a.

```
21 ✓  select airport_code, coordinates from airports_data
22    where city ->> 'ru' = 'Казань' or city ->> 'ru' = 'Москва'
23    order by airport_code desc;
```

Output | demo.bookings.airports_data

4 rows | Tx: Auto | DDL

	airport_code	coordinates
1	VKO	(37.2615013123,55.5914993286)
2	SVO	(37.4146,55.972599)
3	KZN	(49.278701782227,55.606201171875)
4	DME	(37.90629959106445,55.40879821777344)

b.

```
25 ✓  select airport_code || airport_name || city || coordinates || timezone as полная_информация
26    from airports_data
27    order by полная_информация
```

Output | полная_информация:text

104 rows | CSV

	полная_информация
1	AAQ{"en": "Anapa Vityazevo Airport", "ru": "Витязево"}{"en": "Anapa", "ru": "Анапа"}(37.347301483154,45.002101898193)Europe/Moscow
2	ABA{"en": "Abakan Airport", "ru": "Абакан"}{"en": "Abakan", "ru": "Абакан"}(91.38500213623047,53.7400016784668)Asia/Krasnoyarsk
3	AER{"en": "Sochi International Airport", "ru": "Сочи"}{"en": "Sochi", "ru": "Сочи"}(39.956600189209,43.449901580811)Europe/Moscow
4	ARH{"en": "Talagi Airport", "ru": "Талаги"}{"en": "Arkhangelsk", "ru": "Архангельск"}(40.71670150756836,64.60030364990234)Europe/Moscow
5	ASF{"en": "Astrakhan Airport", "ru": "Астрахань"}{"en": "Astrakhan", "ru": "Астрахань"}(48.0063018799,46.2832984924)Europe/Samara
6	BAX{"en": "Barnaul Airport", "ru": "Барнаул"}{"en": "Barnaul", "ru": "Барнаул"}(83.53849792480469,53.363800048828125)Asia/Krasnoyarsk
7	BQS{"en": "Ignatyevo Airport", "ru": "Игнатьево"}{"en": "Blagoveschensk", "ru": "Благовещенск"}(127.41200256347656,50.42539978027344)Asia/…
8	BTK{"en": "Bratsk Airport", "ru": "Братск"}{"en": "Bratsk", "ru": "Братск"}(101.697998046875,56.370601654052734)Asia/Irkutsk
9	BZK{"en": "Bryansk Airport", "ru": "Брянск"}{"en": "Bryansk", "ru": "Брянск"}(34.176399231,53.214199066199996)Europe/Moscow
10	CEE{"en": "Cherepovets Airport", "ru": "Череповец"}{"en": "Cherepovets", "ru": "Череповец"}(38.015800476100004,59.273601532)Europe/Moscow

c.

```sql
select departure_airport, count(*) as количество_рейсов from flights
where departure_airport in ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SVO')
group by departure_airport
ORDER BY количество_рейсов desc;
```

Output | Result 8

6 rows

	departure_airport	количество_рейсов
1	DME	3217
2	SVO	2981
3	LED	1900
4	OVB	1055
5	KZN	471
6	IKT	366

d.

```sql
select departure_airport, count(*) as количество_рейсов from flights
where departure_airport not in ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SVO')
group by departure_airport
ORDER BY количество_рейсов;
```

Output | Result 9

98 rows

	departure_airport	количество_рейсов
1	USK	18
2	KXK	18
3	PKC	26
4	PYJ	27
5	NYA	27
6	IWA	34
7	DYR	36
8	GDX	36
9	KYZ	43
10	LPK	43
11	NFG	44
12	EYK	53

e.

```sql
select flight_no, scheduled_departure, count(ticket_no) as passangers
from flights
    full join bookings.ticket_flights tf on flights.flight_id = tf.flight_id
group by flight_no, scheduled_departure
having count(ticket_no) between 27 and 90
order by flight_no desc, scheduled_departure desc, passangers desc;
```

Output | Result 7

1-500 of 501+

	flight_no	scheduled_departure	passangers
1	PG0710	2017-09-12 01:25:00.000000 +00:00	38
2	PG0710	2017-09-05 01:25:00.000000 +00:00	57
3	PG0710	2017-08-29 01:25:00.000000 +00:00	78
4	PG0710	2017-08-22 01:25:00.000000 +00:00	82
5	PG0710	2017-08-15 01:25:00.000000 +00:00	89
6	PG0710	2017-08-08 01:25:00.000000 +00:00	86
7	PG0710	2017-08-01 01:25:00.000000 +00:00	51
8	PG0710	2017-07-25 01:25:00.000000 +00:00	52
9	PG0709	2017-09-04 17:20:00.000000 +00:00	44
10	PG0709	2017-08-28 17:20:00.000000 +00:00	63
11	PG0709	2017-08-21 17:20:00.000000 +00:00	61

f.

```sql
select passenger_name from tickets
union all
select airport_name ->> 'ru' from airports_data
order by  passenger_name desc;
```

Output | demo.bookings.tickets

1-500 of 501+ Tx: Aut

	passenger_name
1	Якутск
2	Элиста
3	Шереметьево
4	Чульман
5	Чита
6	Череповец
7	Челябинск
8	Чебоксары

g.

```
41 ✓  select passenger_name, 'пассажир' as type from tickets
42    union all
43    select airport_name ->> 'ru', 'аэропорт' as type from airports_data
44    order by type desc, passenger_name desc;
```

Output | Result 10 ×

1-500 of 501+

	passenger_name	type
1	ZULFIYA ZOTOVA	пассажир
2	ZULFIYA ZOTOVA	пассажир
3	ZULFIYA ZHURAVLEVA	пассажир
4	ZULFIYA ZAYCEVA	пассажир
5	ZULFIYA ZAYCEVA	пассажир
6	ZULFIYA ZAKHAROVA	пассажир
7	ZULFIYA ZAKHAROVA	пассажир
8	ZULFIYA VOROBEVA	пассажир

h.

```
46 ✓  select count(*)
47    from flights f left join bookings.ticket_flights tf on f.flight_id = tf.flight_id
48    where tf.ticket_no is null
```

tf

Output | count(*):bigint ×

1 row

count
10895

i. (updated 2023-12-20)

```sql
select a.airport_code as airport, avg(seats_count) as avg_seat_amount, avg(tickets_count) as avg_ticket_amount
from airports_data a
    left join flights f on a.airport_code = f.departure_airport
    left join (select aircraft_code, count(seat_no) as seats_count from seats group by aircraft_code) as sc
        on f.aircraft_code = sc.aircraft_code
    left join (select flight_id, count(ticket_no) as tickets_count from ticket_flights group by flight_id) as tc
        on f.flight_id = tc.flight_id
where date(f.scheduled_departure) between '2017-08-01' and '2017-08-31'
group by airport
order by avg_seat_amount desc, avg_ticket_amount desc;
```

Output | Result 10

104 rows

	airport	avg_seat_amount	avg_ticket_amount
1	PKC	222	68.2307692307692308
2	KXK	222	28.7777777777777778
3	GDX	162.7894736842105263	29.5
4	KRR	135.05	117.8133333333333333
5	VVO	123	41.5217391304347826
6	KUF	121.3333333333333333	129.2258064516129032
7	AER	116.6824324324324324	110.8941798941798942
8	BTK	116	58.7096774193548387
9	DYR	116	41.2
10	AAQ	114.7313432835820896	101.5161290322580645

j.

```sql
select f.flight_no, min(amount) as min, max(amount) as max
from flights f join bookings.ticket_flights tf on f.flight_id = tf.flight_id
group by f.flight_no;
```

Output | Result 19

483 rows

	flight_no	min	max
1	PG0012	12300	13500
2	PG0013	14000	42100
3	PG0014	3300	9800
4	PG0015	18700	20600
5	PG0016	18700	20600
6	PG0019	9500	10500
7	PG0020	9500	10500