

A.

The screenshot shows the SQL Studio interface. The Database Explorer on the left shows a database named 'demo' with a table 'airports_data'. The main editor displays the following SQL query:

```
1 SELECT airports_data.airport_code, airports_data.coordinates
2 FROM airports_data
3 WHERE airports_data.city-->'ru' IN ('Казань', 'Москва')
4 ORDER BY airports_data.airport_code DESC;
```

The Output window at the bottom shows the results of the query, displaying 4 rows of data with columns 'airport_code' and 'coordinates'.

airport_code	coordinates
VK0	(37.2615013123,55.5914993286)
SV0	(37.4146,55.972599)
KZN	(49.278701782227,55.606201171875)
DME	(37.90629959106445,55.40879821777344)

B.

The screenshot shows the SQL Studio interface. The Database Explorer on the left shows a database named 'demo' with a table 'airports_data'. The main editor displays the following SQL query:

```
1 SELECT CONCAT(airports_data.airport_code, airports_data.airport_name-->'ru', airports_data.city-->
2 FROM airports_data
3 ORDER BY "полная информация";
```

The Output window at the bottom shows the results of the query, displaying 14 rows of data with a single column 'полная информация'.

"полная информация"
AAQВитязевоАнапа(37.347301483154,45.002101898193)Europe/Moscow
ABAAБаканАбакан(91.38500213623047,53.7400016784668)Asia/Krasnoyarsk
AERCСочиСочи(39.956600189209,43.449901580811)Europe/Moscow
ARNТалагиАрхангельск(40.71670150756836,64.60030364990234)Europe/Moscow
ASFAстраханьАстрахань(48.0063018799,46.2832984924)Europe/Samara
BAXБарнаулБарнаул(83.53849792480469,53.363800048828125)Asia/Krasnoyarsk
BQSMгнатьевоБлаговещенск(127.41200256347656,50.42539978027344)Asia/Yakutsk
BTKБратскБратск(101.697998046875,56.370601654052734)Asia/Irkutsk
BZKBрянскБрянск(34.176399231,53.214199066199996)Europe/Moscow
CEEЧереповецЧереповец(38.015800476100004,59.273601532)Europe/Moscow
CEKЧелябинскЧелябинск(61.5033,55.305801)Asia/Yekaterinburg
CNNЧульманНерюнгри(124.91400146484,56.913898468018)Asia/Yakutsk
CSYЧебоксарыЧебоксары(47.3473014831543,56.090301513671875)Europe/Moscow
DMEДомодедовоМосква(37.90629959106445,55.40879821777344)Europe/Moscow

C.

Database Explorer: HHW5@localhost 2 of 17

- demo 1 of 4
 - bookings
 - aircrafts_data
 - airports_data
 - boarding_passes
 - bookings
 - flights

SQL_1.sql x flights [HHW5@localhost] airports_data [HHW5@localhost]

```

1 SELECT a.airport_name-->'ru' AS airport_name, COUNT(f.flight_id) AS flight_count
2 FROM airports_data AS a
3 JOIN flights AS f ON f.departure_airport = a.airport_code
4 WHERE a.airport_code IN ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SV0')
5 GROUP BY airport_name
6 ORDER BY flight_count DESC;

```

Output Result 14 x

airport_name	flight_count
Домодедово	3217
Шереметьево	2981
Пулково	1900
Толмачёво	1055
Казань	471
Иркутск	366

Services

Database Explorer: HHW5@localhost 2 of 17

- demo 1 of 4
 - bookings 43 ms
 - SQL_1.sql 43 ms
 - airports_data 232 ms
 - airports_data 232 ms
 - flights 169 ms
 - flights 169 ms

D.

Database Explorer: HHW5@localhost 2 of 17

- demo 1 of 4
 - bookings
 - aircrafts_data
 - airports_data
 - boarding_passes
 - bookings
 - flights

SQL_1.sql x flights [HHW5@localhost] airports_data [HHW5@localhost]

```

1 SELECT a.airport_name-->'ru' AS airport_name, COUNT(f.flight_id) AS flight_count
2 FROM airports_data AS a
3 JOIN flights AS f ON f.departure_airport = a.airport_code
4 WHERE a.airport_code NOT IN ('KZN', 'DME', 'OVB', 'IKT', 'LED', 'SV0')
5 GROUP BY airport_name
6 ORDER BY flight_count;

```

Output Result 18 x

airport_name	flight_count
Хурба	18
Усинск	18
Елизово	26
Полярный	27
Нягань	27
Иваново-Южный	34
Анадырь	36
Магадан	36
Липецк	43
Кызыл	43
Нефтеюганск	44
Белоярский	53
Стрежевой	61

Services

Database Explorer: HHW5@localhost 2 of 17

- demo 1 of 4
 - bookings 53 ms
 - SQL_1.sql 53 ms
 - airports_data 232 ms
 - airports_data 232 ms
 - flights 169 ms
 - flights 169 ms

E.

The screenshot shows the SQL Server Enterprise Manager interface. The Database Explorer on the left shows the 'ticket_flights' table selected. The central pane displays the following SQL query:

```

1 SELECT f.flight_no, f.scheduled_departure, COUNT(tf.ticket_no)
2 FROM ticket_flights tf
3 JOIN flights f ON f.flight_id = tf.flight_id
4 GROUP BY f.flight_no, f.scheduled_departure
5 HAVING COUNT(tf.ticket_no) BETWEEN 27 AND 90
6 ORDER BY f.flight_no DESC, f.scheduled_departure DESC, COUNT(tf.ticket_no) DESC;

```

The bottom pane shows the query results in a table with 38 rows. The columns are 'flight_no', 'scheduled_departure', and 'count'.

flight_no	scheduled_departure	count
P60710	2017-09-12 01:25:00.000000 +00:00	38
P60710	2017-09-05 01:25:00.000000 +00:00	57
P60710	2017-08-29 01:25:00.000000 +00:00	78
P60710	2017-08-22 01:25:00.000000 +00:00	82
P60710	2017-08-15 01:25:00.000000 +00:00	89
P60710	2017-08-08 01:25:00.000000 +00:00	86
P60710	2017-08-01 01:25:00.000000 +00:00	51
P60710	2017-07-25 01:25:00.000000 +00:00	52
P60709	2017-09-04 17:20:00.000000 +00:00	44
P60709	2017-08-28 17:20:00.000000 +00:00	63
P60709	2017-08-21 17:20:00.000000 +00:00	61
P60709	2017-08-14 17:20:00.000000 +00:00	58
P60709	2017-08-07 17:20:00.000000 +00:00	65
P60709	2017-07-31 17:20:00.000000 +00:00	41

F.

The screenshot shows the SQL Server Enterprise Manager interface. The Database Explorer on the left shows the 'tickets' table selected. The central pane displays the following SQL query:

```

1 SELECT passenger_name AS name_or_airport
2 FROM tickets
3 UNION ALL
4 SELECT airport_name-->'en' AS name_or_airport
5 FROM airports_data
6 ORDER BY name_or_airport DESC;

```

The bottom pane shows the query results in a table with 14 rows. The column is 'name_or_airport'.

name_or_airport
ZULFIYA ZOTOVA
ZULFIYA ZOTOVA
ZULFIYA ZHURAVLEVA
ZULFIYA ZAYCEVA
ZULFIYA ZAYCEVA
ZULFIYA ZAKHAROVA
ZULFIYA ZAKHAROVA
ZULFIYA VOROBEVA
ZULFIYA VOLKOVA
ZULFIYA VLASOVA
ZULFIYA VASILEVA
ZULFIYA VASILEVA
ZULFIYA VASILEVA
ZULFIYA TIKHONOVA

G.

Database Explorer

HHW5@localhost

- demo 1 of 4
 - bookings
 - aircrafts_data
 - airports_data
 - boarding_passes
 - bookings
 - flights

SQL_1.sql x airports_data [HHW5@localhost] tickets [HHW5@localhost]

```

1 ✓ SELECT passenger_name AS name_or_airport, 'пассажир' AS type
2   FROM tickets
3   UNION ALL
4   SELECT airport_name->'en' AS name_or_airport, 'аэропорт' AS type
5   FROM airports_data
6   ORDER BY type DESC, name_or_airport DESC;

```

Services

Output Result 68 x

	name_or_airport	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 VOROBEOVA	пассажир
9	ZULFIYA VOLKOVA	пассажир
10	ZULFIYA VLASOVA	пассажир
11	ZULFIYA VASILEVA	пассажир
12	ZULFIYA VASILEVA	пассажир
13	ZULFIYA VASILEVA	пассажир
14	ZULFIYA TIKHONOVA	пассажир

H.

SQL_1.sql x flights [HHW5@localhost] tickets [HHW5@localhost]

```

1 ✓ SELECT COUNT(f.flight_id)
2   FROM flights f
3   LEFT JOIN ticket_flights tf ON f.flight_id = tf.flight_id
4   WHERE tf.ticket_no IS NULL;

```

Output COUNT(f.flight_id):bigint x

	count
1	10895

I.

SQL_1.sql x tickets [HHW5@localhost] aircrafts_data [HHW5@localhost] ticket_flights [HHW5@localhost] seats [HHW5@localhost] flig: v

Tx: Auto v Playground v

```

1 SELECT f.departure_airport, AVG(c1.cnt) AS total_seats, AVG(c2.cnt) AS actual
2 FROM flights f
3 INNER JOIN airports a ON a.airport_code = f.departure_airport
4 INNER JOIN (SELECT s.aircraft_code, COUNT(seat_no) AS cnt FROM seats s GROUP BY s.aircraft_code) AS c1 ON c1.aircraft_code = f.aircraft_code
5 INNER JOIN (SELECT flight_id, COUNT(ticket_no) AS cnt FROM ticket_flights GROUP BY flight_id) AS c2 ON c2.flight_id = f.flight_id
6 WHERE DATE(f.scheduled_departure) BETWEEN '2017-07-01' AND '2017-07-30'
7 GROUP BY f.departure_airport
8 ORDER BY total_seats DESC, actual DESC;
9

```

Output Result 13 x

92 rows v

	departure_airport	total_seats	actual
1	PKC	222	40.166666666666667
2	KXK	222	24
3	GDX	222	3
4	KRR	187.2	76.73333333333333
5	KUF	176	73.6
6	AER	165.4457831325301205	73.3614457831325301
7	KHV	140.7428571428571429	64
8	SVX	139.1619047619047619	71.7047619047619048
9	SCW	130.0851063829787234	56
10	ULV	127.7017543859649123	64.912280701754386
11	AVB	125.5802735802735803	60.38027358027358

9:1 CRLF UTF-8 4 spaces

J.

SQL_1.sql x ticket_flights [HHW5@localhost] tickets [HHW5@localhost] flights [HHW5@localhost]

Tx: Auto v Playground v

```

1 SELECT f.flight_no, MIN(tf.amount) AS min_amount, MAX(tf.amount) AS max_amount
2 FROM flights AS f
3 JOIN ticket_flights AS tf ON f.flight_id = tf.flight_id
4 GROUP BY f.flight_no;

```

Output Result 86 x

483 rows v

	flight_no	min_amount	max_amount
1	P60012	12300	13500
2	P60013	14000	42100
3	P60014	3300	9800
4	P60015	18700	20600
5	P60016	18700	20600
6	P60019	9500	10500
7	P60020	9500	10500
8	P60029	5300	5300
9	P60030	5300	5300
10	P60032	5300	5300
11	P60035	8700	8700
12	P60038	8700	8700
13	P60039	3200	9700
14	P60040	3200	9700