



```
-- hw 7

SELECT airport_code, coordinates
FROM airports_data
WHERE city = '{"en": "Moscow", "ru": "Москва"}' OR city = '{"en": "Kazan", "ru": "Казань"}'
ORDER BY airport_code DESC;
```

	 airport_code	 coordinates
1	VKO	(37.2615013123, 55.5914993286)
2	SV0	(37.4146, 55.972599)
3	KZN	(49.278701782227, 55.606201171875)
4	DME	(37.90629959106445, 55.40879821777344)





```
SELECT CONCAT(airport_code || ', ' || airport_name || ', ' || city || ', ' || coordinates || ', ' || timezone) AS "Полная-информация"
FROM airports_data
ORDER BY 1 ASC;
```



104 rows		CSV	Download	Upload	Refresh
	"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": "Ignatyev Airport", "ru": "Игнатьево"}, {"en": "Blagoveschensk", "ru": "Благовещенск"}, (127.41200256347656,50.42539978027344), Asia/Yakutsk				

```
SELECT departure_airport, COUNT(*) AS flight_count
FROM flights
WHERE flights.departure_airport IN ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SV0')
GROUP BY departure_airport
ORDER BY flight_count DESC;
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	 departure_airport 	 flight_count 
1	DME	3217
2	SV0	2981
3	LED	1900
4	OVB	1055
5	KZN	471
6	IKT	366



```
SELECT departure_airport, COUNT(*) AS flight_count
FROM flights
WHERE flights.departure_airport NOT IN ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SV0')
GROUP BY departure_airport
ORDER BY flight_count ASC;
```

	departure_airport	flight_count
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
13	UKX	61
14	BTK	61
15	IJK	61
16	SWT	61
17	BQS	61
18	GRV	70
19	UUD	71
20	OSW	71





```
SELECT
    flights.flight_no AS flight_number,
    flights.scheduled_departure AS flight_date,
    COUNT(boarding_passes.ticket_no) AS passengers_count
FROM
    flights
JOIN
    boarding_passes ON flights.flight_id = boarding_passes.flight_id
GROUP BY
    flights.flight_no,
    flights.scheduled_departure
HAVING
    COUNT(boarding_passes.ticket_no) BETWEEN 27 AND 90
ORDER BY
    flights.flight_no ASC,
    flights.scheduled_departure ASC,
    passengers_count DESC;
```



<div><div>🔍</div>flight_number</div>	<div><div>🔍</div>flight_date</div>	<div><div>🔍</div>passengers_count</div>
PG0014	2017-07-16 04:30:00.000000 +00:00	41
PG0014	2017-07-17 04:30:00.000000 +00:00	36
PG0014	2017-07-18 04:30:00.000000 +00:00	38
PG0014	2017-07-19 04:30:00.000000 +00:00	39
PG0014	2017-07-20 04:30:00.000000 +00:00	38
PG0014	2017-07-21 04:30:00.000000 +00:00	43
PG0014	2017-07-22 04:30:00.000000 +00:00	34
PG0014	2017-07-23 04:30:00.000000 +00:00	38
PG0014	2017-07-24 04:30:00.000000 +00:00	56
PG0014	2017-07-25 04:30:00.000000 +00:00	59
PG0014	2017-07-26 04:30:00.000000 +00:00	72
PG0014	2017-07-27 04:30:00.000000 +00:00	73
PG0014	2017-07-28 04:30:00.000000 +00:00	77
PG0014	2017-07-29 04:30:00.000000 +00:00	78
PG0014	2017-07-30 04:30:00.000000 +00:00	83
PG0014	2017-07-31 04:30:00.000000 +00:00	83
PG0014	2017-08-01 04:30:00.000000 +00:00	78
PG0014	2017-08-02 04:30:00.000000 +00:00	87
PG0014	2017-08-03 04:30:00.000000 +00:00	87

```
SELECT
    tickets.passenger_name,
    airports_data.airport_name
FROM
    tickets
JOIN
    boarding_passes ON tickets.ticket_no = boarding_passes.ticket_no
JOIN
    flights ON boarding_passes.flight_id = flights.flight_id
JOIN
    airports_data ON flights.departure_airport = airports_data.airport_code
ORDER BY
    tickets.passenger_name DESC, airports_data.airport_name DESC;
```



	passenger_name	airport_name
1	ZULFIYA ZOTOVA	{"en": "Sheremetyevo International Airport", "ru": "Шереметьево"}
2	ZULFIYA ZOTOVA	{"en": "Saransk Airport", "ru": "Саранск"}
3	ZULFIYA ZHURAVLEVA	{"en": "Pulkovo Airport", "ru": "Пулково"}
4	ZULFIYA ZHURAVLEVA	{"en": "Pobedilovo Airport", "ru": "Победилово"}
5	ZULFIYA ZAYCEVA	{"en": "Domodedovo International Airport", "ru": "Домодедово"}
6	ZULFIYA ZAKHAROVA	{"en": "Vnukovo International Airport", "ru": "Внуково"}
7	ZULFIYA ZAKHAROVA	{"en": "Ulyanovsk Baratayevka Airport", "ru": "Баратаевка"}
8	ZULFIYA ZAKHAROVA	{"en": "Ulyanovsk Baratayevka Airport", "ru": "Баратаевка"}
9	ZULFIYA ZAKHAROVA	{"en": "Krasnodar Pashkovsky International Airport", "ru": "Краснодар"}



```
SELECT
    tickets.passenger_name || ' - ' || (airports_data.airport_name->>'ru')::text AS passenger_and_airport
FROM
    tickets
JOIN
    boarding_passes ON tickets.ticket_no = boarding_passes.ticket_no
JOIN
    flights ON boarding_passes.flight_id = flights.flight_id
JOIN
    airports_data ON flights.departure_airport = airports_data.airport_code
ORDER BY
    passenger_and_airport DESC;
```

	🔍 passenger_and_airport	⬆️
1	ZULFIYA ZOTOVA - Шереметьево	
2	ZULFIYA ZOTOVA - Саранск	
3	ZULFIYA ZHURAVLEVA - Пулково	
4	ZULFIYA ZHURAVLEVA - Победилово	
5	ZULFIYA ZAYCEVA - Домодедово	
6	ZULFIYA ZAKHAROVA - Краснодар	
7	ZULFIYA ZAKHAROVA - Внуково	
8	ZULFIYA ZAKHAROVA - Баратаевка	
9	ZULFIYA ZAKHAROVA - Баратаевка	
10	ZULFIYA VOROBEOVA - Рощино	
11	ZULFIYA VOROBEOVA - Внуково	
12	ZULFIYA VOROBEOVA - Бесовец	
13	ZULFIYA VOROBEOVA - Бесовец	
14	ZULFIYA VOLKOVA - Шереметьево	
15	ZULFIYA VOLKOVA - Толмачёво	
16	ZULFIYA VLASOVA - Домодедово	

```
SELECT airports_data.airport_name->>'en' AS passengers_and_airports
FROM airports_data
UNION
SELECT tickets.passenger_name AS passengers_and_airports
FROM tickets
ORDER BY passengers_and_airports DESC;
```



passengers\_and\_airports

1210	YAKOV ALEKSANDROV
1211	YAKOV ABRAMOV
1212	Voronezh International Airp...
1213	Vorkuta Airport
1214	Volgograd International Air...
1215	Vnukovo International Airpo...
1216	Vladivostok International A...
1217	VYACHESLAV ZHURAVLEV
1218	VYACHESLAV ZHUKOV
1219	VYACHESLAV ZAYCEV
1220	VYACHESLAV ZAKHAROV
1221	VYACHESLAV YAKOVLEV



```
SELECT
    airports_data.airport_name->>'en' AS passengers_and_airports,
    'airport' AS type
FROM
    airports_data
UNION
SELECT
    tickets.passenger_name AS passengers_and_airports,
    'passenger' AS type
FROM
    💡 tickets
ORDER BY
    type DESC,
    passengers_and_airports DESC;
```

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	<div><div>🔍</div>passengers_and_airports</div>	<div><div>⬆️</div><div><div>🔍</div>type</div><div>⬆️</div></div>
1	ZULFIYA ZOTOVA	passenger
2	ZULFIYA ZHURAVLEVA	passenger
3	ZULFIYA ZAYCEVA	passenger
4	ZULFIYA ZAKHAROVA	passenger
5	ZULFIYA VOROBEVA	passenger
6	ZULFIYA VOLKOVA	passenger
7	ZULFIYA VLASOVA	passenger
8	ZULFIYA VASILEVA	passenger
9	ZULFIYA TIKHONOVA	passenger
10	ZULFIYA TARASOVA	passenger
11	ZULFIYA SOROKINA	passenger
12	ZULFIYA SOKOLOVA	passenger
13	ZULFIYA SMIRNOVA	passenger
14	ZULFIYA STRODOVA	passenger



```
SELECT
    COUNT(*) AS flights_without_tickets
FROM
    flights
LEFT JOIN
    boarding_passes ON flights.flight_id = boarding_passes.flight_id
WHERE
    boarding_passes.ticket_no IS NULL;
```

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```
SELECT
    flights.departure_airport,
    AVG(s.seats_count) AS capacity,
    AVG(tf.tickets_count) AS tickets
FROM
    flights
JOIN
    (SELECT aircraft_code, COUNT(*) AS seats_count
     FROM seats
     GROUP BY aircraft_code) AS s ON flights.aircraft_code = s.aircraft_code
LEFT JOIN
    (SELECT flight_id, COUNT(*) AS tickets_count
     FROM ticket_flights
     GROUP BY flight_id) AS tf ON flights.flight_id = tf.flight_id
WHERE EXTRACT(MONTH FROM flights.scheduled_departure) = 8
GROUP BY flights.departure_airport
ORDER BY capacity DESC, tickets DESC;
```



	departure_airport	capacity	tickets
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
11	ULV	110.425	77.6064516129032258
12	SVO	109.9301252471984179	76.6155624036979969
13	SVX	107.9771428571428571	99.211864406779661
14	PEE	107.8317460317460317	83.0481927710843373
15	MRV	107.3773584905660377	71.5377358490566038
16	LED	107.0797927461139896	59.7968069666182874
17	KHV	106.303921568627451	86.8197674418604651
18	DME	101.3971848225214198	67.9448875997099347
19	VKO	99.2233676975945017	54.9134751773049645
20	KGD	99.2125	67.375
21	SCW	98	89.0206185567010309
22	URJ	97	84.3387096774193548
23	BZK	97	67.1935483870967742
24	BQS	97	45.1290322580645161
25	MCX	88.5980392156862745	79.2473118279569892
26	OVB	87.7252336448598131	88.9296187683284457
27	NSK	87.2857142857142857	77.1774193548387097
28	TKT	86.0477103548387097	81.7151812715000000

```
SELECT
```

```
    flight_id,
```

```
    MIN(amount) AS cheap_ticket,
```

```
    MAX(amount) AS expensive_ticket
```

```
FROM ticket_flights
```

```
GROUP BY flight_id;
```



	flight_id	cheap_ticket	expensive_ticket
1	11233	19100	57200
2	22344	6600	6600
3	26264	62100	186200
4	4790	17600	19400
5	24416	7500	8200
6	3936	19300	19300
7	18803	4400	4400
8	12502	22600	24800
9	31297	3300	9900
10	29007	10900	32600
11	31789	8900	8900
12	5468	9800	29500
13	29089	3100	3400
14	13520	12200	36600
15	20549	7600	22900
16	4326	30200	90500
17	23000	5200	15700
18	2520	12400	13600
19	2466	28900	86800
20	9038	17600	19300
21	5407	14400	43300