VERSA CARE

GROUP C

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PROJECT DESCRIPTION

Versa Care is a Home Service provider based out of US. It offers a wide range of services to customers across various cities in US. With a database at its core, Versa Care ensures efficient operations and seamless customer experiences. The company operates in several major cities including New York, Boston, San Francisco, Los Angeles, New Jersey with its headquarters situated in Chicago.

At the heart of Versa Care Company's operations lies its diverse range of services, categorized into different service categories such as beauty, home repairs, cleaning, wellness, and more. The company has a dedicated mobile app where each service is meticulously detailed, outlining the specific offerings and procedures. Service providers, who are integral to this company's ecosystem are registered within the system with information about their expertise, availability, and service history is stored.

Customers interact with Versa Care through its user-friendly mobile application or website, where they can create accounts and store their details for seamless booking experiences. Upon logging in, customers can browse through the various services available in their city and make bookings based on their requirements. These bookings are recorded in the system under the booking table, which tracks details such as booking id, service type, service provider assigned, customer id and booking status. Payment for services is handled through secure platform, with customers having the option to choose from various payment methods including credit/debit cards, pay-pal, digital wallets, or cash. Payment details associated with each booking are stored within the payment table, ensuring transparency and accountability.

Once service is completed and recorded by professional, a notification is sent to the customer via email/app/text message where customers are encouraged to provide feedback and ratings. This feedback not only helps Versa Care maintain service quality but also influences the incentives received by service providers. Positive feedback may result in incentives for service providers, motivating them to deliver exceptional service. In addition to service bookings and payments, Versa Care also manages promotional offers and discounts through the promotions for newly registered customers and loyal customers. These offers are tailored to attract more customers and enhance customer loyalty.

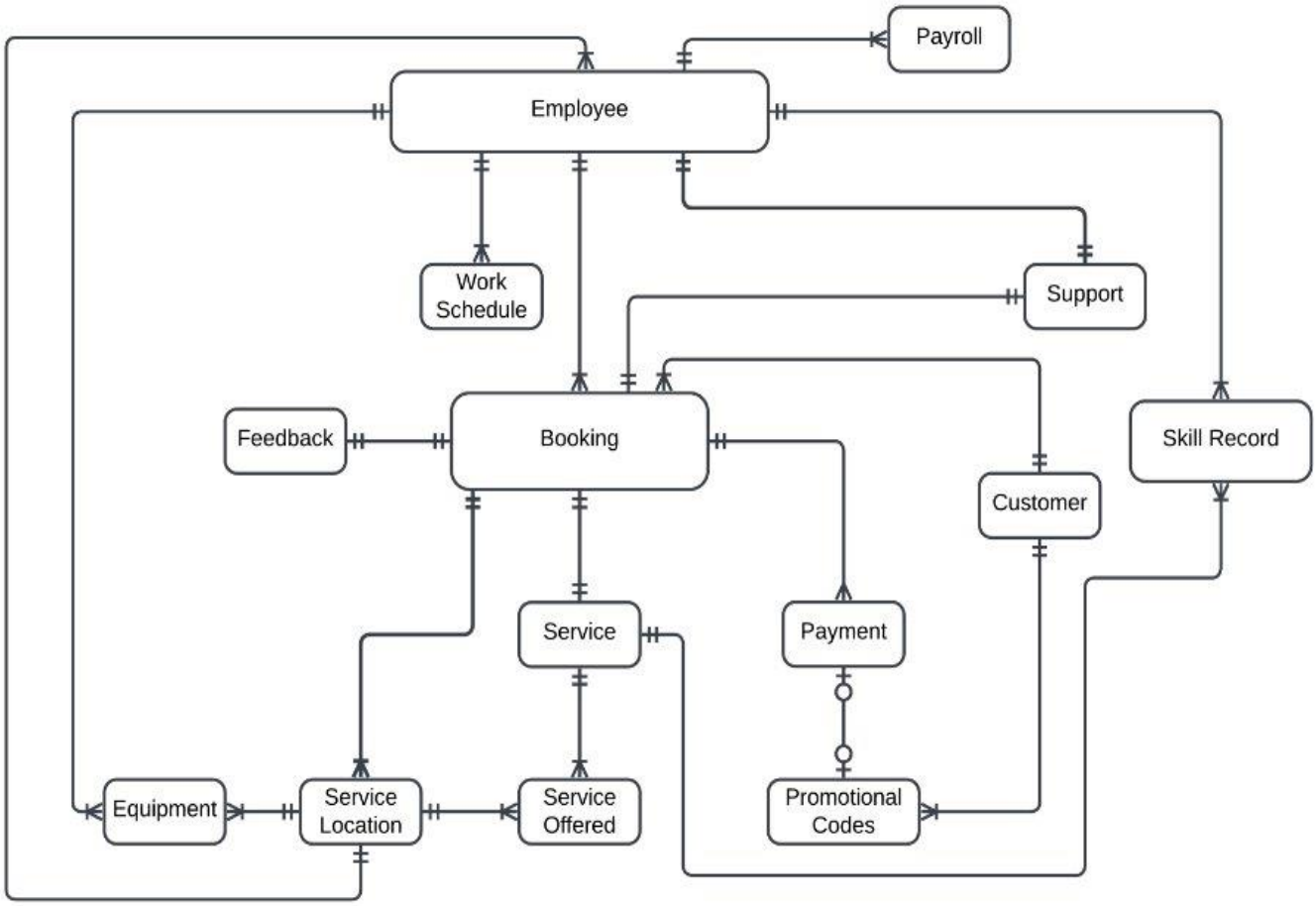
Behind the scenes, Versa Care partners with training centers to upskill their service providers. Details of training programs offered, and equipment provided to service providers are stored within the skill and equipment tables, ensuring that service quality is always maintained. Versa Care also places a strong emphasis on customer support, with a dedicated table to track support tickets and resolutions. This ensures that customer issues or queries are addressed promptly, further enhancing customer satisfaction and the company make sures that the same issue is not repeated to other customers.

Lastly, Versa Care maintains comprehensive employee records and payroll information for its internal staff through the employee and payroll tables respectively, ensuring smooth operations and employee satisfaction. Additionally, all financial transactions within the platform are recorded in the company's transaction table, providing a clear audit trail of financial activities. In essence, the company's database-driven approach facilitates seamless interactions between customers, service providers, and internal staff, enabling the company to deliver exceptional services while continuously improving its operations and customer satisfaction levels.

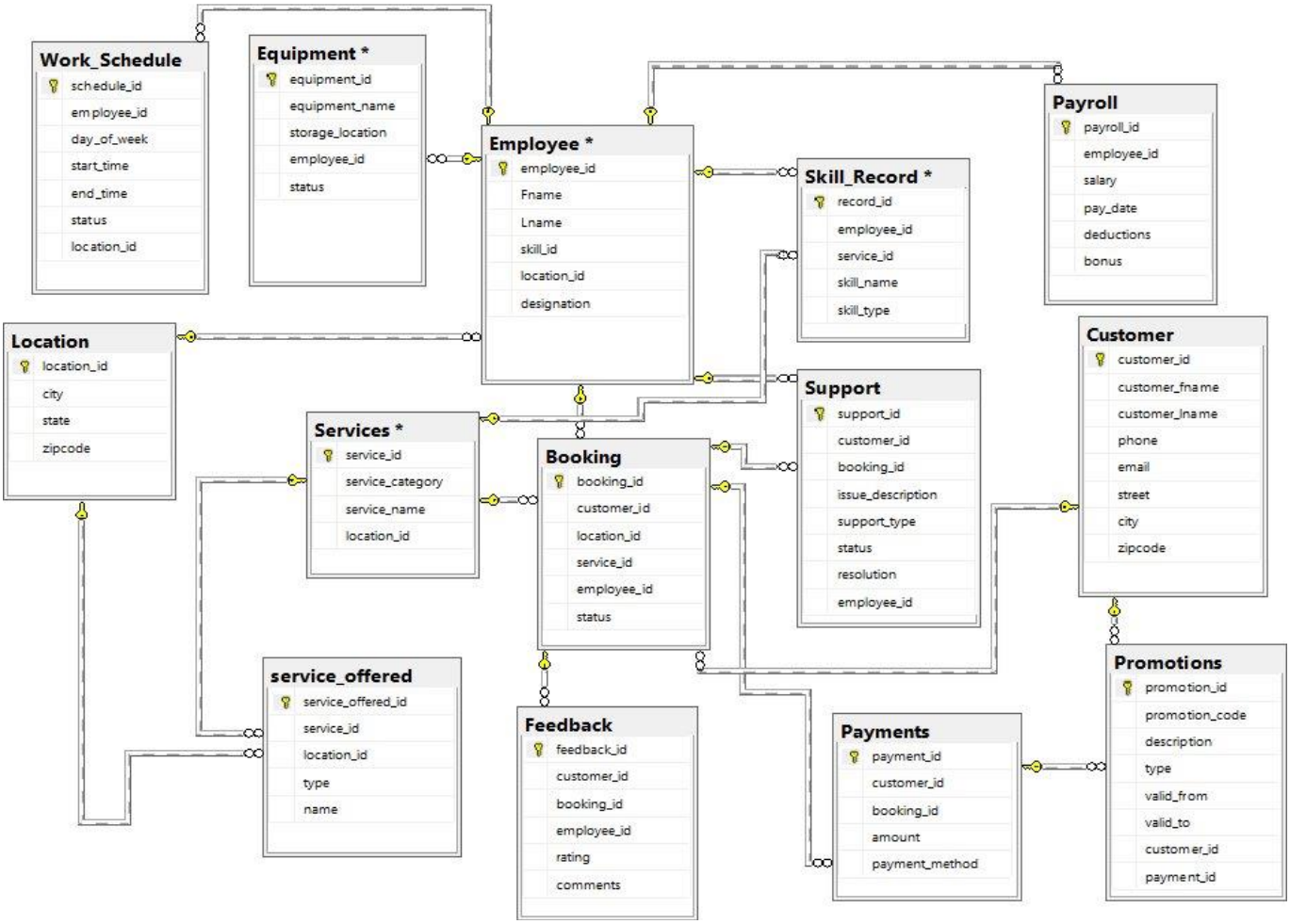
ENTITIES AND ATTRIBUTES

1. **Customer**: customer_id, customer_fname, customer_lname, phone, email, street, city, zipcode
2. **Booking** : booking_id, customer_id, location_id, service_id, employee_id, status
3. **Services**: service_id, service_cateogory, service_name, location_id
4. **Service offered**: service_offered_id, service_id, location_id, type, name
5. **Location**: location_id, city, state, zipcode
6. **Equipment**: equipment_id, equipment_name, storage_location, employee_id, status
7. **Payment :** payment_id, customer_id, booking_id, amount, payment_method
8. **Promotions**: promotion_id, promotion_code, description, type, valid_from, valid_to, customer_id, payment_id
9. **Feedback**: feedback_id, customer_id, booking_id, employee_id, rating,comments
10. **Support** : support_id, customer_id, booking_id, issue_description, support_type, status, resolution, employee_id
11. **Employee**: employee_id, Fname, Lname, skill_id, location_id, designation
12. **Skill Record**: record_id, employee_id, service_id, skill_name, skill_type
13. **Work schedule**: schedule_id, employee_id, day_of_week, start_time, end_time, status, location_id
14. **Payroll**: payroll_id, employee_id, salary, pay_date, deductions, bonus

ENTITY RELATIONSHIP DIAGRAM



DATABASE DIAGRAM



SQL QUERIES

1. Find the booking details, customer information and employee details:

SELECT b.booking_id, b.customer_id, b.employee_id, c.customer_fname, e.fname as emp_fname
FROM Booking b JOIN Customer c ON b.customer_id = c.customer_id
JOIN Employee e ON b.employee_id = e.employee_id;

```sql
SELECT b.booking_id, b.customer_id, b.employee_id, c.customer_fname, e.fname as emp_fname
FROM Booking b
JOIN Customer c ON b.customer_id = c.customer_id
JOIN Employee e ON b.employee_id = e.employee_id;
```

146 %

Results | Messages

	booking_id	customer_id	employee_id	customer_fname	emp_fname
1	12109	19816	13172728	John	Sarah
2	26478	18025	13177065	Jane	James
3	38988	10039	13178048	Alice	Rachel
4	47245	10044	13178059	Bob	Lucas
5	50176	30059	13179234	Charlie	Emma
6	67753	70064	13183439	Daisy	Liam
7	79967	60077	13197268	Ethan	Olivia

2. Get the service details, booking history, and customer feedback:

SELECT s.service_id, s.service_name, b.booking_id, b.customer_id, f.rating, f.comments
FROM services s JOIN Booking b ON s.service_id = b.service_id
JOIN Feedback f ON b.booking_id = f.booking_id;

```sql
/*Get the service details, booking history, and customer feedback: */

SELECT s.service_id, s.service_name, b.booking_id, b.customer_id, f.rating, f.comments
FROM services s
JOIN Booking b ON s.service_id = b.service_id
JOIN Feedback f ON b.booking_id = f.booking_id;
```

146 %

Results | Messages

	service_id	service_name	booking_id	customer_id	rating	comments
1	100458	Stress Relief	26478	18025	4	Very good experience.
2	129983	Smart locks installation	47245	10044	5	Loved the yoga class!
3	100126	Saloon	12109	19816	5	Excellent service!
4	145016	Full Home Cleaning	50176	30059	4	Great Pilates session.
5	167230	Disinfection Services	67753	70064	2	Could be better.
6	112879	Appliance repair	38988	10039	3	It was okay.
7	190142	Wall decor and house painters	79967	60077	5	Wonderful meditation.

3. **Get the booking details for a specific customer and their preferred employee:**

```
SELECT *
FROM Booking b
WHERE b.customer_id = 10044 AND b.employee_id IN
                                (SELECT employee_id
                                 FROM Employee e
                                 WHERE Fname = 'Lucas' AND Lname = 'Grey');
```

```sql
SELECT b.*
FROM Booking b
WHERE b.customer_id = 10044 AND b.employee_id = (
  SELECT employee_id
  FROM Employee e
  WHERE Fname = 'Lucas' AND Lname = 'Grey'
);
```

146 %

Results | Messages

	booking_id	customer_id	location_id	service_id	employee_id	status
1	47245	10044	6001	129983	13178059	Confirmed

4. **Retrieve the employees who have availability on a specific day and location:**

```
SELECT *
FROM Employee e
WHERE e.employee_id IN
                (SELECT employee_id
                 FROM Work_Schedule
                 WHERE day_of_week = 'Friday' AND location_id = 7001  );
```

```sql
/*Retrieve the service providers who have availability on a specific day and location: */
SELECT *
FROM Employee e
WHERE e.employee_id IN (
  SELECT employee_id
  FROM Work_Schedule
  WHERE day_of_week = 'Friday' AND location_id = 7001
);
```

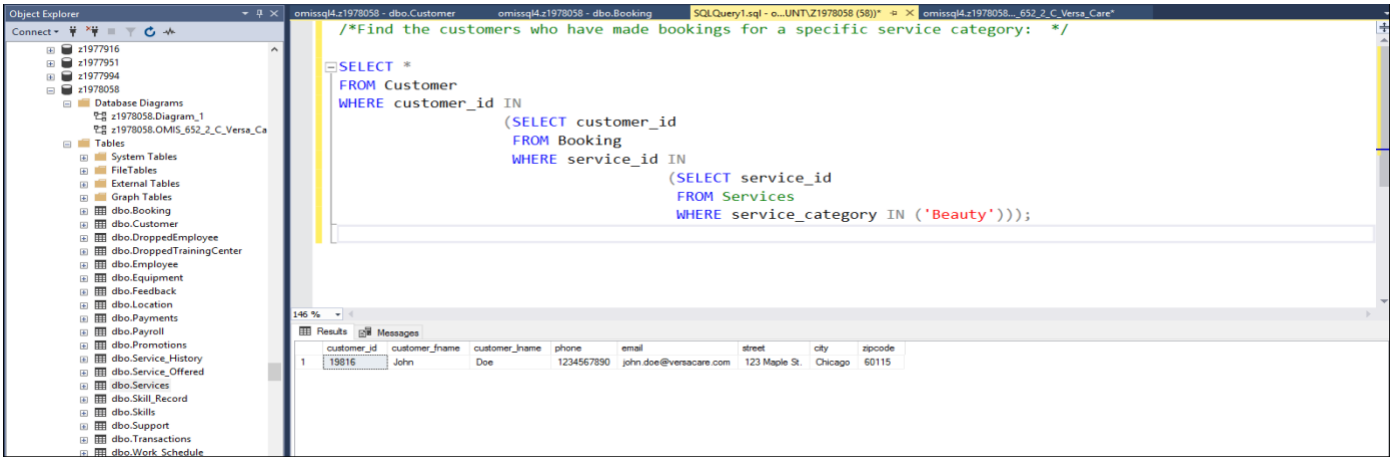
46 %

Results | Messages

	employee_id	Fname	Lname	skill_id	location_id	designation
1	13179234	Emma	Stone	57477579	7001	Service Providers

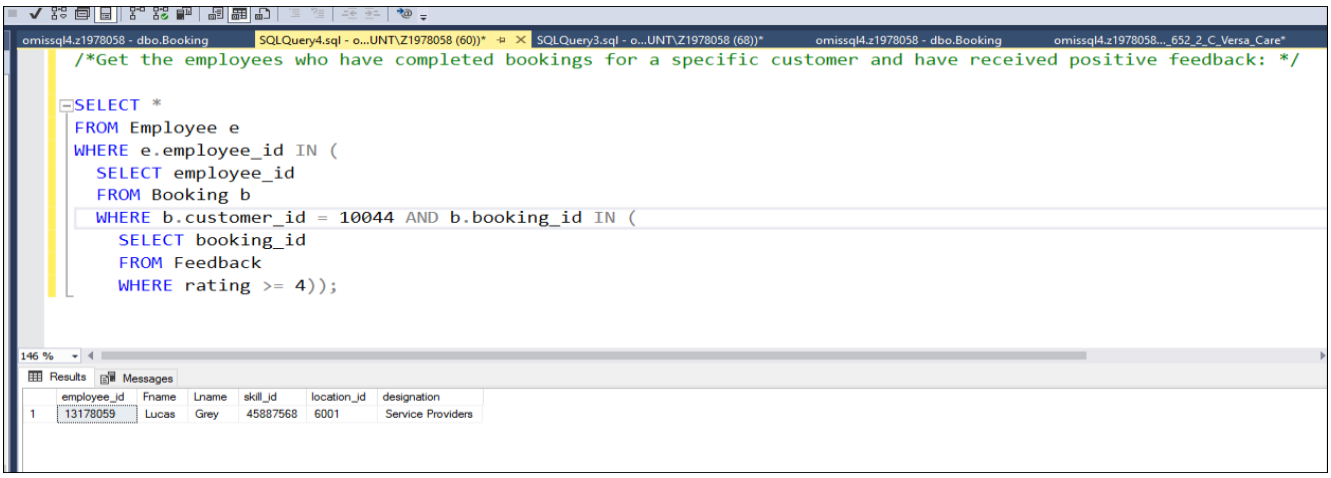
5. **Find the customers who have made bookings for a specific service category:**

```
SELECT *
FROM Customer
WHERE customer_id IN
                    (SELECT customer_id
                     FROM Booking
                     WHERE service_id IN
                                  (SELECT service_id
                                   FROM Services
                                   WHERE service_category IN ('Beauty')));
```



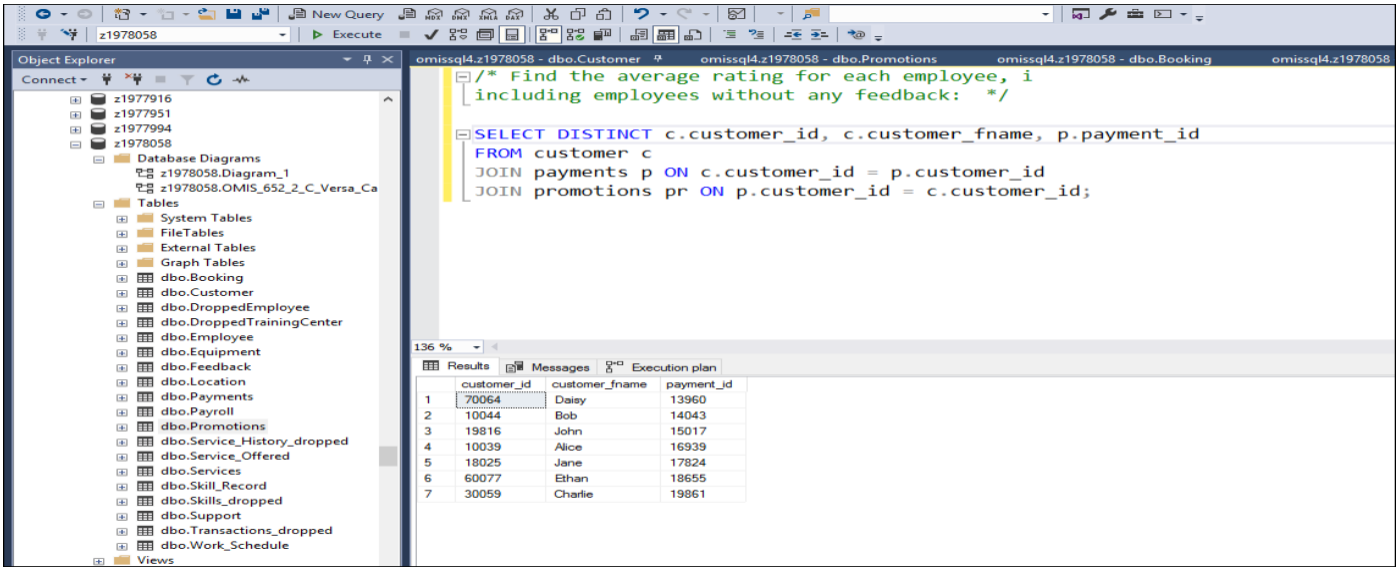
6. **Get the employees who have completed bookings for a specific customer and have received positive feedback:**

```
SELECT sp.*
FROM Employee e
WHERE e.employee_id IN
                    (SELECT employee_id
                     FROM Booking b
                     WHERE b.customer_id = 789 AND b.booking_id IN
                                  (SELECT booking_id
                                   FROM Feedback
                                   WHERE rating >= 4 ) );
```



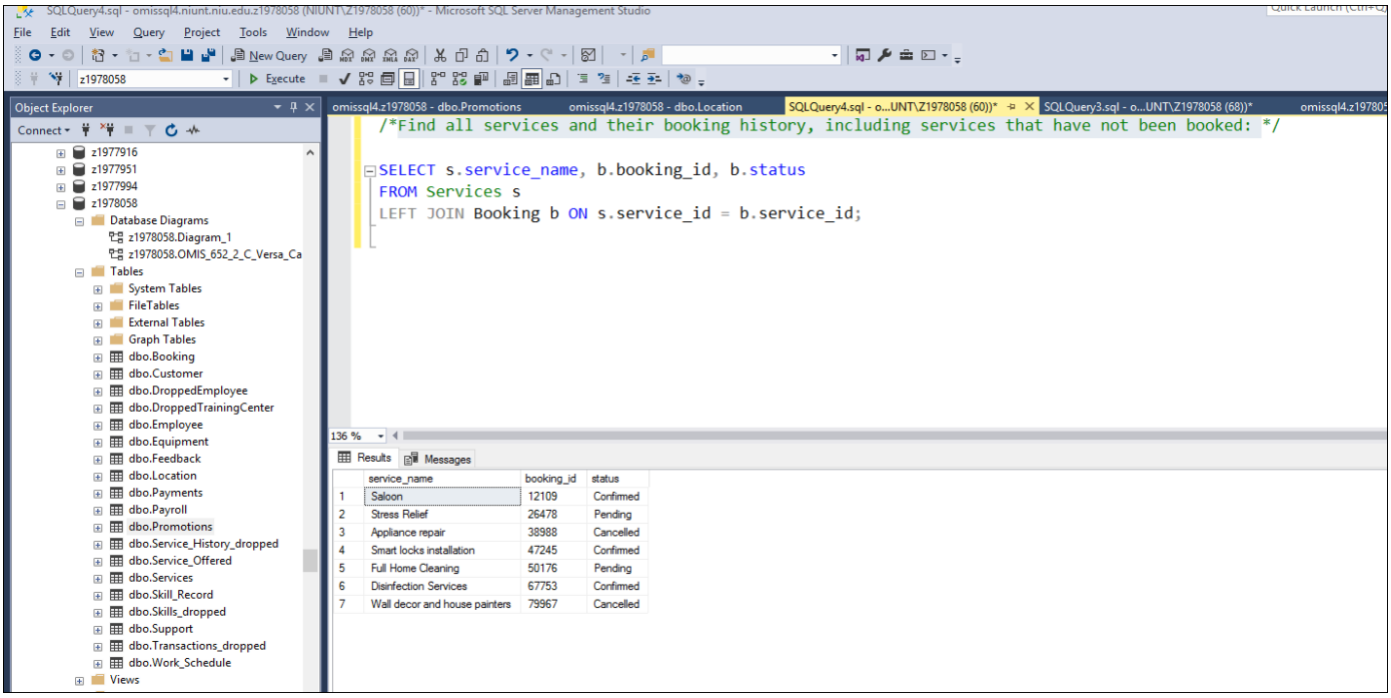
7. **Retrieve the customers who have used the promotion code during payment:**

```
SELECT DISTINCT c.customer_id, c.customer_fname, p.payment_id
FROM customer c
JOIN payments p ON c.customer_id = p.customer_id
JOIN promotions pr ON p.customer_id = c.customer_id;
```



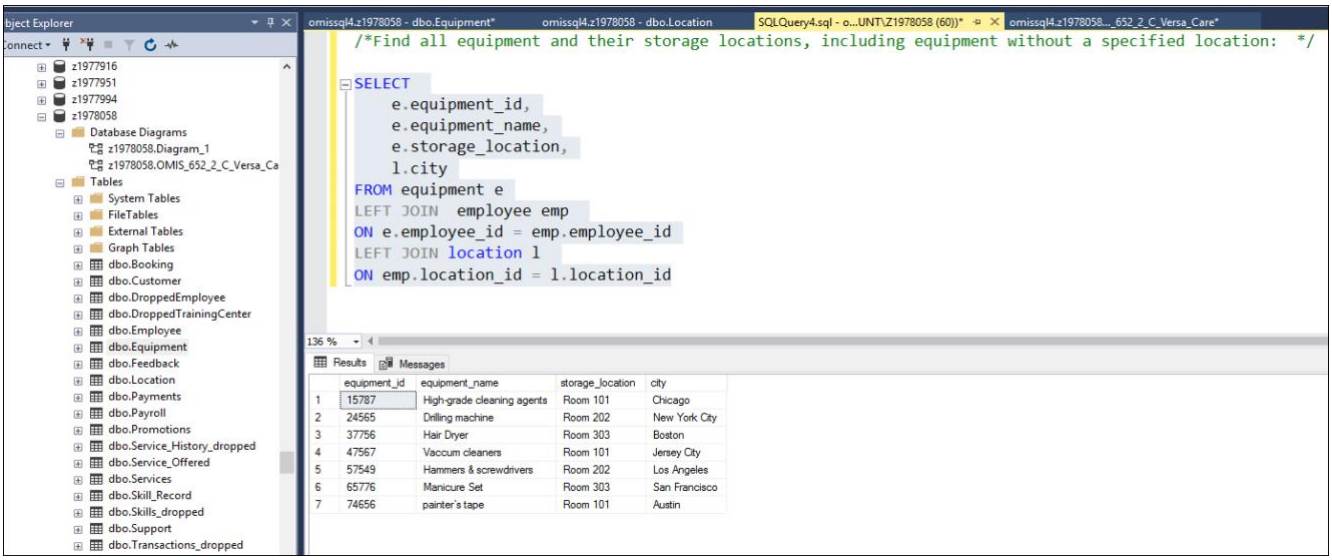
8. **Find all services and their booking history, including services that have not been booked:**

```
SELECT s.service_name, b.booking_id,b.status
FROM Services s LEFT JOIN Booking b
ON s.service_id = b.service_id;
```



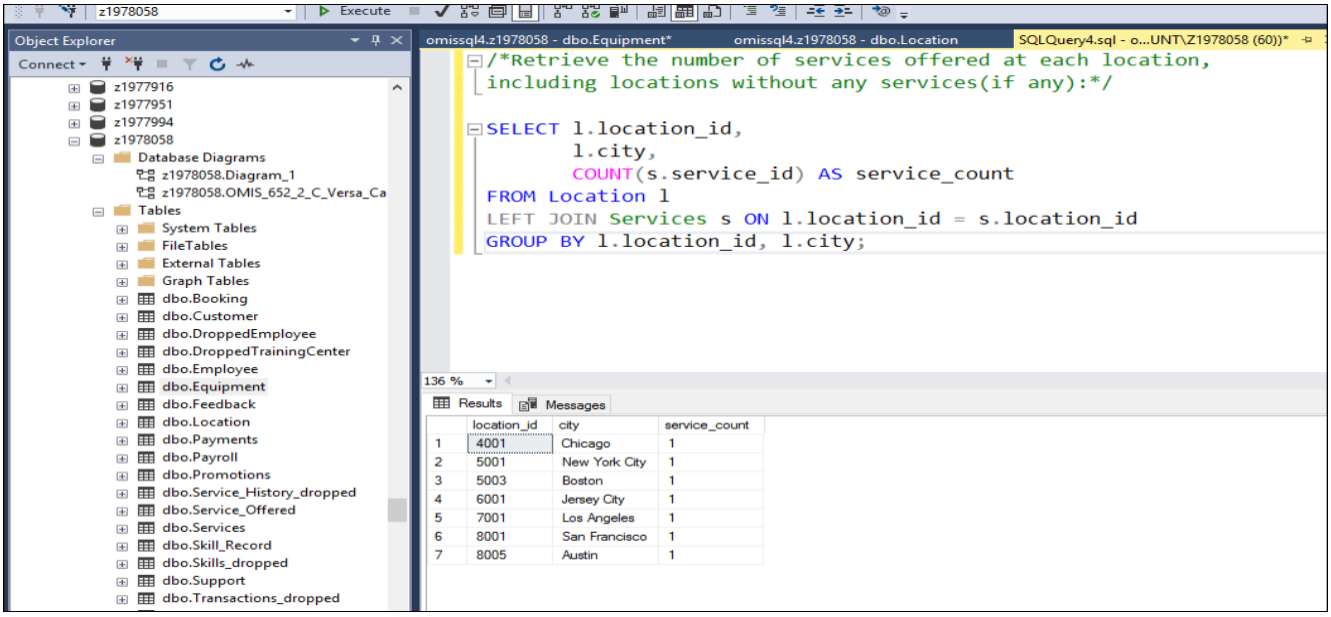
9. Find all equipment and their storage locations, with a specified location:

```
SELECT eq.equipment_id, eq.equipment_name, l.city, e.storage_location
FROM equipment e LEFT JOIN  employee emp
ON e.employee_id = emp.employee_id
LEFT JOIN location l
ON emp.location_id = l.location_id
```



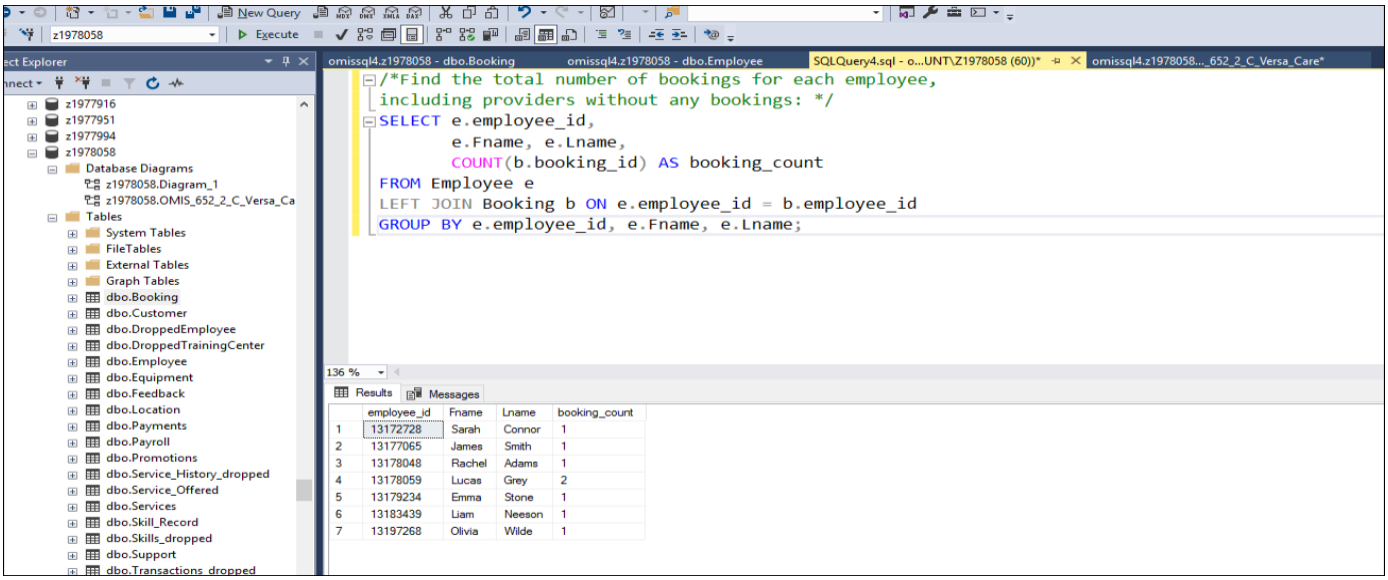
10. Retrieve the number of services offered at each location, including locations without any services:

```
SELECT l.location_id, l.city, COUNT(s.service_id) AS service_count
FROM Location l LEFT JOIN Services s
ON l.location_id = s.location_id
GROUP BY l.location_id, l.city;
```



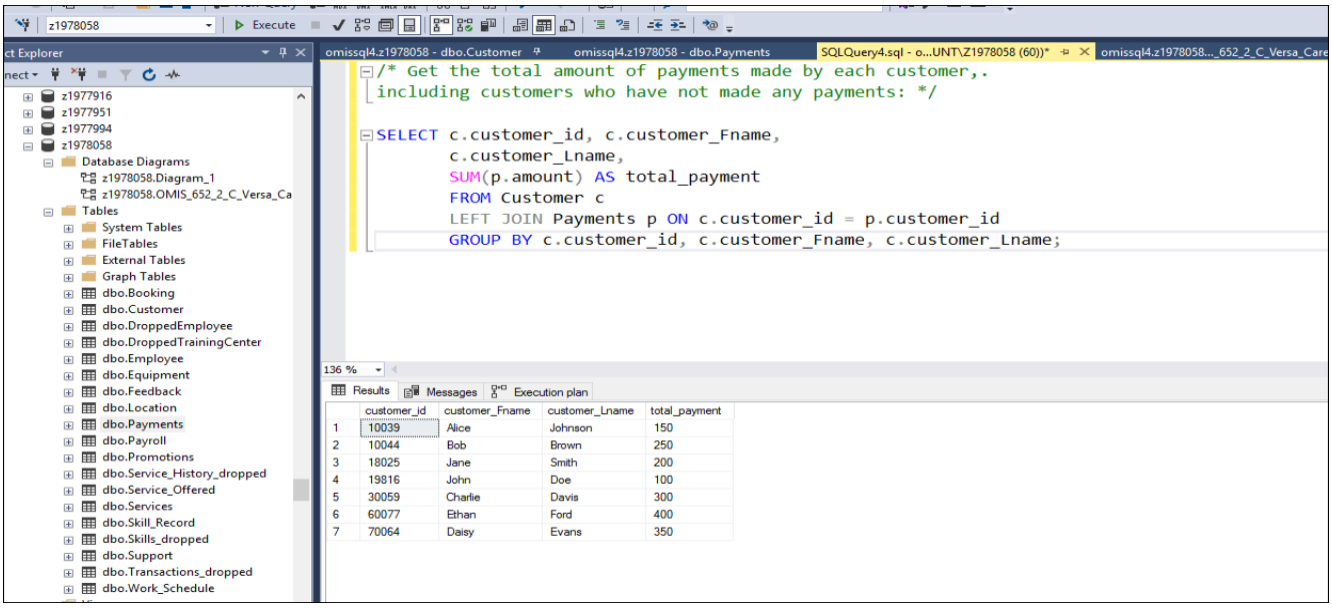
11. Find the total number of bookings for each employee, including providers without any bookings:

```
SELECT e.employee_id, e.Fname, e.Lname, COUNT(b.booking_id) AS booking_count
FROM Employee e LEFT JOIN Booking b
ON e.employee_id = b.employee_id
GROUP BY e.employee_id, e.Fname, e.Lname;
```



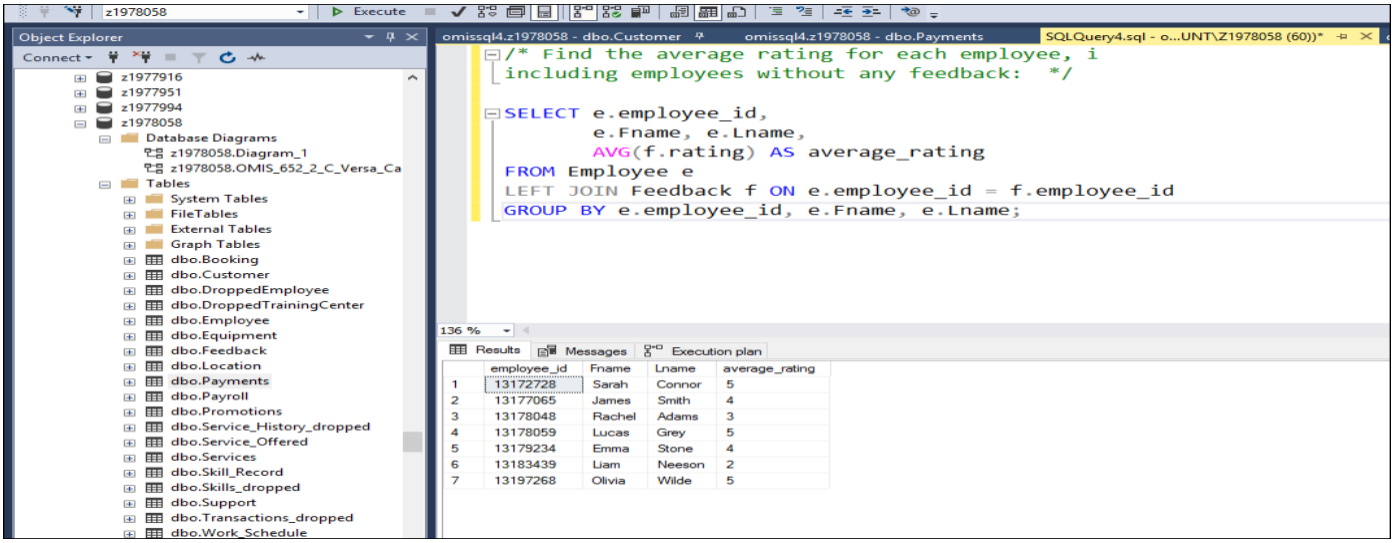
12. Get the total amount of payments made by each customer, including customers who have not made any payments:

```
SELECT c.customer_id, c.customer_Fname, c.customer_Lname, SUM(p.amount) AS total_payment
FROM Customers c LEFT JOIN Payments p
ON c.customer_id = p.customer_id
GROUP BY c.customer_id, c.customer_Fname, c.customer_Lname;
```



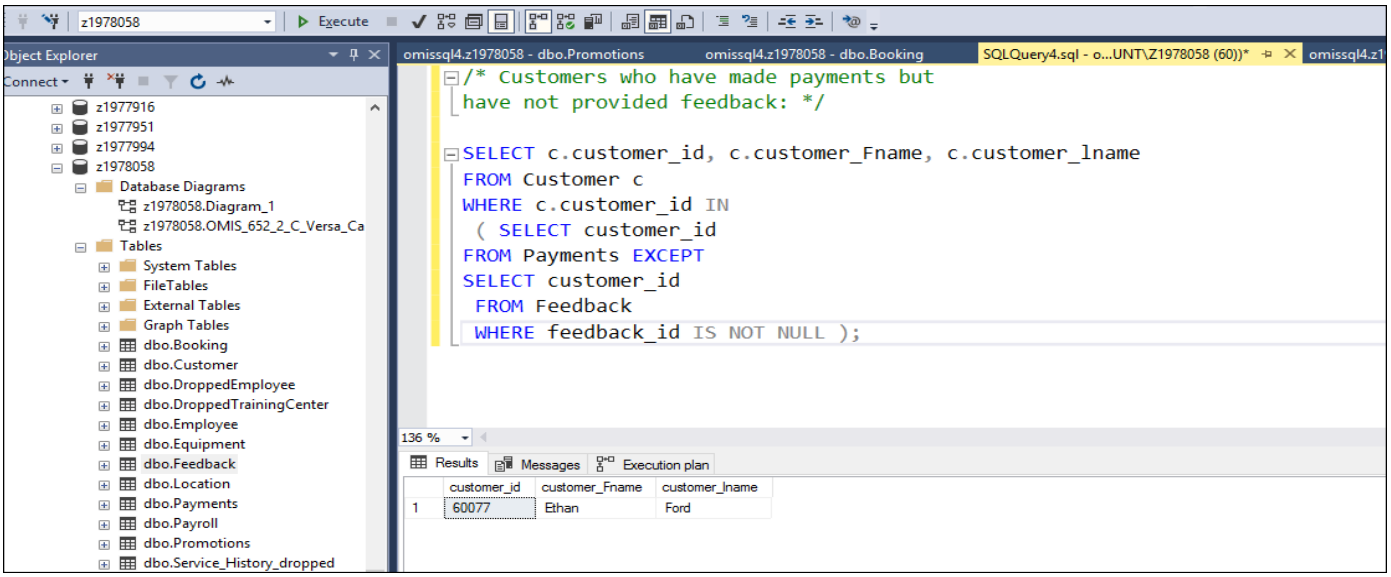
13. Find the average rating for each employee, including employees without any feedback:

```
SELECT e.employee_id, e.Fname, e.Lname, AVG(f.rating) AS average_rating
FROM Employee e LEFT JOIN Feedback f
ON e.employee_id = f.employee_id
GROUP BY e.employee_id, e.Fname, e.Lname;
```



14. Customers who have made payments but have not provided feedback:

```
SELECT c.customer_id, c.customer_Fname, c.customer_lname
FROM Customers c
WHERE c.customer_id IN
        (SELECT customer_id
        FROM Payments EXCEPT
            SELECT customer_id
            FROM Feedback
            WHERE feedback_id IS NOT NULL);
```



15. Retrieve the customers who have made bookings for services that are offered at a specific location:

```
SELECT *
FROM Customer c
WHERE c.customer_id IN
        (SELECT customer_id
         FROM Booking b
         WHERE b.service_id IN
                (SELECT service_id
                 FROM Services
                 WHERE location_id =
                        (SELECT location_id
                                FROM Location
                                WHERE city = 'Boston' )))
```

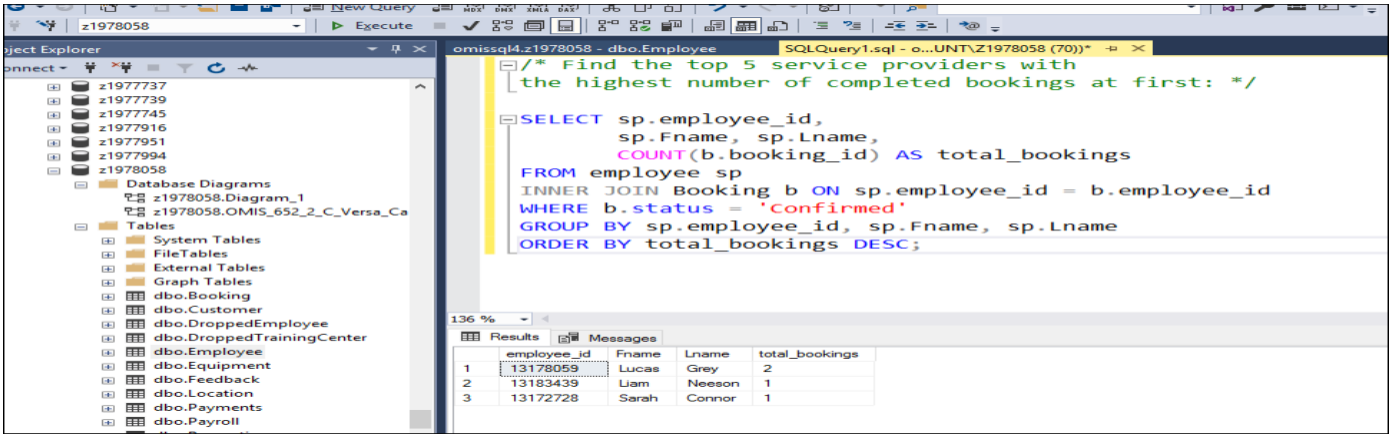
```
/*Retrieve the customers who have made bookings for services that are offered at a specific location  */
SELECT *
FROM Customer c
WHERE c.customer_id IN (
  SELECT customer_id
  FROM Booking b
  WHERE b.service_id IN (
    SELECT service_id
    FROM Services
    WHERE location_id = (
      SELECT location_id
      FROM Location
      WHERE city = 'Boston' )))
```

Results | Messages

customer_id	customer_fname	customer_lname	phone	email	street	city	zipcode
10039	Alice	Johnson	3456789012	alice.j@versacare.com	789 Pine Rd.	San Fransico	80229

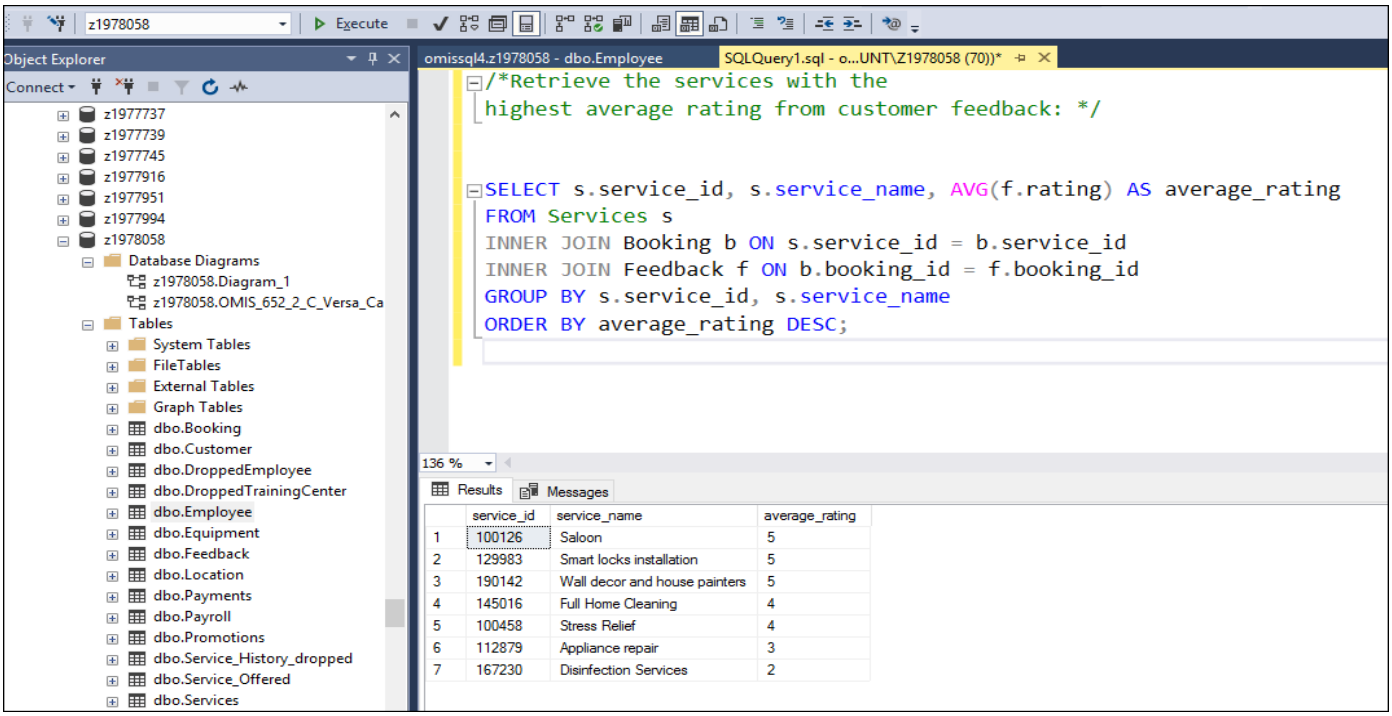
16. Find the top 5 service providers with the highest number of completed bookings at first:

```
SELECT sp.employee_id,  sp.Fname, sp.Lname, COUNT(b.booking_id) AS total_bookings
FROM employee sp  INNER JOIN Booking b
ON sp.employee_id = b.employee_id
WHERE b.status = 'Confirmed'
GROUP BY sp.employee_id, sp.Fname, sp.Lname
ORDER BY total_bookings DESC;
```



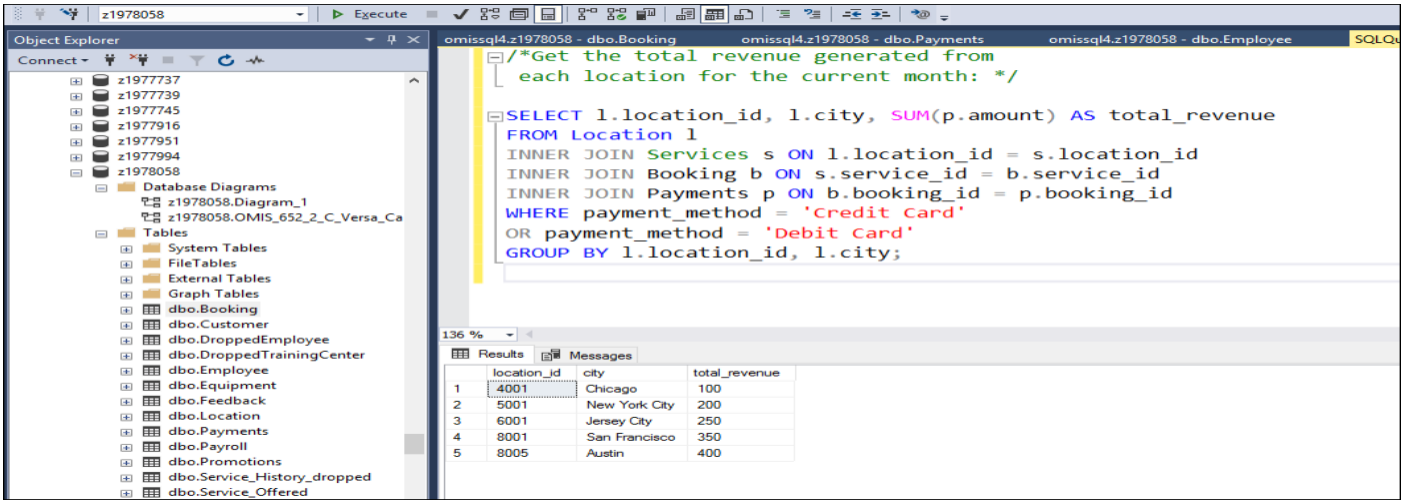
17. Retrieve the services with the highest average rating from customer feedback:

```
SELECT s.service_id, s.service_name, AVG(f.rating) AS average_rating
FROM Services s
INNER JOIN Booking b ON s.service_id = b.service_id
INNER JOIN Feedback f ON b.booking_id = f.booking_id
GROUP BY s.service_id, s.service_name
ORDER BY average_rating DESC;
```



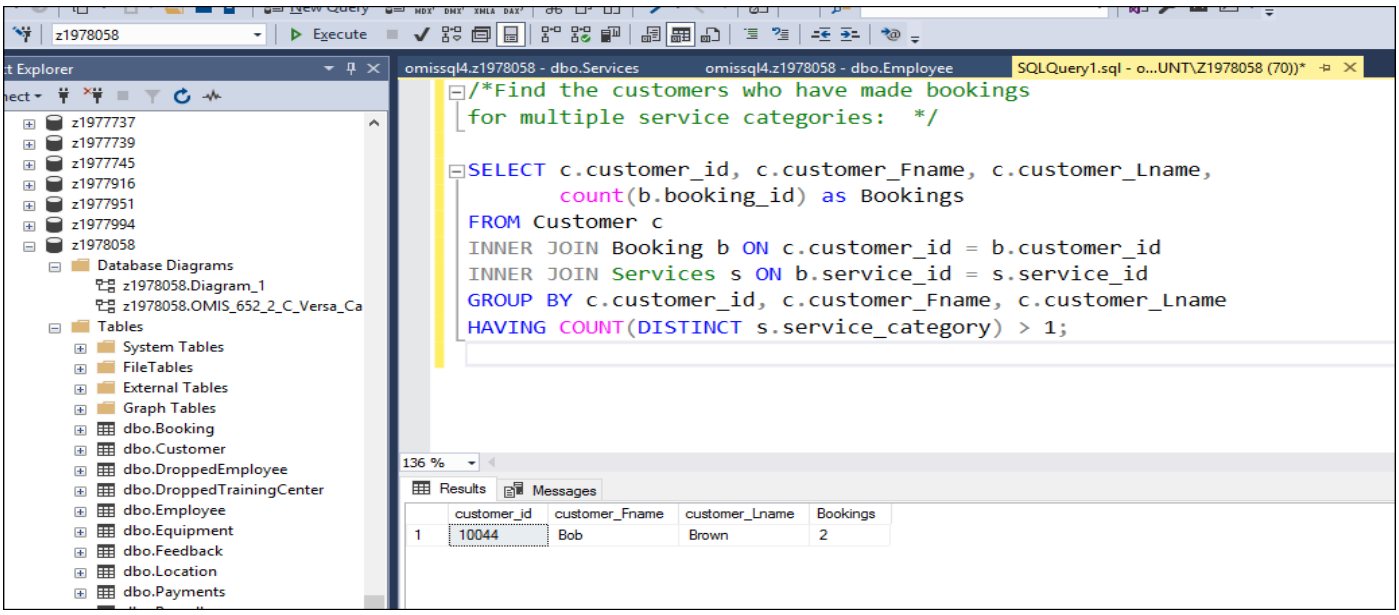
18. Get the total revenue generated from each location from credit card and debit card:

```
SELECT l.location_id, l.city, SUM(p.amount) AS total_revenue
FROM Location l
INNER JOIN Services s ON l.location_id = s.location_id
INNER JOIN Booking b ON s.service_id = b.service_id
INNER JOIN Payments p ON b.booking_id = p.booking_id
WHERE payment_method = 'Credit Card'  OR payment_method = 'Debit Card'
GROUP BY l.location_id, l.city;
```



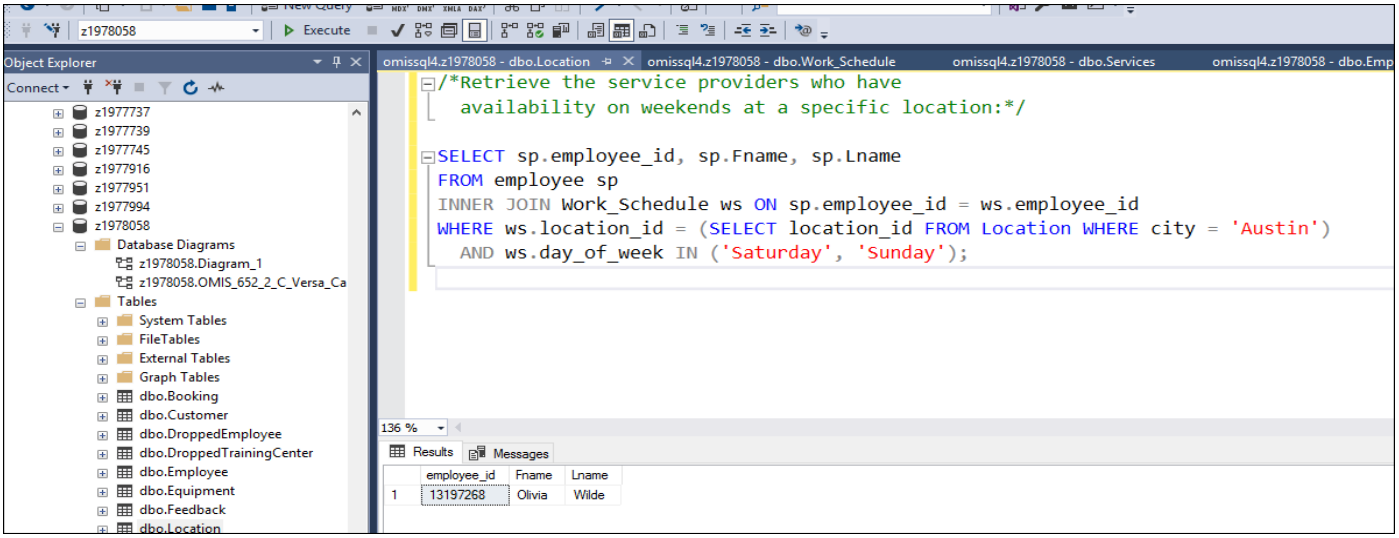
19. Find the customers who have made bookings for multiple service categories:

```
SELECT c.customer_id, c.customer_Fname, c.customer_Lname, count(b.booking_id) as Bookings
FROM Customer c
INNER JOIN Booking b ON c.customer_id = b.customer_id
INNER JOIN Services s ON b.service_id = s.service_id
GROUP BY c.customer_id, c.customer_Fname, c.customer_Lname
HAVING COUNT(DISTINCT s.service_category) > 1;
```



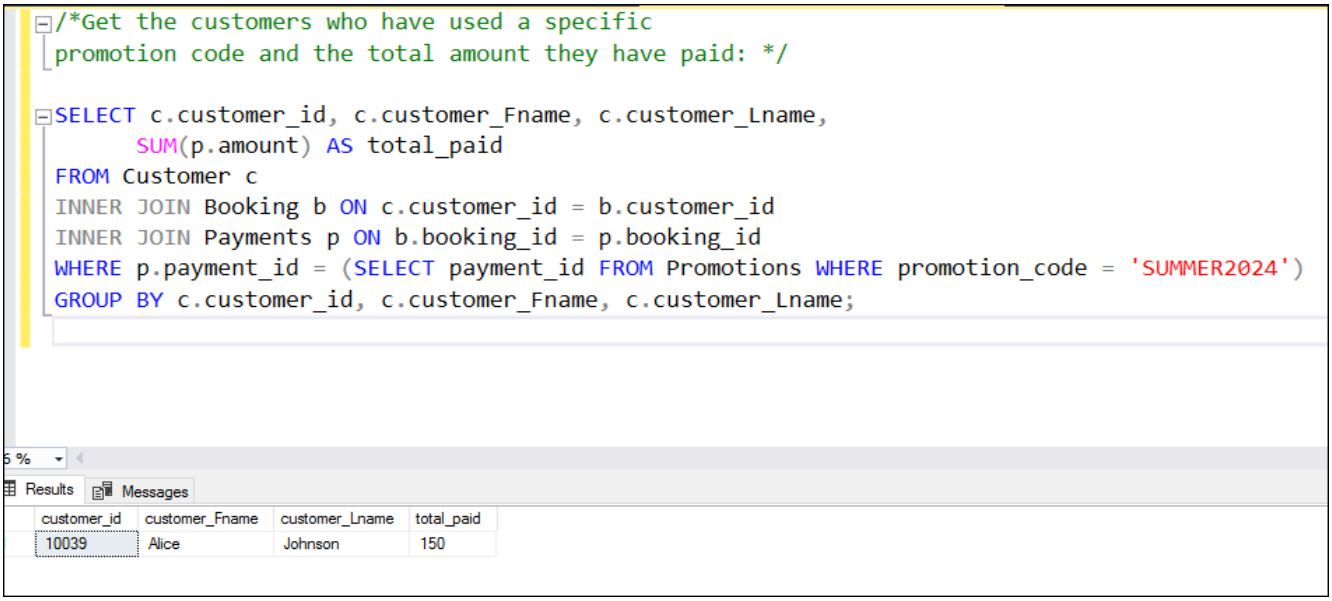
20. Retrieve the service providers who have availability on weekends at a specific location:

```
SELECT sp.employee_id, sp.Fname, sp.Lname
FROM employee sp
INNER JOIN Work_Schedule ws ON sp.employee_id = ws.employee_id
WHERE ws.location_id = (SELECT location_id FROM Location WHERE city = 'Austin')
AND ws.day_of_week IN ('Saturday', 'Sunday');
```



21. **Get the customers who have used a specific promotion code and the total amount they have paid:**

```
SELECT c.customer_id, c.customer_Fname, c.customer_Lname, SUM(p.amount) as total_paid
FROM Customer c
INNER JOIN Booking b ON c.customer_id = b.customer_id
INNER JOIN Payments p ON b.booking_id = p.booking_id
WHERE p.payment_id = (SELECT payment_id FROM Promotions WHERE promotion_code =
'SUMMER2024')
GROUP BY c.customer_id, c.customer_Fname, c.customer_Lname;
```



22. Find the service providers who have received feedback with a rating below 3 and the number of such feedbacks:

```
SELECT sp.employee_id, sp.Fname, sp.Lname, COUNT(f.feedback_id) as low_rating_count
FROM employee sp
INNER JOIN Booking b ON sp.employee_id = b.employee_id
INNER JOIN Feedback f ON b.booking_id = f.booking_id
WHERE f.rating < 3
GROUP BY sp.employee_id, sp.Fname, sp.Lname;
```