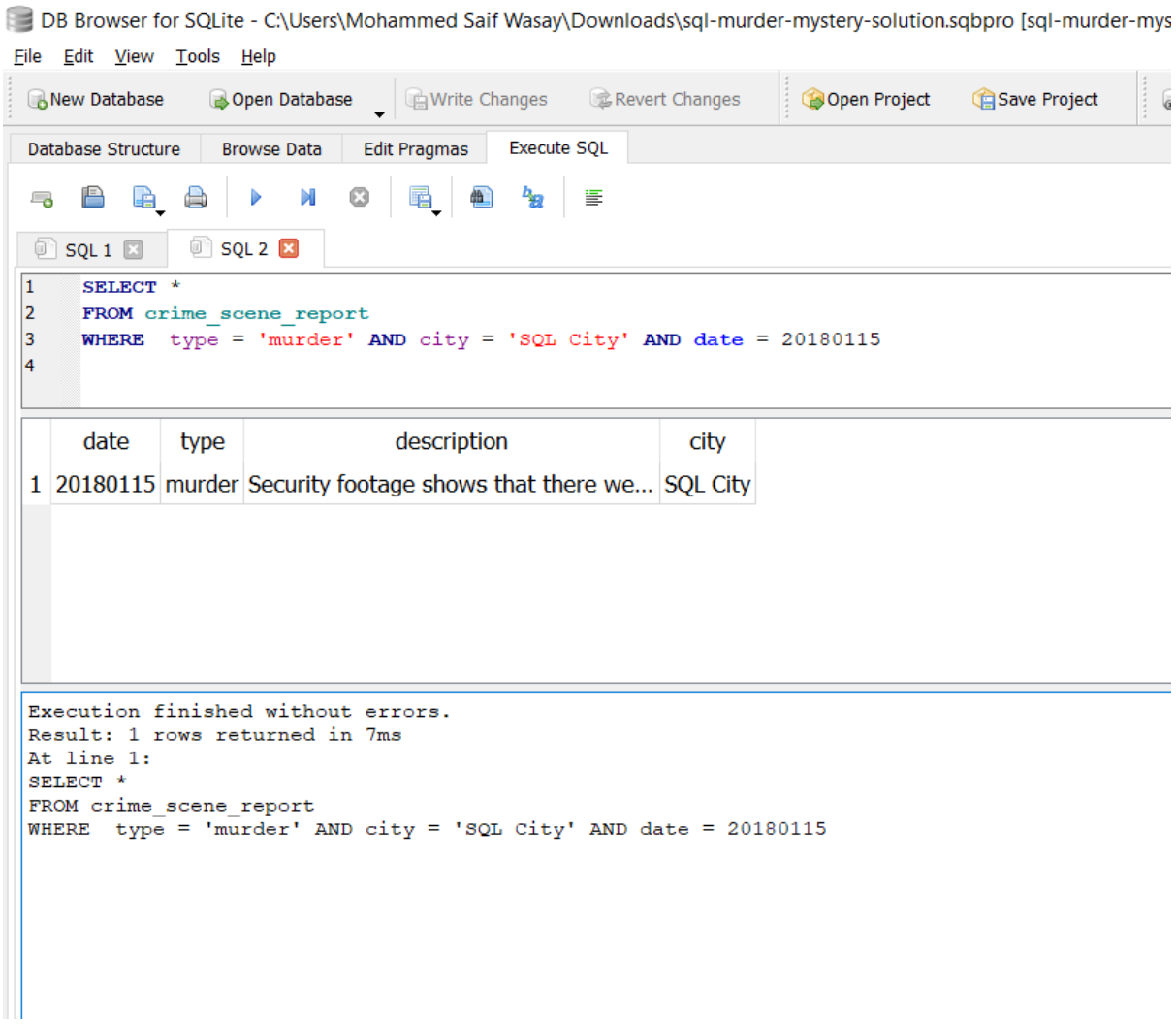
Assignment: SQL Murder Mystery

A crime has taken place and the detective needs your help. The detective gave you the crime scene report, but you somehow lost it. You vaguely remember that the crime was a murder that occurred sometime on Jan.15, 2018, and that it took place in SQL City.

Let's Start the Investigation:

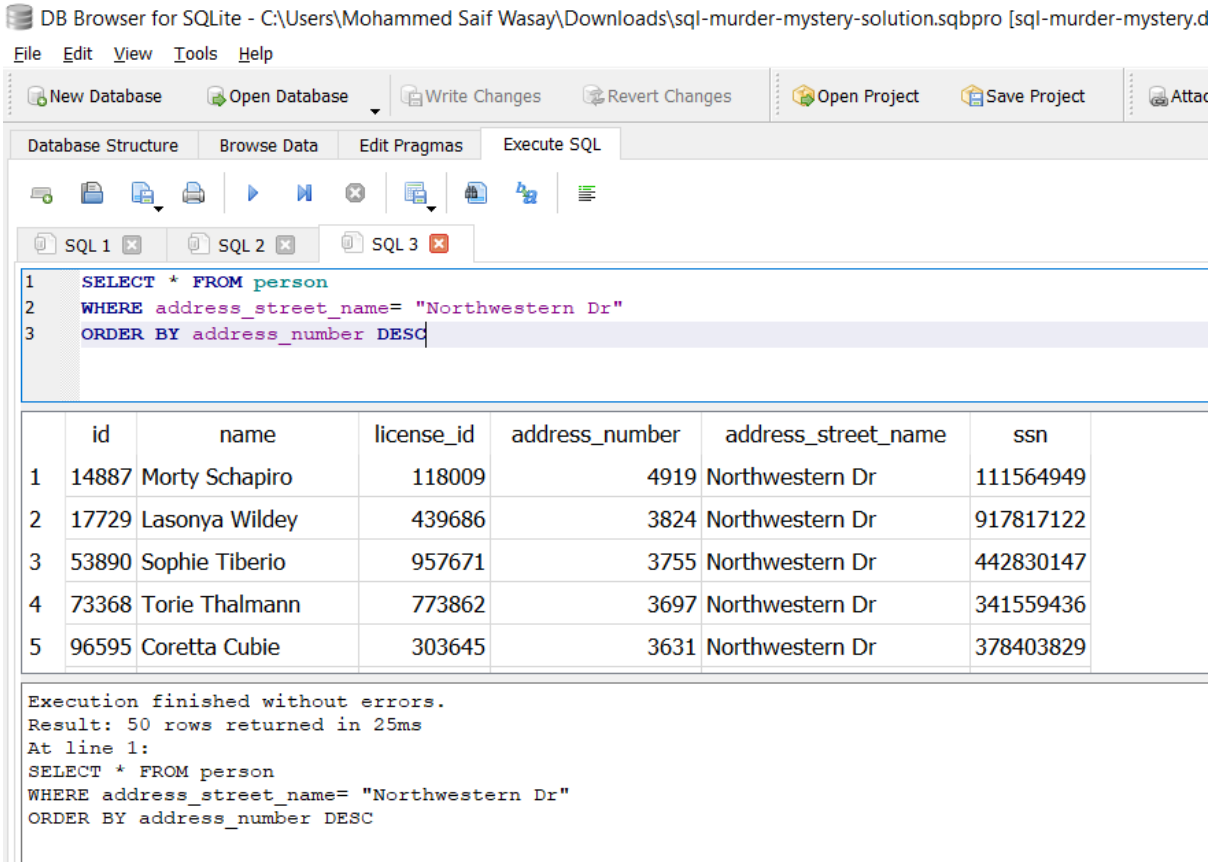
Fact: 1

SELECT *FROM crime_scene_report
WHERE type = 'murder' AND city = 'SQL City' AND date = 20180115



Fact: 2

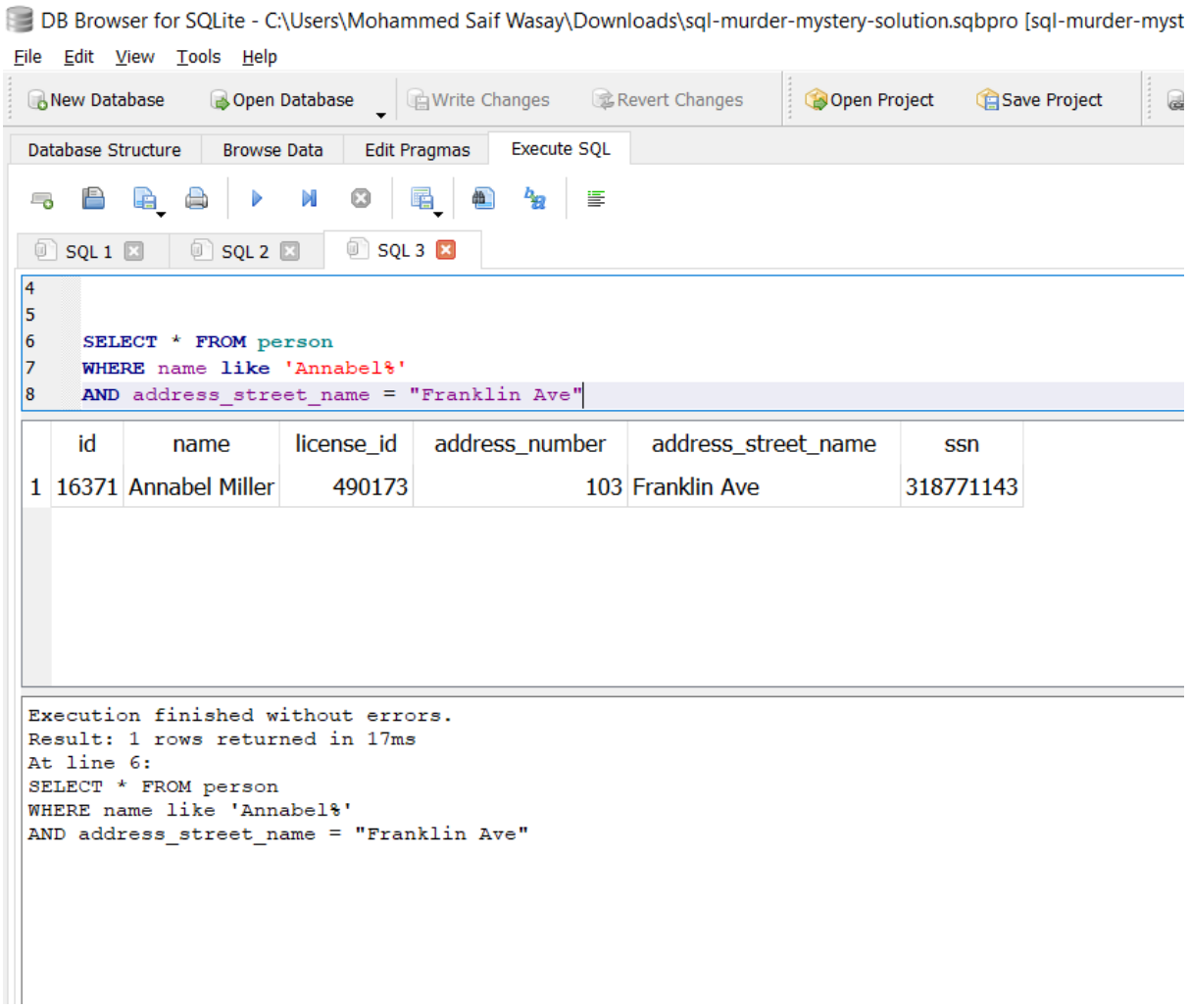
SELECT * FROM person
WHERE address_street_name= "Northwestern Dr"
ORDER BY address_number DESC



	id	name	license_id	address_number	address_street_name	ssn
1	14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949
2	17729	Lasonya Wildey	439686	3824	Northwestern Dr	917817122
3	53890	Sophie Tiberio	957671	3755	Northwestern Dr	442830147
4	73368	Torie Thalmann	773862	3697	Northwestern Dr	341559436
5	96595	Coretta Cubie	303645	3631	Northwestern Dr	378403829

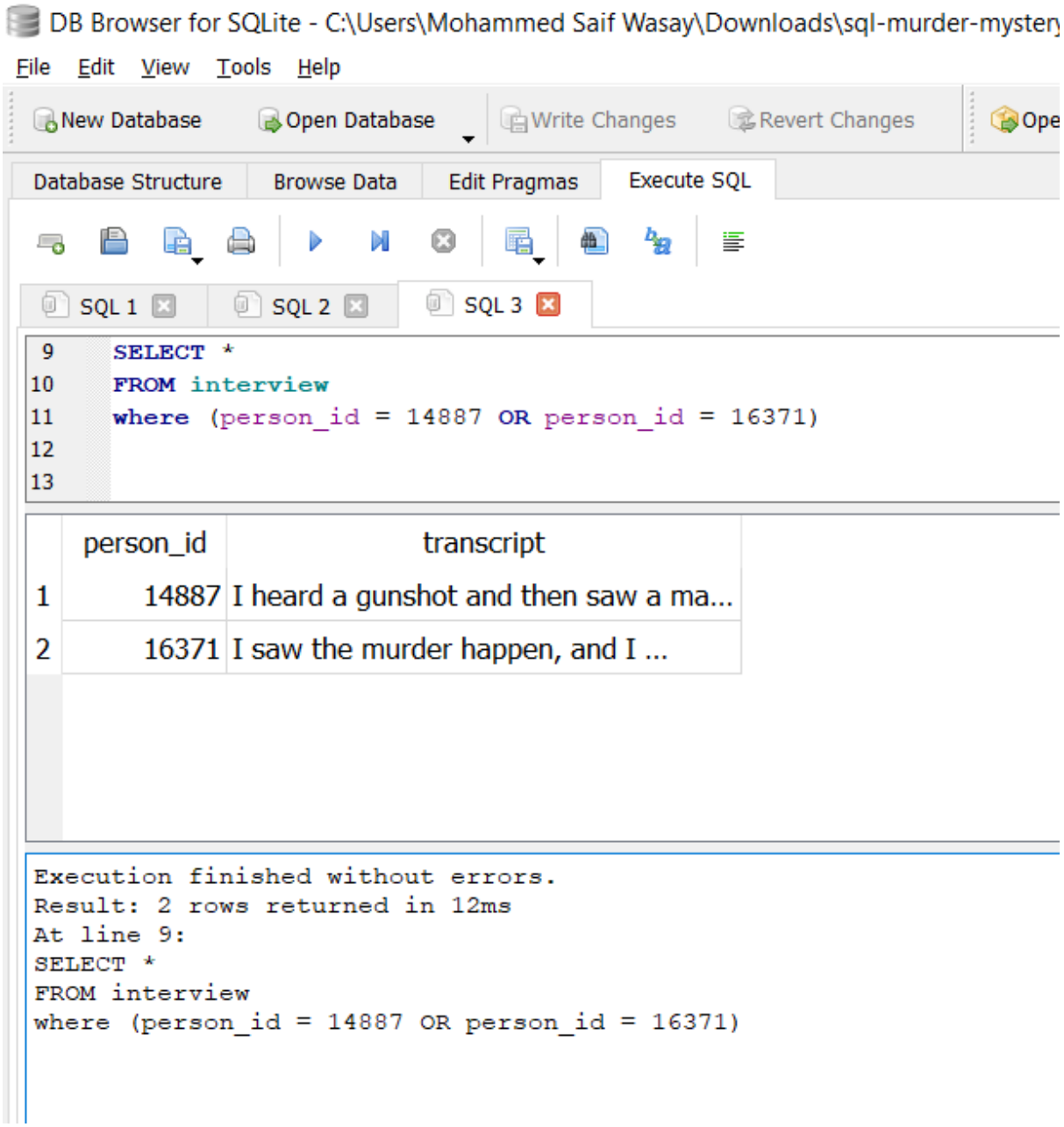
Fact: 3

SELECT * FROM person
WHERE name like 'Annabel%'
AND address_street_name = "Franklin Ave"



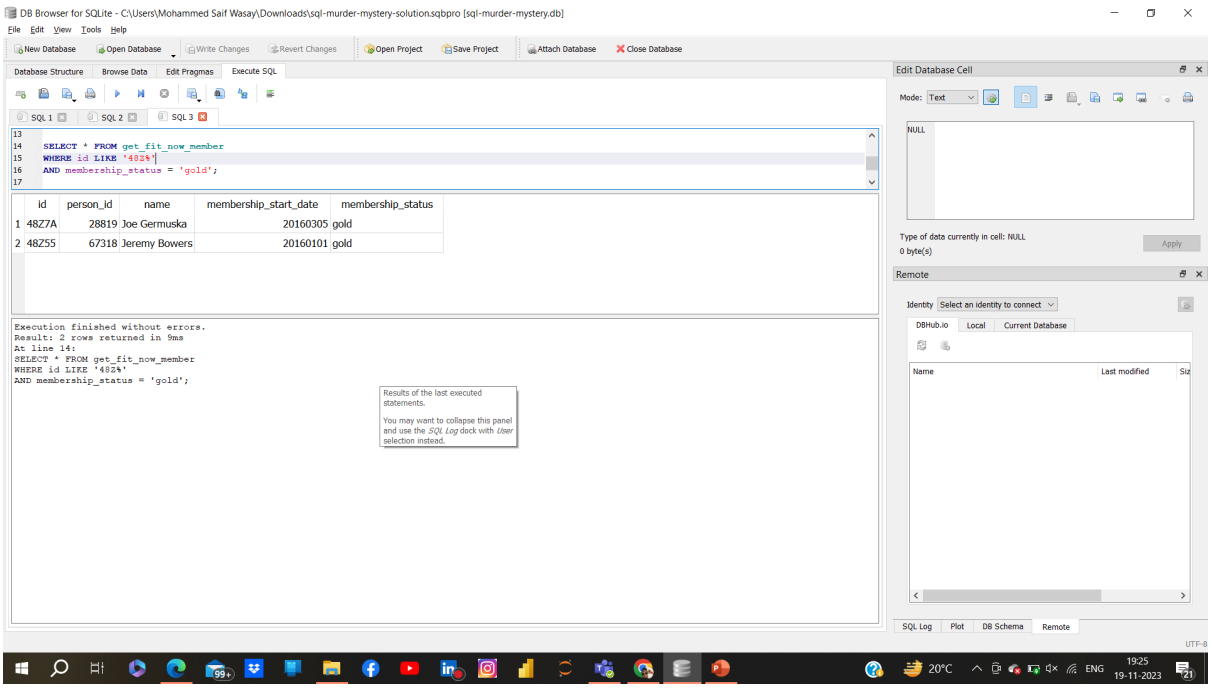
Fact: 4

**SELECT *
FROM interview
where (person_id = 14887 OR person_id = 16371)**



Fact: 4

SELECT * FROM get_fit_now_member
WHERE id LIKE '48Z%'
AND membership_status = 'gold';



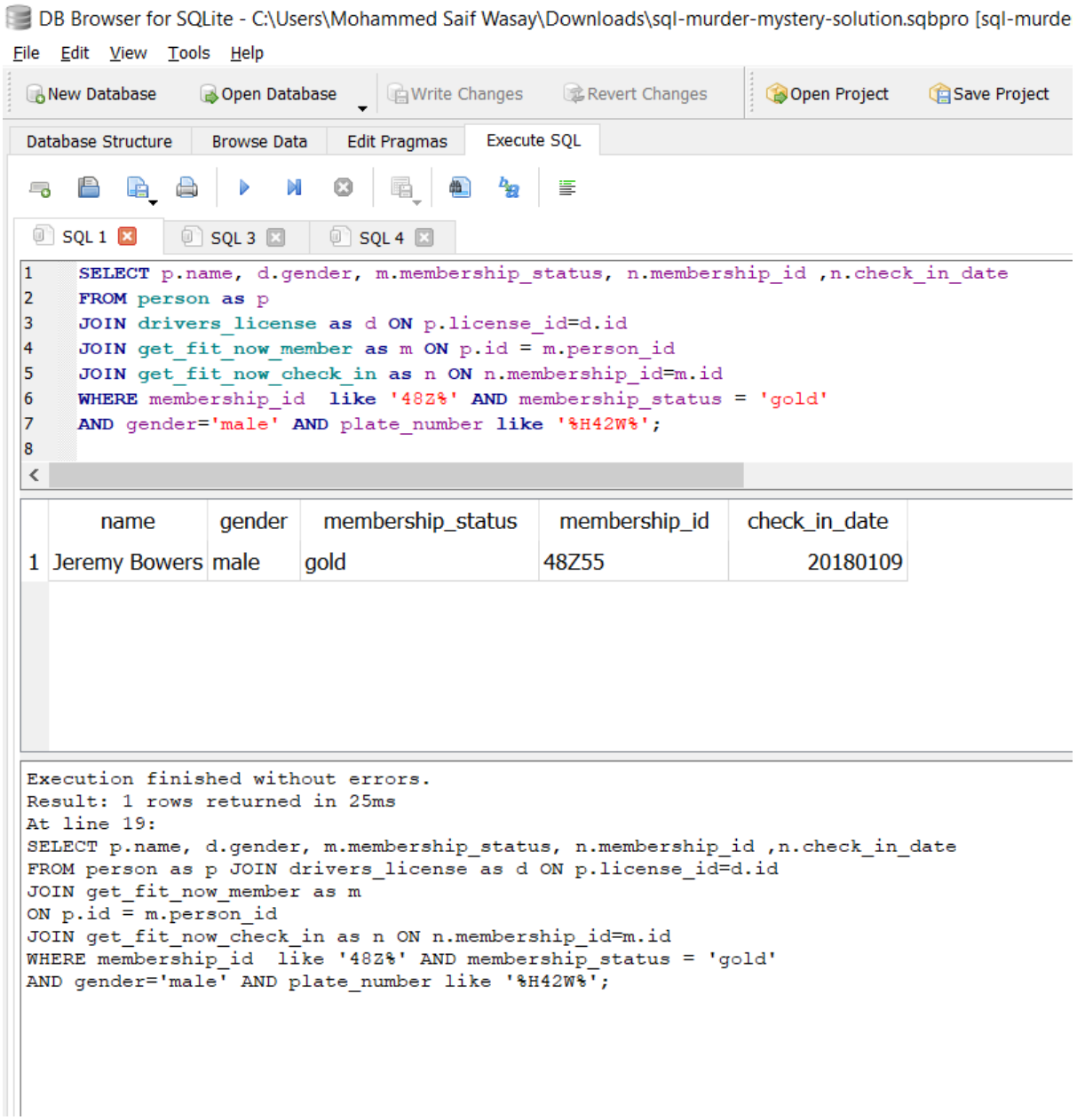
let's Look for Clues:
CLUES

- It was a man. He had a gym bag.
- Gym Membership ID began with ‘48Z’.
- Only Gold Members have that type of bag.
- The license plate of the getaway car includes ‘H42W’.
- The murder date was 2018-01-09

After considering, clues the solution is to JOIN all possible tables to find the suspect.
Solution:

Query:

SELECT p.name, d.gender, m.membership_status, n.membership_id,n.check_in_date
FROM person as p
JOIN drivers_license as d ON p.license_id=d.id
JOIN get_fit_now_member as m ON p.id = m.person_id
JOIN get_fit_now_check_in as n ON n.membership_id=m.id
WHERE membership_id like '48Z%' AND membership_status = 'gold'
AND gender='male' AND plate_number like '%H42W%';



Explanation:

SELECT Clause:

p.name, d.gender, m.membership_status, n.membership_id,n.check_in_date

p.name: Select the name of the person.
d.gender: Select the gender of the person.
m.membership_status: Select the gym membership of the person.
n.check_in_date: Select the check-in date of the person.

FROM Clause:

- Person as p: Represents Person and takes p as an Alias
- drivers_licence as d: Represents driver's license and takes d as Alias
- get_fit_now_member as m: Represents Gym membership and takes m as an Alias
- get_fit_now_check_in as n: Represents the person's check-in date and takes n as an Alias

JOIN Clauses:

JOIN drivers_license ON p.license_id = d.id: Joins the 'person' table with the 'drivers_license' table based on the driver's license ID.

JOIN get_fit_now_member ON p.name = m.name: Joins the 'person' table with the 'get_fit_now_member' table based on the Persons Name.

JOIN get_fit_now_check_in ON n.membership_id=m.id Joins the 'get_fit_now_check_in' table with the 'get_fit_now_member' table based on the person's Name.

WHERE Clause:

WHERE membership_id like '48Z%' AND membership_status = 'gold'
AND gender='male' AND plate_number like '%H42W%';

Here:

-membership_id Like '48Z' (Filters members ID opted for a gym membership)

-membership_status= 'gold' (Filters members who opted for a gold gym membership)

-gender='male' (Filters the gender of a person such as male)

-plate_number='%H42W%' (Filters the car plate number of a person)

In conclusion:

After considering all the clues that a suspect is a man, who had a gym bag, and a gym Membership ID beginning with '48Z', Only Gold Members have that type of bag, license plate of the getaway car includes 'H42W'. And, the murder date was 2018-01-09. So, the suspect is Jeremy Bowers.