**Проект «Авиарейсы без потерь»**

**Задание 4.1**

SELECT city, count(airport\_code) as

FROM dst\_project.airports

GROUP BY city

ORDER BY count desc

**Задание 4.2**

**Вопрос 1.**

SELECT count(distinct status)

FROM dst\_project.flights

**Вопрос 2.**

SELECT status, count(flight\_id)

FROM dst\_project.flights

WHERE status = 'Departed'

GROUP BY status

**Вопрос 3.**

SELECT aircraft\_code, count(seat\_no) as count\_seat

FROM dst\_project.seats

GROUP BY aircraft\_code

HAVING aircraft\_code=‘773'

**Вопрос 4.**

SELECT status, count(flight\_id)

FROM dst\_project.flights

WHERE (actual\_arrival BETWEEN '2017-04-01' AND '2017-09-01') AND (status = 'Arrived')

GROUP BY status

**Задание 4.3**

**Вопрос 1.**

SELECT count(status)

FROM dst\_project.flights

WHERE status = ‘Cancelled'

**Вопрос 2.**

SELECT sum(CASE WHEN model LIKE 'Boeing%' THEN 1 ELSE 0 END) AS BoeingToken,

sum(CASE WHEN model LIKE 'Airbus%' THEN 1 ELSE 0 END) AS AirbusToken,

sum(CASE WHEN model LIKE 'Sukhoi Superjet%' THEN 1 ELSE 0 END) AS SukhoiToken

FROM dst\_project.aircrafts

**Вопрос 3.**

SELECT sum(CASE WHEN timezone LIKE 'Asia%' THEN 1 ELSE 0 END) AS Asia,

sum(CASE WHEN timezone LIKE 'Europe%' THEN 1 ELSE 0 END) AS Europe,

sum(CASE WHEN timezone LIKE 'Australia%' THEN 1 ELSE 0 END) AS Australia

FROM dst\_project.airports

**Вопрос 4.**

SELECT (actual\_arrival - scheduled\_arrival) AS time\_zaderjka, flight\_id

FROM dst\_project.flights

WHERE actual\_arrival IS NOT NULL

ORDER BY time\_zaderjka DESC

**Задание 4.4**

**Вопрос 1.**

SELECT scheduled\_departure

FROM dst\_project.flights

ORDER BY scheduled\_departure

**Вопрос 2.**

SELECT

(DATE\_PART('hour', scheduled\_arrival - scheduled\_departure) \* 60

+ DATE\_PART('minute', scheduled\_arrival - scheduled\_departure))

AS long\_flight

FROM dst\_project.flights

WHERE scheduled\_departure is not null

ORDER BY long\_flight desc

**Вопрос 3.**

SELECT

(DATE\_PART('hour', scheduled\_arrival - scheduled\_departure) \* 60

+ DATE\_PART('minute', scheduled\_arrival - scheduled\_departure))

AS long\_flight,

departure\_airport,

arrival\_airport

FROM dst\_project.flights

WHERE scheduled\_departure is not null

ORDER BY long\_flight desc

**Вопрос 4.**

SELECT

avg(DATE\_PART('hour', scheduled\_arrival - scheduled\_departure) \* 60

+ DATE\_PART('minute', scheduled\_arrival - scheduled\_departure))

AS mean\_long\_flight

FROM dst\_project.flights

WHERE scheduled\_departure is not null

**Задание 4.5**

**Вопрос 1.**

SELECT fare\_conditions, count(seat\_no)

FROM dst\_project.seats

WHERE aircraft\_code = 'SU9'

GROUP BY fare\_conditions

**Вопрос 2.**

SELECT total\_amount

FROM dst\_project.bookings

ORDER BY total\_amount asc

LIMIT 1

**Вопрос 3.**

SELECT seat\_no

FROM dst\_project.tickets t

JOIN dst\_project.boarding\_passes b ON t.ticket\_no = b.ticket\_no

WHERE passenger\_id = '4313 788533'

**Задание 5.**

**Вопрос 1.**

SELECT arrival\_airport, count(status)

FROM dst\_project.flights

WHERE (arrival\_airport = 'AAQ') and (actual\_arrival between '2017-01-01' and '2017-12-31')

GROUP BY arrival\_airport

**Вопрос 2.**

SELECT status, count(departure\_airport)

FROM dst\_project.flights

WHERE (departure\_airport = 'AAQ') and (actual\_departure between '2017-01-01' and '2017-03-01')

GROUP BY status

**Вопрос 3.**

SELECT status, count(departure\_airport)

FROM dst\_project.flights

WHERE (departure\_airport = 'AAQ')

GROUP BY status

**Вопрос 4.**

SELECT count(flight\_no)

FROM dst\_project.flights

WHERE (departure\_airport='AAQ')

AND (arrival\_airport !='DME')

AND (arrival\_airport !='SVO')

AND (arrival\_airport !='VKO')

**Вопрос 5.**

SELECT a.model,

count(distinct s.seat\_no),

f.departure\_airport

FROM dst\_project.flights f

JOIN dst\_project.aircrafts a ON a.aircraft\_code = f.aircraft\_code

JOIN dst\_project.seats s ON a.aircraft\_code = s.aircraft\_code

WHERE f.departure\_airport = 'AAQ'

GROUP BY a.model, f.departure\_airport

ORDER BY 2 desc

LIMIT 1

**Задание 6.**

Выведем на экран таблицу с id рейса, аэропортом отправления, аэропортом прибытия, найдем длительность перелета в минутах, выведем модель самолета, его максимальную дальность полета, цену за билет.

SELECT distinct f.flight\_id,

f.departure\_airport,

f.arrival\_airport,

(DATE\_PART('hour', f.actual\_arrival - f.actual\_departure) \* 60

+ DATE\_PART('minute', f.actual\_arrival - f.actual\_departure)) AS long\_flight,

a.model,

a.range,

tf.amount

FROM dst\_project.flights f

JOIN dst\_project.ticket\_flights tf ON f.flight\_id = tf.flight\_id

JOIN dst\_project.aircrafts a ON f.aircraft\_code = a.aircraft\_code

JOIN dst\_project.seats s ON f.aircraft\_code = s.aircraft\_code

WHERE f.departure\_airport = 'AAQ'

AND (date\_trunc('month', f.scheduled\_departure) in ('2017-01-01','2017-02-01', '2017-12-01'))

AND f.status not in ('Cancelled')

AND f.actual\_departure is not null

Отдельно в этой таблице у меня не получилось применить группировку по номеру рейса, поэтому сделал отдельный запрос:

SELECT f.flight\_id,

sum(tf.amount) amount\_total

FROM dst\_project.flights f

JOIN dst\_project.ticket\_flights tf ON f.flight\_id = tf.flight\_id

JOIN dst\_project.aircrafts a ON f.aircraft\_code = a.aircraft\_code

JOIN dst\_project.seats s ON f.aircraft\_code = s.aircraft\_code

WHERE f.departure\_airport = 'AAQ'

AND (date\_trunc('month', f.scheduled\_departure) in ('2017-01-01','2017-02-01', '2017-12-01'))

AND f.status not in ('Cancelled')

AND f.actual\_departure is not null

GROUP BY f.flight\_id

ORDER BY amount\_total asc

Отдельно пришлось посчитать среднюю продолжительность каждого рейса в минутах:

SELECT f.flight\_id,

avg((DATE\_PART('hour', f.actual\_arrival - f.actual\_departure) \* 60

+ DATE\_PART('minute', f.actual\_arrival - f.actual\_departure))) AS long\_flight

FROM dst\_project.flights f

JOIN dst\_project.ticket\_flights tf ON f.flight\_id = tf.flight\_id

JOIN dst\_project.aircrafts a ON f.aircraft\_code = a.aircraft\_code

JOIN dst\_project.seats s ON f.aircraft\_code = s.aircraft\_code

WHERE f.departure\_airport = 'AAQ'

AND (date\_trunc('month', f.scheduled\_departure) in ('2017-01-01','2017-02-01', '2017-12-01'))

AND f.status not in ('Cancelled')

AND f.actual\_departure is not null

GROUP BY f.flight\_id

ORDER BY long\_flight asc

Сгруппируем модели самолетов по продолжительности перелета:

SELECT distinct a.model,

(DATE\_PART('hour', f.actual\_arrival - f.actual\_departure) \* 60

+ DATE\_PART('minute', f.actual\_arrival - f.actual\_departure)) AS long\_flight

FROM dst\_project.flights f

JOIN dst\_project.ticket\_flights tf ON f.flight\_id = tf.flight\_id

JOIN dst\_project.aircrafts a ON f.aircraft\_code = a.aircraft\_code

JOIN dst\_project.seats s ON f.aircraft\_code = s.aircraft\_code

WHERE f.departure\_airport = 'AAQ'

AND (date\_trunc('month', f.scheduled\_departure) in ('2017-01-01','2017-02-01', '2017-12-01'))

AND f.status not in ('Cancelled')

AND f.actual\_departure is not null

ORDER BY long\_flight