## **Solving the SQL Murder Mystery**

Instead of solving the murder on the website, the database file was downloaded, converted to a sql file through SQLite Database Browser.

The exported SQL syntax was edited slightly to work on the MS-SQL server. The syntax files are attached in the files.

Let us begin!

There's been a Murder in SQL City! 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.

```
SELECT * FROM CRIME SCENE REPORT

WHERE DATE=20180115

AND CITY LIKE 'SQL CITY'

AND TYPE LIKE 'MURDER'

Murder Security footage shows that there were 2 witness... SQL City
```

Security footage shows that there were 2 witnesses.

- The first witness lives at the last house on "Northwestern Dr".
- The second witness, named Annabel, lives somewhere on "Franklin Ave".

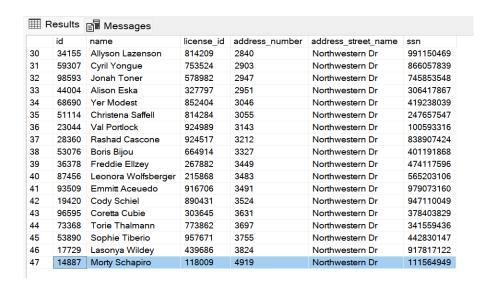
Let us now look into the two witnesses:

```
13 SELECT * FROM PERSON

14 WHERE ADDRESS STREET NAME LIKE 'NORTHWESTERN DR'

15 ORDER BY ADDRESS NUMBER ASC
```

```
19 SELECT * FROM PERSON
20 WHERE ADDRESS STREET NAME LIKE 'FRANKLIN AVE'
21 AND NAME LIKE '%ANNABEL%'
```



Ⅲ R	Results	■ Messages				
	id	name	license_id	address_number	address_street_name	ssn
1	16371	Annabel Miller	490173	103	Franklin Ave	318771143

Since these are the two witnesses, let us now investigate if they gave an interview:

```
27 SELECT * FROM INTERVIEW
28 WHERE PERSON_ID=14887
29 OR PERSON_ID=16371
```

--Morty's interview:

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".

--Annabel's interview:

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

Here, we have several clues regarding the killer's gym membership, car license number and the killer's gym check-in on January 9th.

```
42 SELECT * FROM get_fit_now_member

43 WHERE ID LIKE '48Z%'

44 AND MEMBERSHIP_STATUS_LIKE 'GOLD'
```



Let us cross check Jeremy's car details as well:

```
SELECT * FROM PERSON
WHERE ID=67318

SELECT * FROM DRIVERS LICENSE
WHERE ID=423327

--Crosschecking the witness' description of car plate number
SELECT * FROM DRIVERS LICENSE
WHERE PLATE NUMBER LIKE '%H42W%'

WHERE PLATE NUMBER LIKE '%H42W%'
```

	id	name		license_id	d address_	number	address_street_	name	ssn
1	67318	Jerem	ny Bowers	423327	530		Washington PI,	Apt 3A	871539279
	id	age	height	eye color	hair color	gender	plate number	car mak	ke car mode
1	423327	30	70	brown	brown	male	0H42W2	Chevrol	_
	<u> </u>								·
	id	age	height	eye_color	hair_color	gender	plate_number	car_mal	ke car_mode
1	183779	21	65	blue	blonde	female	H42W0X	Toyota	Prius
2	423327	30	70	brown	brown	male	0H42W2	Chevrol	et Spark LS
					black	male	4H42WR	Nissan	Altima

After investigating all of Morty's claims, our prime suspect is a man named Jeremy Bowers.

Let us now crosscheck Annabel's claims that she saw him at the gym on Jan 9<sup>th</sup> as well:

```
65 SELECT * FROM get_fit_now_check_in WHERE CHECK_IN_DATE=20180109
```

	membership_id	check_in_date	check_in_time	check_out_time
1	X0643	20180109	957	1164
2	UK1F2	20180109	344	518
3	XTE42	20180109	486	1124
4	1AE2H	20180109	461	944
5	6LSTG	20180109	399	515
6	7MWHJ	20180109	273	885
7	GE5Q8	20180109	367	959
8	48Z55	20180109	1530	1700
9	90081	20180109	1600	1700

(highlighting Jeremy's checkin)

As a final confirmation, let us check where the witnesses themselves were on the day of the murder:

```
72 SELECT * FROM facebook event checkin

73 WHERE PERSON ID=16371 -- Annabel (witness)

74 OR PERSON ID= 14887 -- Morty (witness)

75 OR PERSON ID= 67318 -- Jeremy (suspect)
```

		J		
	person_id	event_id	event_name	date
1	14887	4719	The Funky Grooves Tour	20180115
2	16371	4719	The Funky Grooves Tour	20180115
3	67318	4719	The Funky Grooves Tour	20180115
4	67318	1143	SQL Symphony Concert	20171206

On January 15th, 2018, the two witnesses and the suspect were all at the Funky Grooves Tour.

All the evidence points towards Mr. Bowers as our killer. He seems to be a fan of musical events as he attended a Symphony Concert a month earlier as well.

Let us confirm if it is our killer!

```
INSERT INTO solution VALUES (1, 'Jeremy Bowers');

SELECT value FROM solution;

Congrats, you found the murderer! But wait, there's more....
```

-- Congrats, you found the murderer! But wait, there's more...

If you think you're up for a challenge, try querying the interview transcript of the murderer to find the real villain behind this crime. Use this same INSERT statement with your new suspect to check your answer.

**PLOT TWIST?!** The real mastermind was someone else? Let us find the culprit starting from Jeremy's interview statement:

```
SELECT * FROM INTERVIEW
WHERE PERSON_ID=67318
```

```
Results

person_id transcript

1 67318

I was hired by a woman with a lot of money. I do...
```

--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.

Let us now investigate Jeremy's testimony: -

```
107 SELECT * FROM DRIVERS LICENSE

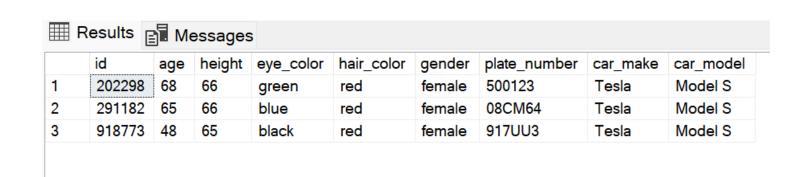
108 WHERE GENDER LIKE 'FEMALE'

109 AND HAIR COLOR LIKE 'RED'

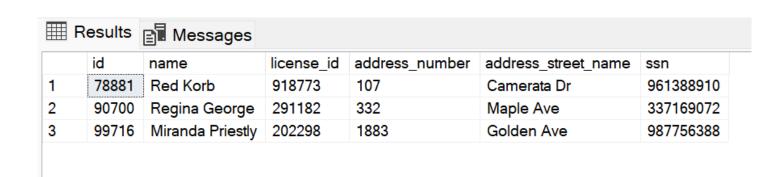
110 AND CAR MAKE LIKE 'TESLA'

111 AND CAR MODEL LIKE 'MODEL S'

112
```

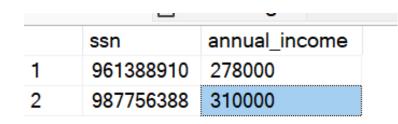


We have narrowed our search to three people. Let us investigate all of them now:



Jeremy claimed the woman was wealthy. Let us look into their incomes through their social security numbers now:

131	SELECT * FROM INCOME
132	WHERE SSN=961388910
133	OR SSN=337169072
134	OR SSN=987756388



According to our investigations, out of the two incomes that came back in our search result, Miranda Priestly's income is the highest at 310,000 per annum. The other result (Red Korb) also has significant wealth at 278,000 per annum.

Just to be on the safe side, we will pin point our suspect after investigating Jeremy's last claim:

```
SELECT * FROM facebook event checkin
WHERE EVENT NAME LIKE 'SQL SYMPHONY CONCERT'
AND DATE LIKE '201712%'
AND (PERSON ID = 78881 --redkorb

OR PERSON ID=99716) --miranda
```

person\_id event\_id event\_name	date			
1	99716	1143	SQL Symphony Concert	20171206
2	99716	1143	SQL Symphony Concert	20171212
3	99716	1143	SQL Symphony Concert	20171229

All the evidence points towards Miranda Priestly as our real mastermind!

It is interesting to note from our earlier investigation that both Jeremy and Miranda attended the SQL Symphony Concert on 6th December 2017. Perhaps this is where he was hired.

Let us confirm our evidence:

--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!

Our mastermind was Miranda Priestly! Turns out, the devil does wear Prada and enjoys SQL Symphony concerts!