Задание 4.1

**SELECT** city,

**count**(a.airport\_name) **AS** qty

**FROM** dst\_project.airports a

**GROUP** **BY** a.city

**HAVING** **count**(a.airport\_name) > 1

Ответ: Moscow, Ulyanovsk

### Задание 4.2

### 1)

**SELECT** **count**(**DISTINCT** f.status)

**FROM** dst\_project.flights f

Ответ: 6

2)

**SELECT** **count**(f.flight\_id)

**FROM** dst\_project.flights f

**WHERE** f.status = 'Departed'

Ответ: 58

3)

**SELECT** **count**(seat\_no)

**FROM** dst\_project.seats s

**WHERE** s.aircraft\_code = '773'

Ответ: 402

4)

**SELECT** **count**(f.flight\_id)

**FROM** dst\_project.flights f

**WHERE** (f.actual\_arrival **BETWEEN** '2017-04-01' **AND** '2017-09-01')

**AND** (f.status = 'Arrived')

Ответ: 74227

### Задание 4.3

### 1)

**SELECT** **count**(f.flight\_id)

**FROM** dst\_project.flights f

**WHERE** f.status = 'Cancelled'

Ответ: 437

2)

**SELECT** 'Airbus',

**count**(\*)

**FROM** dst\_project.aircrafts a

**WHERE** a.model **LIKE** 'Airbus%'

**UNION** **ALL**

**SELECT** 'Boeing',

**count**(\*)

**FROM** dst\_project.aircrafts a

**WHERE** a.model **LIKE** 'Boeing%'

**UNION** **ALL**

**SELECT** 'Sukhoi',

**count**(\*)

**FROM** dst\_project.aircrafts a

**WHERE** a.model **LIKE** 'Sukhoi%'

Ответ: 3; 1; 3

3)

**SELECT** **count**(\*)

**FROM** dst\_project.airports a

**WHERE** a.timezone **LIKE** 'Europe%'

**UNION** **ALL**

**SELECT** **count**(\*)

**FROM** dst\_project.airports a

**WHERE** a.timezone **LIKE** 'Asia%'

**UNION** **ALL**

**SELECT** **count**(\*)

**FROM** dst\_project.airports a

**WHERE** a.timezone **LIKE** 'Australia%'

Ответ: Europe, Asia

4)

**SELECT** f.flight\_id,

(f.actual\_arrival - f.scheduled\_arrival) time\_delta

**FROM** dst\_project.flights f

**WHERE** f.actual\_arrival **IS** **NOT** **NULL**

**ORDER** **BY** 2 **DESC**

**LIMIT** 1

Ответ: 157571

### Задание 4.4

1)



Ответ: 14.08.2016

2)

**SELECT** date\_part('hour', f.scheduled\_arrival - f.scheduled\_departure) \* 60 + date\_part('minute', f.scheduled\_arrival - f.scheduled\_departure) flight\_time

**FROM** dst\_project.flights f

**ORDER** **BY** 1 **DESC**

Ответ: 530

3)

**SELECT** f.arrival\_airport,

f.departure\_airport,

f.status,

date\_part('hour', f.scheduled\_arrival - f.scheduled\_departure) \* 60 + date\_part('minute', f.scheduled\_arrival - f.scheduled\_departure) flight\_time

**FROM** dst\_project.flights\_v f

**ORDER** **BY** 4 **DESC**

Ответ: DME – UUS

4) **SELECT** **avg**(f.scheduled\_duration)

**FROM** dst\_project.flights\_v f

Ответ: 128

### Задание 4.5

1)

**SELECT** **count**(s.fare\_conditions)

**FROM** dst\_project.seats s

**WHERE** aircraft\_code = 'SU9'

**AND** s.fare\_conditions **like** 'Economy'

Ответ: Economy

2)

**SELECT** **min**(b.total\_amount)

**FROM** dst\_project.bookings b

Ответ: 3400

3)

**SELECT** b.seat\_no

**FROM** dst\_project.boarding\_passes b

**JOIN** dst\_project.tickets t **ON** b.ticket\_no = t.ticket\_no

**GROUP** **BY** b.seat\_no,

t.passenger\_id

**HAVING** t.passenger\_id = '4313 788533'

Ответ: 2A

### Задание 5.1

**Вопрос 1. Анапа — курортный город на юге России. Сколько рейсов прибыло в Анапу за 2017 год?**

**SELECT** **count**(\*)

**FROM** dst\_project.flights

**WHERE** (arrival\_airport = 'AAQ')

**AND** (date\_part('year', actual\_arrival) = 2017)

Ответ: 486

**Вопрос 2. Сколько рейсов из Анапы вылетело зимой 2017 года?**

**SELECT** **count**(\*)

**FROM** dst\_project.flights

**WHERE** (departure\_airport = 'AAQ')

**AND** (date\_part('year', actual\_departure) = 2017)

**AND** (date\_part('month', actual\_departure) **in** (12,

1,

2));

Ответ: 127

**Вопрос 3. Посчитайте количество отмененных рейсов из Анапы за все время.**

**SELECT** **count**(\*)

**FROM** dst\_project.flights f

**WHERE** (f.departure\_airport = 'AAQ')

**AND** (f.status = 'Cancelled')

Ответ: 1

**Вопрос 4. Сколько рейсов из Анапы не летают в Москву?**

**SELECT** **count**(\*)

**FROM** dst\_project.flights f

**WHERE** (f.departure\_airport = 'AAQ')

**AND** (f.arrival\_airport != 'VKO')

**AND** (f.arrival\_airport != 'DME')

**AND** (f.arrival\_airport != 'SVO')

Ответ: 453

**Вопрос 5. Какая модель самолета летящего на рейсах из Анапы имеет больше всего мест?**

**SELECT** **DISTINCT** f.aircraft\_code,

a.seats

**FROM** dst\_project.flights f

**JOIN**

(**SELECT** aircraft\_code,

**count**(\*) seats

**FROM** dst\_project.seats

**GROUP** **BY** aircraft\_code) a **ON** a.aircraft\_code = f.aircraft\_code

**WHERE** f.departure\_airport = 'AAQ'

**ORDER** **BY** a.seats **DESC**

**LIMIT** 1

Ответ: Boeing 737-300

Сборка датасета:

**SELECT** f.flight\_id,

f.flight\_no,

f.scheduled\_departure,

f.scheduled\_arrival,

f.departure\_airport,

f.arrival\_airport,

f.status,

f.actual\_departure,

f.actual\_arrival,

date\_part('hour', f.scheduled\_arrival - f.scheduled\_departure) \* 60 + date\_part('minute', f.scheduled\_arrival - f.scheduled\_departure) flight\_time\_min,

**EXTRACT**(DOW

**FROM** f.scheduled\_arrival) **AS** arr\_weekd,

**EXTRACT**(DOW

**FROM** f.scheduled\_departure) **AS** dep\_weekd,

date\_part('hour', f.actual\_arrival - f.scheduled\_arrival) \* 60 + date\_part('minute', f.actual\_arrival - f.scheduled\_arrival) arr\_delay,

date\_part('hour', f.actual\_departure - f.scheduled\_departure) \* 60 + date\_part('minute', f.actual\_departure - f.scheduled\_departure) dep\_delay,

f.aircraft\_code,

q.sold\_qty,

u.flight\_cost,

u.fares,

u.fare\_conditions,

v.total\_cost

**FROM** dst\_project.flights f

**JOIN**

(**SELECT** s.aircraft\_code,

**count**(\*) seats\_num

**FROM** dst\_project.seats s

**GROUP** **BY** s.aircraft\_code) a **ON** a.aircraft\_code = f.aircraft\_code

**JOIN**

(**SELECT** b.flight\_id,

**count**(**DISTINCT** b.ticket\_no) **AS** sold\_qty

**FROM** dst\_project.boarding\_passes b

**GROUP** **BY** b.flight\_id) q **ON** q.flight\_id = f.flight\_id

**JOIN**

(**SELECT** t.flight\_id,

t.fare\_conditions,

**count**(t.fare\_conditions) **AS** fares,

**sum**(t.amount) **AS** flight\_cost

**FROM** dst\_project.ticket\_flights t

**WHERE** t.ticket\_no **IS** **NOT** **NULL**

**GROUP** **BY** t.flight\_id,

t.fare\_conditions) u **ON** u.flight\_id = f.flight\_id

**JOIN**

(**SELECT** t.flight\_id,

**sum**(t.amount) **AS** total\_cost

**FROM** dst\_project.ticket\_flights t

**WHERE** t.ticket\_no **IS** **NOT** **NULL**

**GROUP** **BY** t.flight\_id) v **ON** v.flight\_id = f.flight\_id

**WHERE** f.departure\_airport = 'AAQ'

**AND** (date\_part('month', f.scheduled\_departure) **in** (12,

1,

2))

**AND** f.status **not** **in** ('Cancelled')

**ORDER** **BY** 1 **DESC**