Murder in SQL City

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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. Start by retrieving the corresponding crime scene report from the police department's database. Figure out who committed the crime with the details you remembered above.

This report highlights the analysis of a crime committed in the SQL city on January 15 using the scene report from the Police department's Database.

The following Steps were carried out to figure out who committed the crime.

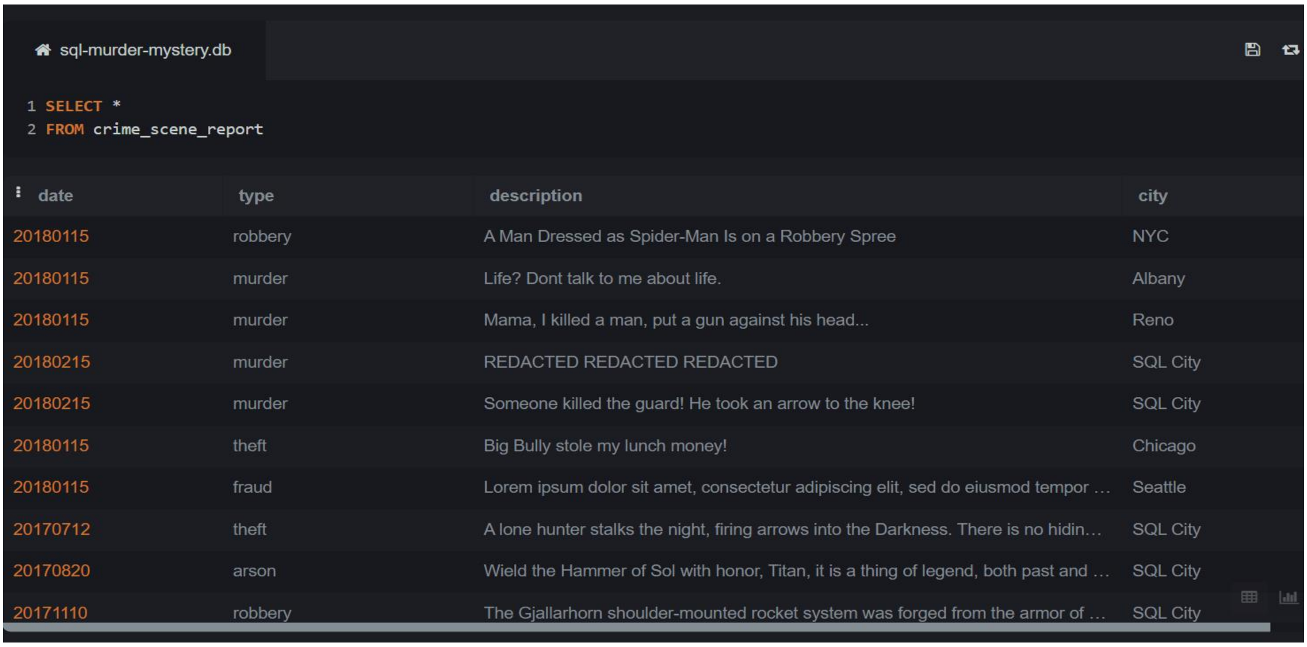
Step 1:

I queried the police department database to show the columns on the crime_scene report, using the following syntax:

SELECT *

FROM crime_scene_report

The table returned a result set showing details of date, type, description, and city.



```
SELECT *
FROM crime_scene_report
```

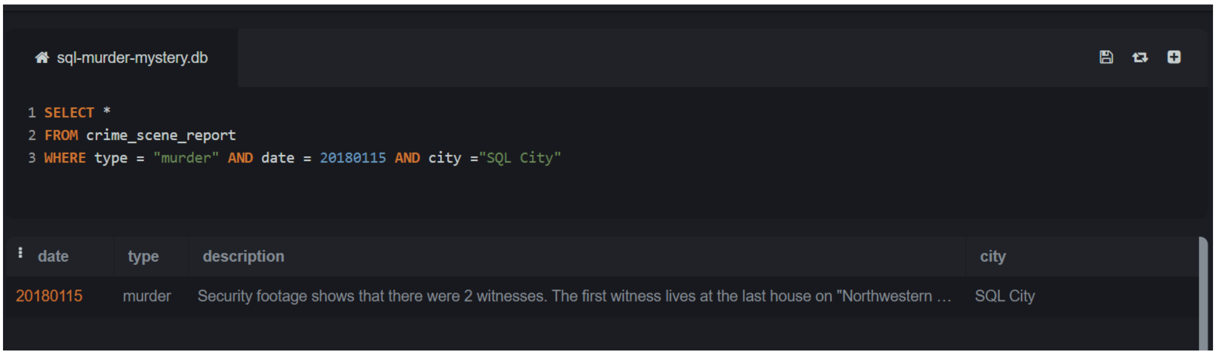
date	type	description	city
20180115	robbery	A Man Dressed as Spider-Man Is on a Robbery Spree	NYC
20180115	murder	Life? Dont talk to me about life.	Albany
20180115	murder	Mama, I killed a man, put a gun against his head...	Reno
20180215	murder	REDACTED REDACTED REDACTED	SQL City
20180215	murder	Someone killed the guard! He took an arrow to the knee!	SQL City
20180115	theft	Big Bully stole my lunch money!	Chicago
20180115	fraud	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor …	Seattle
20170712	theft	A lone hunter stalks the night, firing arrows into the Darkness. There is no hidin…	SQL City
20170820	arson	Wield the Hammer of Sol with honor, Titan, it is a thing of legend, both past and …	SQL City
20171110	robbery	The Gjallarhorn shoulder-mounted rocket system was forged from the armor of …	SQL City

Step 2: I filtered the table with the detective brief, the brief identified that the crime was a murder, it occurred sometime on Jan.15, 2018 and that it took place in SQL City.

SELECT *

FROM crime_scene_report

WHERE type = "murder" AND date = 20180115 and city ="SQL City"



```sql
SELECT *
FROM crime_scene_report
WHERE type = "murder" AND date = 20180115 AND city ="SQL City"
```

date	type	description	city
20180115	murder	Security footage shows that there were 2 witnesses. The first witness lives at the last house on "Northwestern …	SQL City

From the query result set description column- Security footage shows that were 2 witnesses. The first witness lives at the last house on "**Northwestern Dr"** and the second witness, named **Annabel,** lives somewhere on **"Franklin Ave".**

Step 3:

The addresses obtained from the result set will be used to find the **ID and name** of the **first witness**. This is done by querying the **Person table** and filtering it with the address **"Northwestern Dr".** The first witness lives at the last house, so I ordered the witness's street name in descending order and limit it by 1 so that I can see the name of the person living in the last house on Northwestern Dr Street.

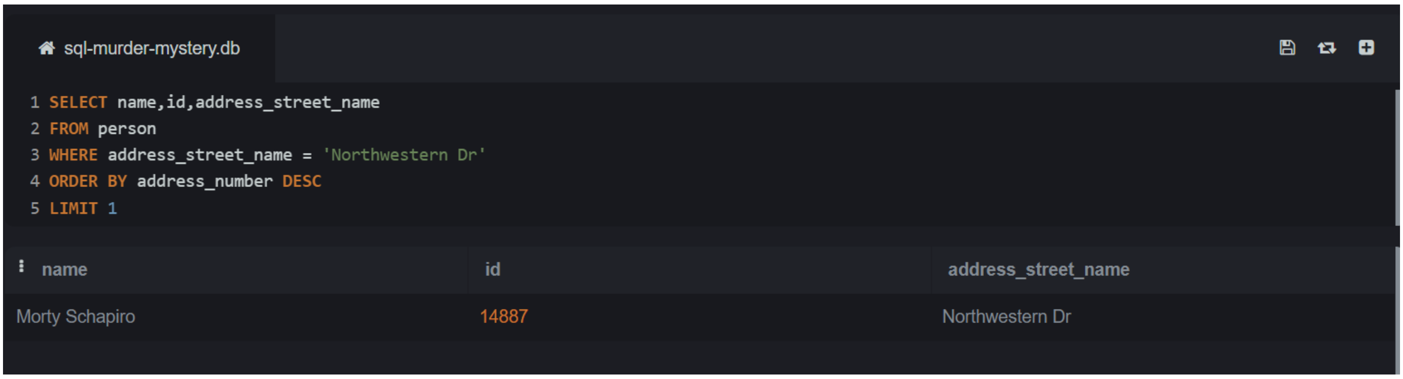
```
SELECT name, id, address_street_name

FROM person

Where address_street_name = 'Northwestern Dr'

ORDER BY address_number DESC

LIMIT 1
```



```sql
SELECT name,id,address_street_name
FROM person
WHERE address_street_name = 'Northwestern Dr'
ORDER BY address_number DESC
LIMIT 1
```

name	id	address_street_name
Morty Schapiro	14887	Northwestern Dr

The name of the first witness obtained is **Morty Schapiro** with **ID number 14887.**

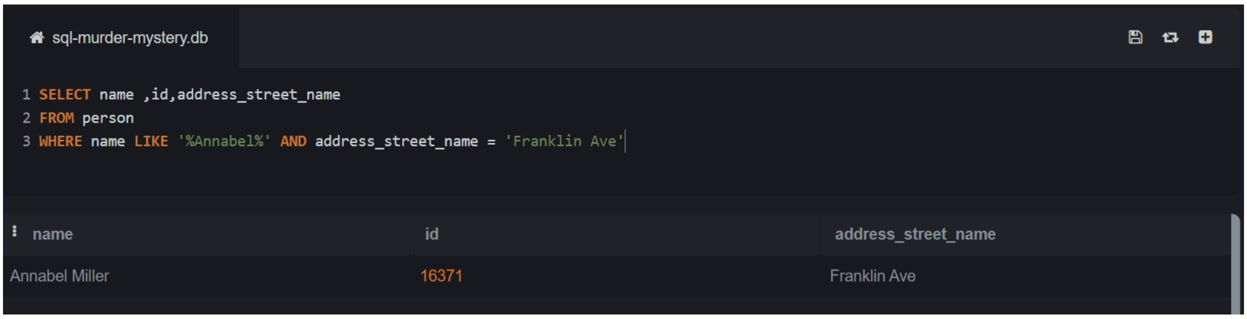
Step 4:

The second witness **ID** number will be retrieved using their name and address. This is done by querying the **Person table** and filtering it with the witness's name and address: **"Annabel and Franklin Ave".**

```
SELECT name, id, address_street_name

FROM person

WHERE name LIKE '%Annabel%' AND address_street_name = 'Franklin Ave'
```



```sql
SELECT name ,id,address_street_name
FROM person
WHERE name LIKE '%Annabel%' AND address_street_name = 'Franklin Ave'
```

name	id	address_street_name
Annabel Miller	16371	Franklin Ave

The name of the second witness is **Annabel Miller** with **ID number 16371.**

Step 5:

After retrieving the ID of the two witnesses, I checked the database schema, and the **schema diagram** showed that the **person and interview table** has **primary and foreign key**. The **person table** has the primary key (id), and the **interview table** has the foreign key (person_id). These keys will be used to **join** both tables together and retrieve relevant information by leveraging the relationships between them.

I joined the person table and interview table to check the details of each witness transcripts using both **ID**.

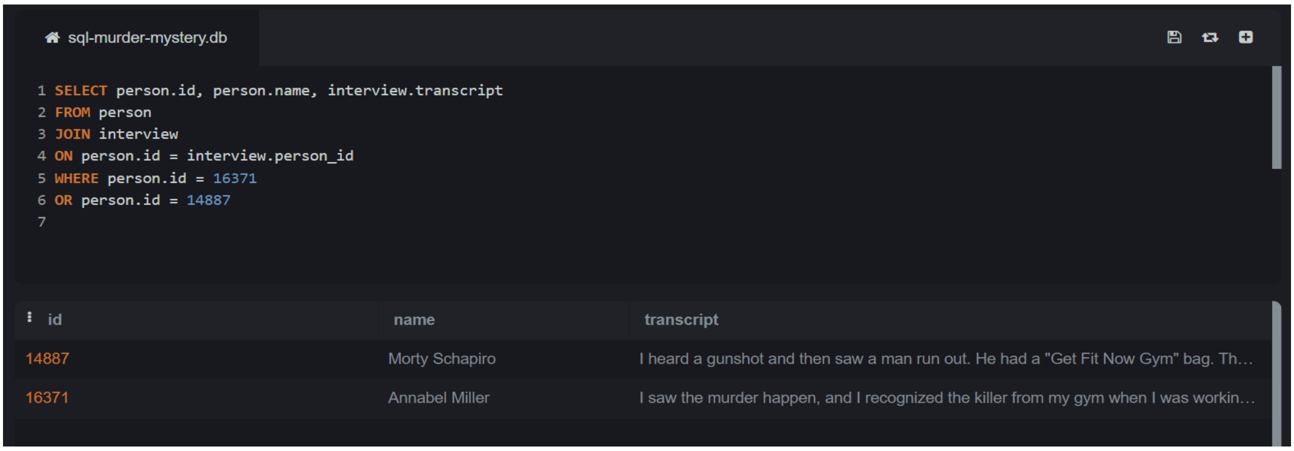
SELECT person.id, person.name, interview. transcript

FROM person

Join interview.

ON person.id = interview.person_id

WHERE person.id = 16371 OR person.id = 14887



```sql
SELECT person.id, person.name, interview.transcript
FROM person
JOIN interview
ON person.id = interview.person_id
WHERE person.id = 16371
OR person.id = 14887
```

id	name	transcript
14887	Morty Schapiro	I heard a gunshot and then saw a man run out. He had a "Get Fit Now Gym" bag. Th…
16371	Annabel Miller	I saw the murder happen, and I recognized the killer from my gym when I was workin…

- ➢ **The First Witness- Morty Schapiro transcript:**

"I heard a gunshot and then saw a man run out. He had a ""Get Fit Now Gym"" bag. The membership number on the bag started with ""48Z"". Only gold members have those bags. The man got into a car with a plate that included ""H42W""

- ➢ **The Second Witness- Annabel Miller transcript:**

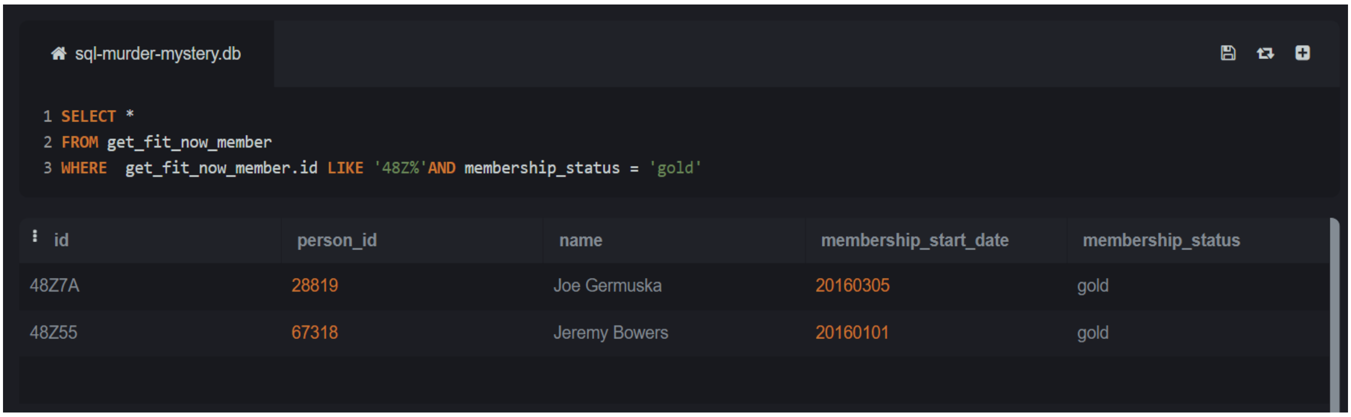
I saw the murder happen, and I recognized the killer from my gym when I was working out last week on January the 9th.

Step 6:

The witness’s transcript from the interview table results set shows that the killer is a man and a gym member. To get the membership_id of who committed the crime.

I wrote a query to check the **get_fit_now_member table** and filtered the table based on what the first witness (**Morty Schapiro**) mentioned-**Membership number with”48Z** on a bag which is identified with Gold-**Membership status.**

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



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

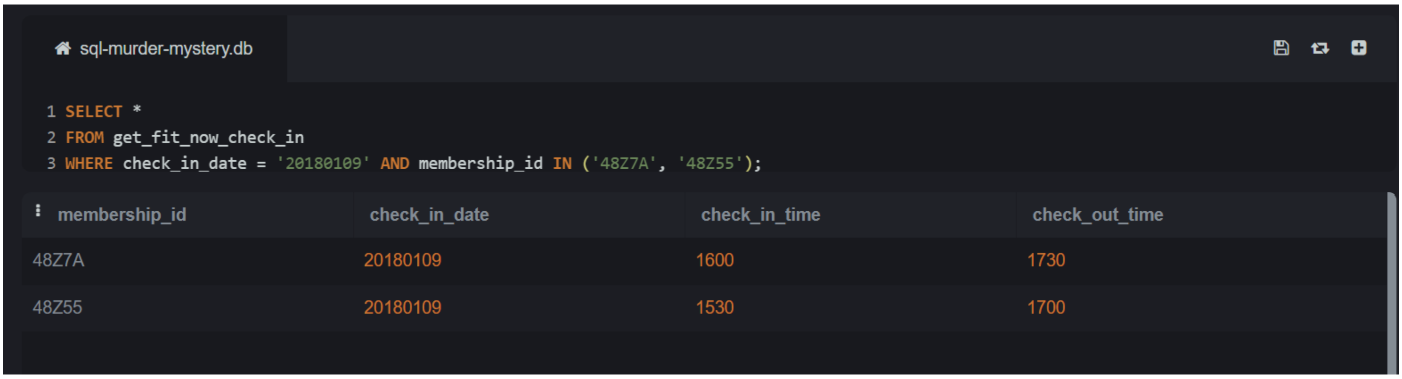
id	person_id	name	membership_start_date	membership_status
48Z7A	28819	Joe Germuska	20160305	gold
48Z55	67318	Jeremy Bowers	20160101	gold

The query result set shows that there are only two members (**Joe Germuska and Jeremy Bowers)** with gold membership status and their Membership_id are as follows (**48Z7A and 48Z55**) and their person_id is (**67318, 28819)**

Step 7:

Based on the second witness transcript - **Annabel Miller (**She mentioned that she was working out on the **9th of January**).

I wrote a query to check the **get_fit_now_check_in table** and filtered it with the 2membership id from the first witness transcript **(48Z7A and 48Z55).**



```
SELECT *
FROM get_fit_now_check_in
WHERE check_in_date = '20180109' AND membership_id IN ('48Z7A', '48Z55');
```

membership_id	check_in_date	check_in_time	check_out_time
48Z7A	20180109	1600	1730
48Z55	20180109	1530	1700

The query result set shows that the **two members with gold membership status** and Membership_id (**48Z7A and 48Z55**) both checked in on the **9th of January 2018.**

Step 8:

From the findings I have an opinion that the crime was committed between (**Joe Germuska** and **Jeremy Bowers** as they both checked in on the **9th of January** and based on the first witness interview transcript report by (**Morty Schapiro-** mentioned that the man got into a car with **a plate** that included **""H42W""**.)

To identify the main suspect who committed the crime between these two, I used the **schema diagram** to join the **person table** and driver **license table** together because they both have primary and foreign key(id), and I filtered it with their **person_id** to find out who has a car registered with the plate **'H42W'**.

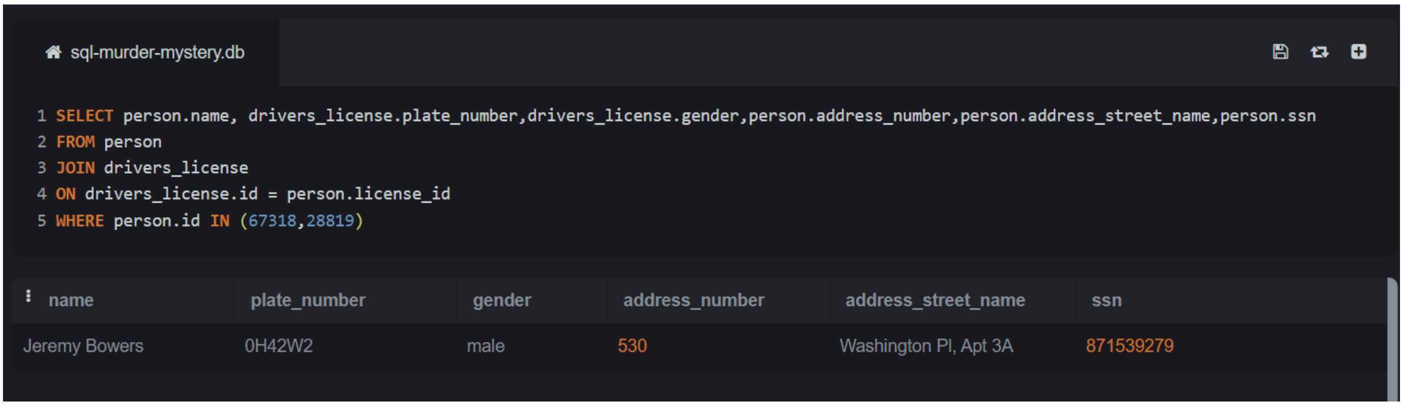
```
SELECT
person.name,drivers_license.plate_number,drivers_license.gender,person.address_number,person.address_street_name,person.ssn

FROM person

JOIN drivers_license

ON drivers_license.id = person.license_id

WHERE person.id IN (67318,28819)
```



sql-murder-mystery.db

```
SELECT person.name, drivers_license.plate_number,drivers_license.gender,person.address_number,person.address_street_name,person.ssn
FROM person
JOIN drivers_license
ON drivers_license.id = person.license_id
WHERE person.id IN (67318,28819)
```

name	plate_number	gender	address_number	address_street_name	ssn
Jeremy Bowers	0H42W2	male	530	Washington Pl, Apt 3A	871539279

From the Query result, it shows that Jeremy bowers has a car with a plate_number **H42W** as mentioned by the first witness and his gender reveal that he is male and reside at 530, Washington PI, Apt 3A.

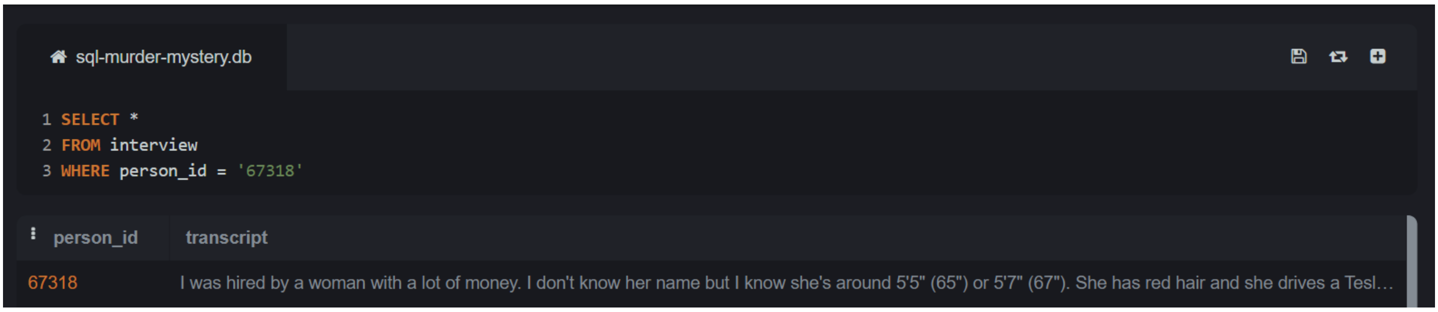
Step 9:

From these findings, **Jeremy Bowers** is the main suspect based on the two-witness description. However, to confirm that he was the one who committed the murder, I went further to check the interview table for his transcript using his person_id (**67318)**

```
SELECT *

FROM interview

WHERE person_id = '67318'
```



sql-murder-mystery.db

```
SELECT *
FROM interview
WHERE person_id = '67318'
```

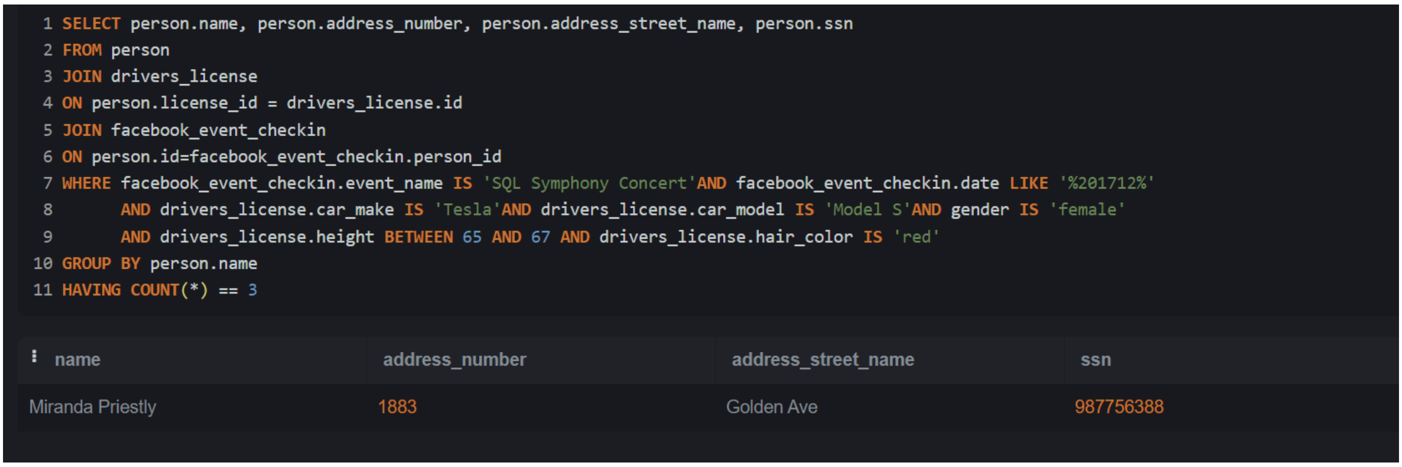
person_id	transcript
67318	I was hired by a woman with a lot of money. I don't know her name but I know she's around 5'5" (65") or 5'7" (67"). She has red hair and she drives a Tesl…

The transcript result set shows the suspect **Jeremy Bowers- mentioned this** "I was hired by a woman with a lot of money. I don't know her name, but I know she's around 5'5"" (65") or 5'7"" (67”). She has red hair, and she drives a Tesla Model S. I know that she attended the SQL Symphony Concert 3 times in December 2017.”

Step 10:

Now, we can see that **Jeremy Bowers** is the one who committed the murdered, but he was hired by a woman, and he provided information about the main culprit. This information was used in writing a query to retrieve the name of the woman who hired him.

SELECT person.name, person. address_number, person. address_street_name, person.ssn from person
JOIN drivers_license
ON person.license_id = drivers_license.id
JOIN facebook_event_checkin
ON person.id=facebook_event_checkin.person_id
WHERE facebook_event_checkin.event_name is 'SQL Symphony Concert' AND facebook_event_checkin.date LIKE '%201712%'
AND drivers_license.car_make is 'Tesla'AND drivers_license.car_model is 'Model S' AND gender is 'female' AND drivers_license.height BETWEEN 65 and 67 AND drivers_license.hair_color is 'red'
GROUP by person.name
HAVING count(*) == 3



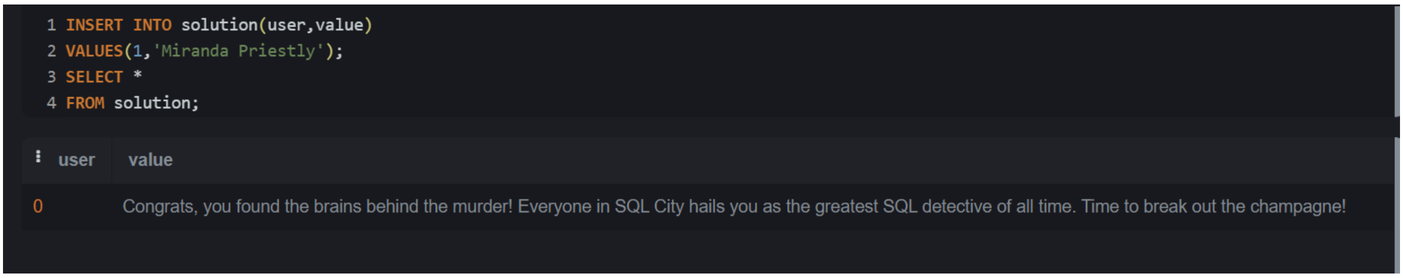
```
SELECT person.name, person.address_number, person.address_street_name, person.ssn
FROM person
JOIN drivers_license
ON person.license_id = drivers_license.id
JOIN facebook_event_checkin
ON person.id=facebook_event_checkin.person_id
WHERE facebook_event_checkin.event_name IS 'SQL Symphony Concert'AND facebook_event_checkin.date LIKE '%201712%'
      AND drivers_license.car_make IS 'Tesla'AND drivers_license.car_model IS 'Model S'AND gender IS 'female'
      AND drivers_license.height BETWEEN 65 AND 67 AND drivers_license.hair_color IS 'red'
GROUP BY person.name
HAVING COUNT(*) == 3
```

name	address_number	address_street_name	ssn
Miranda Priestly	1883	Golden Ave	987756388

Summary:

The result set shows that **Miranda Priestly** who lives in **1883, Golden Ave** with the **Ssn:987756388** was the woman who hired **Jeremy Bower** to commit the murder.

However, to be sure that these are the brains behind the crime, I queried the solution table and it showed this result set.



```
INSERT INTO solution(user,value)
VALUES(1,'Miranda Priestly');
SELECT *
FROM solution;
```

user	value
0	Congrats, you found the brains behind the murder! Everyone in SQL City hails you as the greatest SQL detective of all time. Time to break out the champagne!