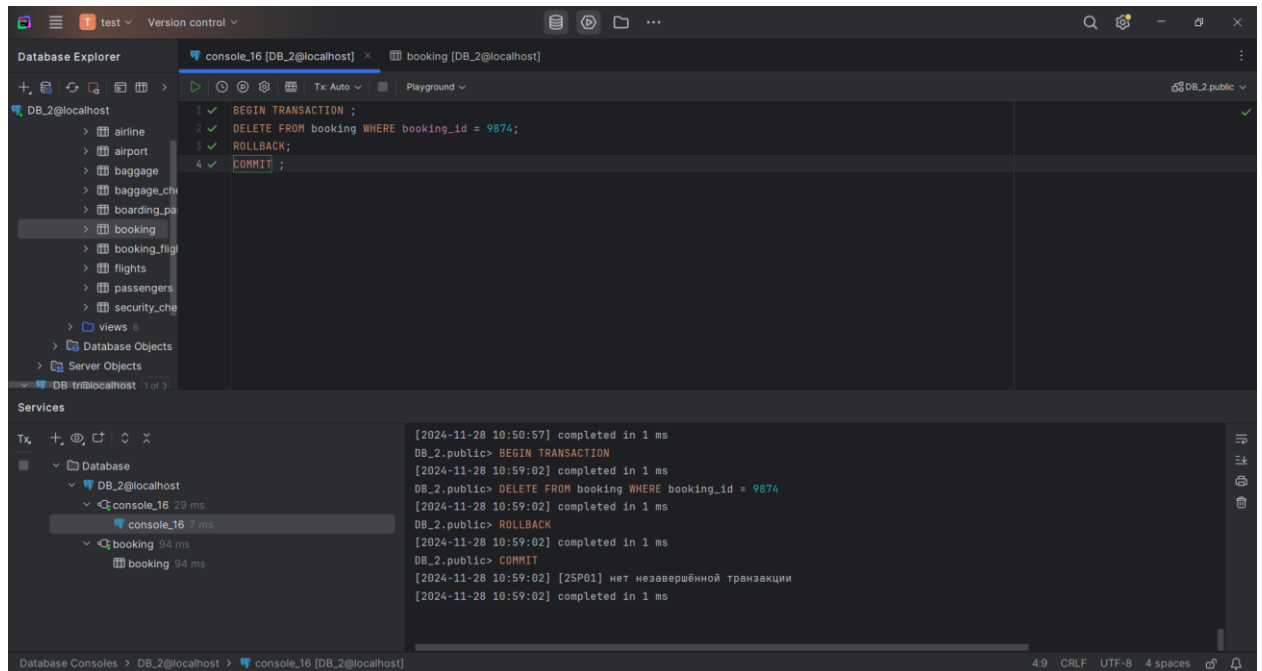
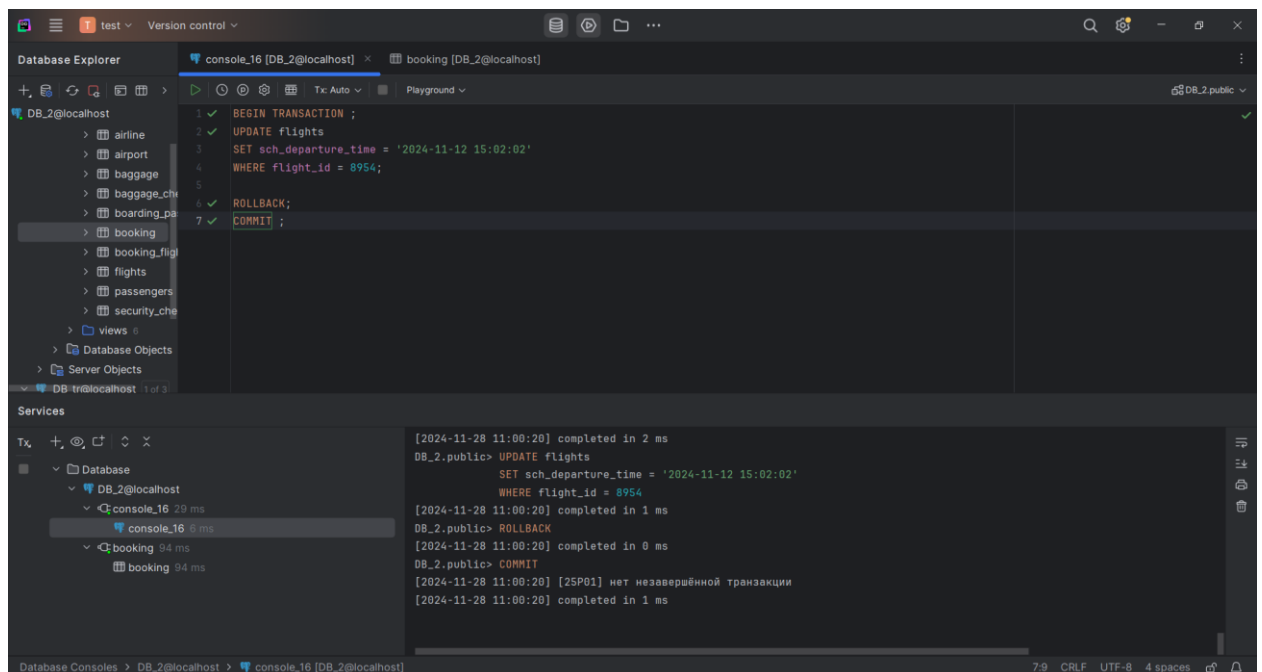


Laboratory work 9

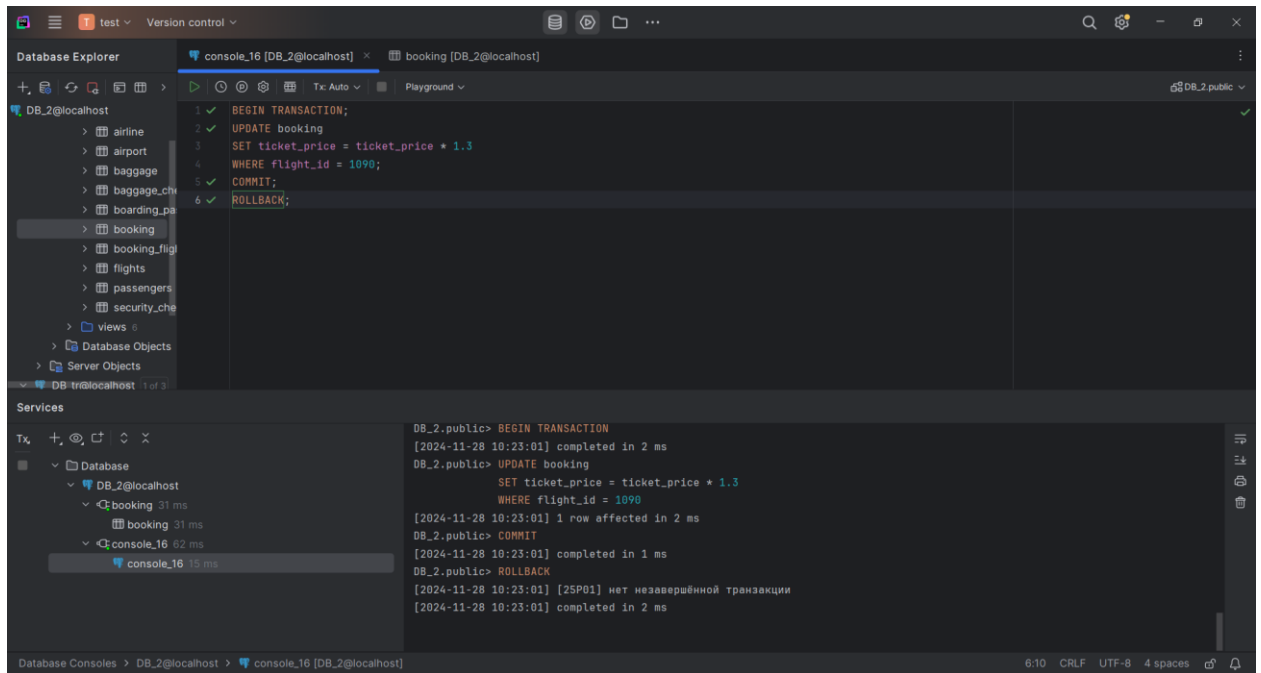
1. A passenger cancels their booking. You need to remove the booking for the flight. Ensure the 'booking' table no longer contains the booking. Simulate an error to test rollback (for example, invalid booking_id).



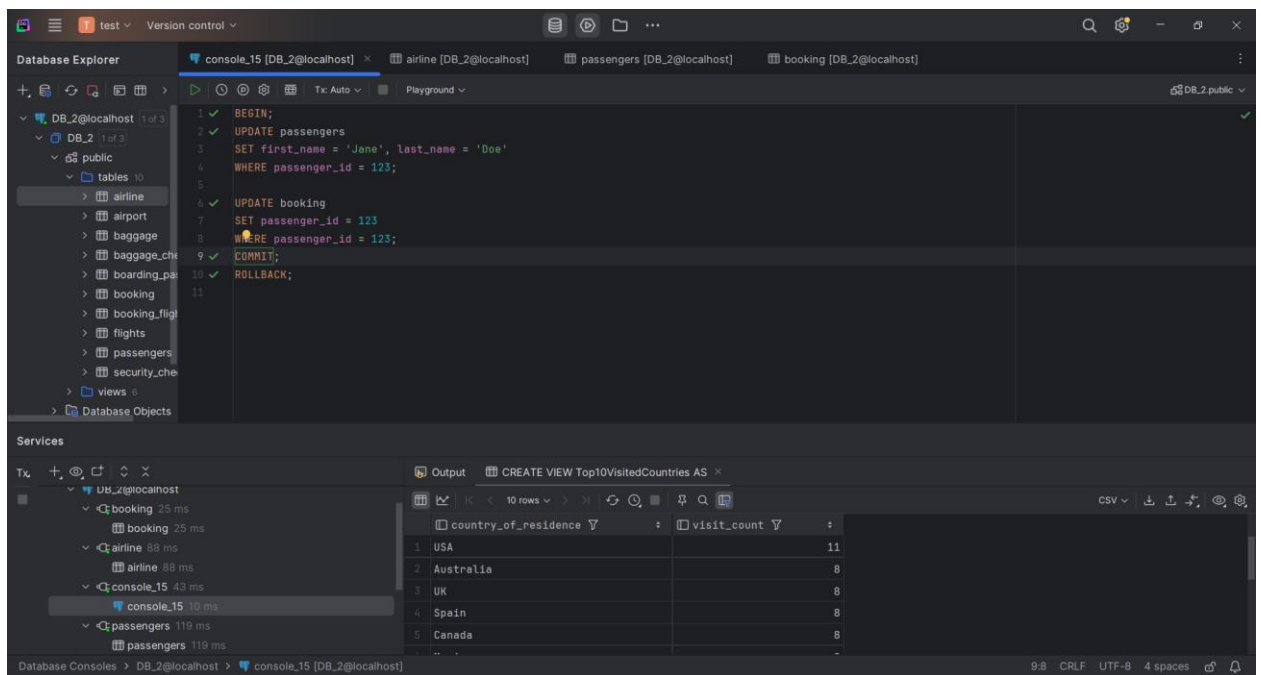
2. Rescheduling a flight. You need to reschedule a flight. Verify the 'flights' table reflects the new departure time. Simulate an error to test rollback (for example, invalid flight_id).



3. Updating ticket prices. You need to decrease the ticket price for a specific flight for all existing bookings. If an error occurs, no changes should be applied.



4. A passenger updates their details. Ensure the update is reflected across all associated records, including bookings.



5. A new passenger is registered, and a booking is created. Ensure the new passenger is added and the booking succeeds.

test Version control

Database Explorer

- DB_2@localhost
 - airline
 - airport
 - baggage
 - baggage_ch
 - boarding_pa
 - booking
 - booking_fli
 - flights
 - passengers
 - security_che
 - views 6
 - Database Objects
 - Server Objects

console_16 [DB_2@localhost]

```
1 INSERT INTO passengers (  
2     passenger_id,  
3     first_name,  
4     last_name,  
5     date_of_birth,  
6     gender,  
7     country_of_citizenship,  
8     country_of_residence,  
9     passport_number,  
10    created_at,  
11    updated_at  
12 )  
13 VALUES (  
14     passenger_id 2489,  
15     first_name 'John',  
16     last_name 'Doe',  
17     'Doe',  
18     '2000-06-15',  
19     'Male',  
20     'Kazakhstan',  
21     'Kazakhstan',  
22     'K21234567',  
23     CURRENT_TIMESTAMP,  
24     CURRENT_TIMESTAMP  
25 )  
[2024-11-28 10:35:22] 1 row affected in 5 ms
```

Services

Database

- DB_2@localhost
 - booking 31 ms
 - console_16 14 ms
 - passengers 129 ms

Database Consoles > DB_2@localhost > console_16 [DB_2@localhost]

23:22 CRLF UTF-8 4 spaces

test Version control

Database Explorer

- DB_2@localhost
 - airline
 - airport
 - baggage
 - baggage_ch
 - boarding_pa
 - booking
 - booking_fli
 - flights
 - passengers
 - security_che
 - views 6
 - Database Objects
 - Server Objects

console_16 [DB_2@localhost]

```
1 INSERT INTO booking (  
2     booking_id,  
3     flight_id,  
4     passenger_id,  
5     booking_platform,  
6     created_at,  
7     updated_at,  
8     status,  
9     ticket_price,  
10    ticket_discount,  
11    final_price  
12 )  
13 VALUES (  
14     booking_id 7895,  
15     flight_id 7895,  
16     passenger_id 2489,  
17     'Online',  
18     current_timestamp,  
19     current_timestamp,  
20     'Confirmed',  
21     10000.00,  
22     500.00,  
23     9500.00  
24 )  
[2024-11-28 10:41:43] 1 row affected in 10 ms
```

Services

Database

- DB_2@localhost
 - console_16 19 ms
 - booking 104 ms

Database Consoles > DB_2@localhost > console_16 [DB_2@localhost]

19:22 CRLF UTF-8 4 spaces

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Database Explorer' with a tree view of the 'DB_2@localhost' database. The 'passengers' table is selected. The right pane shows the 'Query Editor' with a query: `SELECT * FROM passengers WHERE passport_number = 'KZ1234567';`. The 'Output' pane shows the results of the query, which is a single row of passenger data.

date_of_birth	gender	country_of_citizenship	country_of_residence	passport_number
2000-06-15	Male	Kazakhstan	Kazakhstan	KZ1234567

6. Increase the ticket price for all bookings on a specific flight by a fixed amount.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Database Explorer' with a tree view of the 'DB_2@localhost' database. The 'booking' table is selected. The right pane shows the 'Query Editor' with a transaction: `BEGIN TRANSACTION ;`, `UPDATE booking SET ticket_price = ticket_price * 0.9 WHERE flight_id = 1001;`, `COMMIT ;`, and `ROLLBACK ;`. The 'Output' pane shows the results of the transaction, which is a single row of passenger data.

date_of_birth	gender	country_of_citizenship	country_of_residence	passport_number
2000-06-15	Male	Kazakhstan	Kazakhstan	KZ1234567

7. Update a baggage weight. A passenger updates the declared weight of their baggage. Ensure that the change is correctly reflected in the database.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Database Explorer' with the 'baggage' table selected under 'DB_2@localhost'. The central pane shows a SQL script in the 'console_16 [DB_2@localhost]' window:

```
1 BEGIN TRANSACTION ;
2 UPDATE baggage
3 SET weight_in_kg = 16.3
4 WHERE baggage_id = 11;
5 COMMIT ;
6 ROLLBACK ;
7 SELECT * FROM baggage
8 WHERE baggage_id = 11;
```

The right pane shows the 'Output' window for 'DB_2.public.baggage', displaying a table with the following data:

baggage_id	weight_in_kg	created_at	updated_at	booking_id
11	16.30	2024-10-09 07:02:52.751538	2024-10-09 07:02:52.751538	4

8. Apply a discount to a booking for a specific passenger. If any error occurs, roll back.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'Database Explorer' with the 'booking' table selected under 'DB_2@localhost'. The central pane shows a SQL script in the 'console_16 [DB_2@localhost]' window:

```
1 BEGIN TRANSACTION ;
2 UPDATE booking
3 SET ticket_price = ticket_price * 0.8
4 WHERE passenger_id = 789;
5 ROLLBACK ;
6 COMMIT ;
```

The right pane shows the 'Output' window for 'DB_2.public.booking', displaying a log of the transaction execution:

```
[2024-11-28 10:50:56] completed in 1 ms
DB_2.public> UPDATE booking
SET ticket_price = ticket_price * 0.8
WHERE passenger_id = 789;
[2024-11-28 10:50:56] completed in 1 ms
DB_2.public> ROLLBACK
[2024-11-28 10:50:56] completed in 1 ms
DB_2.public> COMMIT
[2024-11-28 10:50:57] [25P01] нет незавершенной транзакции
[2024-11-28 10:50:57] completed in 1 ms
```

9. Reschedule all bookings for a flight to a new flight.

