AIRLINE.AID
```

```
inner join CITY on
```

```
AIRLINE.CID = CITY.CID
```

```
where -{fn TIMESTAMPDIFF(SQL_TSI_YEAR, CURRENT_TIME,
```

```
CREW_MEMBER.DOB)} > 65
```

```
group by AIRLINE_NAME, STATE_NAME, CITY_NAME
```

having count(\*) >= 1;

| # | AIRLINE_NAME   | STATE_NAME | CITY_NAME   | NUMBER_OF_PILOTS |
|---|----------------|------------|-------------|------------------|
| 1 | Socal_Airlines | California | Los Angeles | 2                |
| 2 | Theta_Airlines | California | Los Angeles | 1                |

c.Crew and the airlines that they work for

select FIRST\_NAME, LAST\_NAME, EMAIL, AIRLINE\_NAME, CITY\_NAME,

STATE\_NAME

from CREW\_MEMBER inner join AIRLINE

on CREW\_MEMBER.AID = AIRLINE.AID

inner join CITY on

CITY.CID = AIRLINE.CID

order by AIRLINE\_NAME;

| #  | FIRST_NAME | LAST_NAME   | EMAIL               | AIRLINE_NAME       | CITY_NAME   | STATE_NAME |
|----|------------|-------------|---------------------|--------------------|-------------|------------|
| 1  | Joshua     | Hayter      | jhayt@gamma.com     | Gamma_Airlines     | Los Angeles | California |
| 2  | Jamal      | Ashraf      | ashraf@gamma.com    | Gamma_Airlines     | Los Angeles | California |
| 3  | Paul       | Wilkinson   | pjwilk@gamma.com    | Gamma_Airlines     | Los Angeles | California |
| 4  | Eduardo    | Rocha       | Erocha@gamma.com    | Gamma_Airlines     | Los Angeles | California |
| 5  | Sergio     | Vasquez     | svasq@gamma.com     | Gamma_Airlines     | Los Angeles | California |
| 6  | Mary       | Jane        | mjay@gamma.com      | Gamma_Airlines     | Los Angeles | California |
| 7  | Peter      | Parker      | ppark@gamma.com     | Gamma_Airlines     | Los Angeles | California |
| 8  | Pablo      | Picasso     | ppac@gamma.com      | Gamma_Airlines     | Los Angeles | California |
| 9  | Hector     | Rodriguez   | Hec@gamma.com       | Gamma_Airlines     | Los Angeles | California |
| 10 | Manny      | Cortez      | manc@gamma.com      | Gamma_Airlines     | Los Angeles | California |
| 11 | Tim        | Roughgarden | tjm@stanford.com    | Hollywood_Airlines | Los Angeles | California |
| 12 | Andrew     | Ng          | andrew@cmu.com      | Hollywood_Airlines | Los Angeles | California |
| 13 | Jennifer   | Aniston     | aniston@aniston.com | Hollywood_Airlines | Los Angeles | California |
| 14 | Brad       | Pitt        | pitt@pitt.com       | Hollywood_Airlines | Los Angeles | California |
| 15 | Angelina   | Jolie       | jolie@jolie.com     | Hollywood_Airlines | Los Angeles | California |
| 16 | Kevin      | Bacon       | bacon@bacon.com     | Hollywood_Airlines | Los Angeles | California |
| 17 | Pascal     | Vasquez     | pvasq@socal.com     | Socal_Airlines     | Los Angeles | California |
| 18 | Ryan       | Hiroko      | ryan@socal.com      | Socal_Airlines     | Los Angeles | California |
| 19 | Cole       | Hart        | chart@south.com     | Southwest Airlines | Dallas      | Texas      |
| 20 | Kendrick   | Williams    | kwil@south.com      | Southwest Airlines | Dallas      | Texas      |
| 21 | Jan        | McFellow    | jan@south.com       | Southwest Airlines | Dallas      | Texas      |
| 22 | Julie      | Anderson    | jule@south.com      | Southwest Airlines | Dallas      | Texas      |
| 23 | Andrew     | Perez       | andy@south.com      | Southwest Airlines | Dallas      | Texas      |
| 24 | Jeremy     | Howard      | jhow@gamma.com      | Theta_Airlines     | Los Angeles | California |
| 25 | Jeff       | Edmond      | jed@united.com      | United Airlines    | Chicago     | Illinois   |
| 26 | Jeff       | Erickson    | jerick@united.com   | United Airlines    | Chicago     | Illinois   |
| 27 | Rachel     | Zax         | rachzax@united.com  | United Airlines    | Chicago     | Illinois   |
| 28 | Erk        | Dermaine    | erk@united.com      | United Airlines    | Chicago     | Illinois   |
| 29 | Eric       | Leighman    | erc@united.com      | United Airlines    | Chicago     | Illinois   |

d.Do a query to find all retired pilots

SELECT FIRST\_NAME, LAST\_NAME, DOB, 'retired pilot' as occupation

from CREW\_MEMBER inner join PILOT

on CREW\_MEMBER.CMID = PILOT.CMID

left outer join FLIGHT\_CREW on

PILOT.FLIGHT\_CREW\_NAME = FLIGHT\_CREW.FLIGHT\_CREW\_NAME

where PILOT.FLIGHT\_CREW\_NAME is null

and -{fn TIMESTAMPDIFF(SQL\_TSI\_YEAR, CURRENT\_TIME, CREW\_MEMBER.DOB)}

>= 65;

SELECT FIRST\_NAME, LAST\_N... X

| Max. rows: 100   Fetched Rows: 3 |            |           |            |               |
|----------------------------------|------------|-----------|------------|---------------|
| #                                | FIRST_NAME | LAST_NAME | DOB        | OCCUPATION    |
| 1                                | Ryan       | Hiroko    | 1946-08-23 | retired pilot |
| 2                                | Pascal     | Vasquez   | 1945-09-25 | retired pilot |
| 3                                | Jeremey    | Howard    | 1950-10-10 | retired pilot |
|                                  |            |           |            |               |

e. Do a query to see the count of airlines a city has to show that no city headquarters more than 10

airlines

select distinct FIRST\_NAME, LAST\_NAME, EMAIL, HOUROFEXPERIENCE from

CREW\_MEMBER

inner join PILOT on

CREW\_MEMBER.CMID = PILOT.CMID

inner join FLIGHT\_CREW on

PILOT.FLIGHT\_CREW\_NAME = FLIGHT\_CREW.FLIGHT\_CREW\_NAME

inner join FLIGHT on

FLIGHT\_CREW.FLIGHT\_CREW\_NAME = FLIGHT.FLIGHT\_CREW\_NAME



inner join FLIGHT\_SCHEDULE on FLIGHT.FSID = FLIGHT\_SCHEDULE.FSID

inner join INTERNATIONAL\_FLIGHT on

INTERNATIONAL\_FLIGHT.FSID = FLIGHT\_SCHEDULE.FSID;

select city\_name, count(a... X

Max. rows: 100 | Fetched Rows: 9

| # | CITY_NAME       | AIRLINES_IN_CITY |
|---|-----------------|------------------|
| 1 | Los Angeles     | 10               |
| 2 | Garhoud         | 2                |
| 3 | Ōta             | 1                |
| 4 | Minato          | 1                |
| 5 | Dallas          | 1                |
| 6 | Crawley         | 1                |
| 7 | Chicago         | 1                |
| 8 | Chaoyang-Shunyi | 1                |
| 9 | Atlanta         | 1                |
|   |                 |                  |
|   |                 |                  |

f. List all pilots doing international flights to ensure that they have over 10000 hours of experience

```
select distinct FIRST_NAME, LAST_NAME, EMAIL, HOUROFEXPERIENCE from
```

```
CREW_MEMBER
```

```
inner join PILOT on
```

```
CREW_MEMBER.CMID = PILOT.CMID
```

```
inner join FLIGHT_CREW on
```

```
PILOT.FLIGHT_CREW_NAME = FLIGHT_CREW.FLIGHT_CREW_NAME
```

```
inner join FLIGHT on
```

```
FLIGHT_CREW.FLIGHT_CREW_NAME = FLIGHT.FLIGHT_CREW_NAME
```

```
inner join FLIGHT_SCHEDULE on FLIGHT.FSID = FLIGHT_SCHEDULE.FSID
```

```
inner join INTERNATIONAL_FLIGHT on
```

```
INTERNATIONAL_FLIGHT.FSID = FLIGHT_SCHEDULE.FSID;
```

| select distinct FIRST_NAM... X                                                                                 |            |           |                 |                  |
|----------------------------------------------------------------------------------------------------------------|------------|-----------|-----------------|------------------|
| <div><div></div><div></div><div></div><div></div><div></div><div></div></div> Max. rows: 100   Fetched Rows: 2 |            |           |                 |                  |
| #                                                                                                              | FIRST_NAME | LAST_NAME | EMAIL           | HOUROFEXPERIENCE |
| 1                                                                                                              | Manny      | Cortez    | manc@gamma.com  | 15000            |
| 2                                                                                                              | Sergio     | Vasquez   | svasq@gamma.com | 200000           |
|                                                                                                                |            |           |                 |                  |
|                                                                                                                |            |           |                 |                  |
|                                                                                                                |            |           |                 |                  |