SQL Murder Mystery

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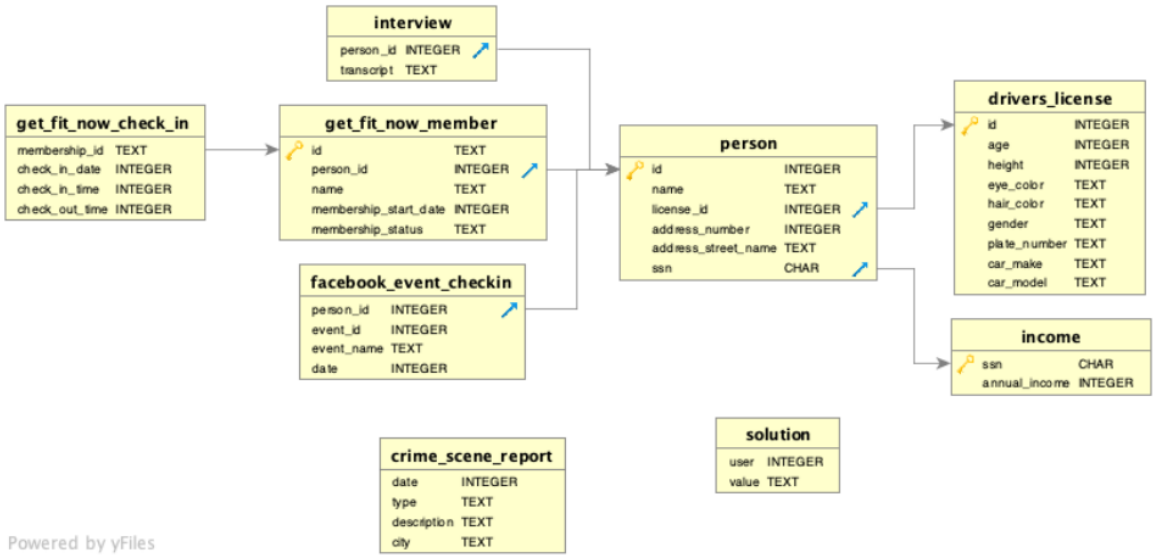
Data Given:

- the crime was a **murder**
- occurred sometime on **Jan.15, 2018**
- took place in **SQL City**

Solution:

First of all we will take a look at the schema diagram to see what we are dealing with



Crime_scene_report is the only table that makes sense to look at so we will run a query to look at the crime_scene_report table

```
select * from crime_scene_report where type = "murder" and city
```

```
select * from crime_scene_report where type = "murder" and city = "SQL City";
```

RUN ⇩ RESET

date	type	description	city
20180215	murder	REDACTED REDACTED REDACTED	SQL City
20180215	murder	Someone killed the guard! He took an arrow to the knee!	SQL City
20180115	murder	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".	SQL City

The last record has the same same date as the date given to us.

2 names are given to us in the that report so we will look up to that

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

we will check the person table for it

```
select * from person;
```

```
select * from person;
```

RUN ⇩ RESET

id	name	license_id	address_number	address_street_name	ssn
10000	Christoper Peteuil	993845	624	Bankhall Ave	747714076
10007	Kourtney Calderwood	861794	2791	Gustavus Blvd	477972044
10010	Muoi Cary	385336	741	Northwestern Dr	828638512
10016	Era Moselle	431897	1987	Wood Glade St	614621061
10025	Trena Hornby	550890	276	Daws Hill Way	223877684

1st Witness:

The first witness lives at the last house on "Northwestern Dr". so we look in to it

```
select * from person where address_street_name = "Northwestern D
order by address_number desc ;
```

```
select * from person where address_street_name = "Northwestern Dr" order by address_
```

RUN ⇩ RESET

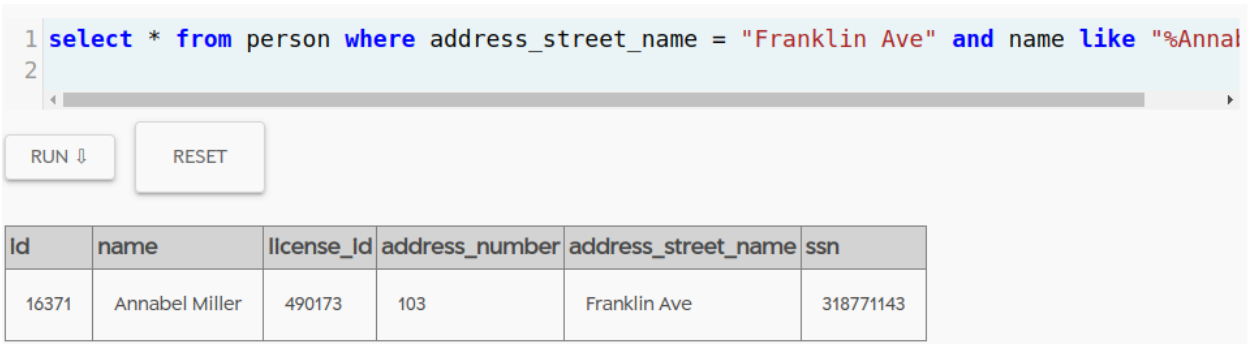
id	name	license_id	address_number	address_street_name	ssn
14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949

The first witness id **Morty Schapiro , id = 14887.**

2nd Witness

Now we look for the second witness

```
select * from person where address_street_name = "Franklin Ave"
and name like "%Annabel%";
```



id	name	license_id	address_number	address_street_name	ssn
16371	Annabel Miller	490173	103	Franklin Ave	318771143

The 2nd witness is **Annabel Miller, id = 16371**

Now we will explore the interview table to check what the witnesses have to say. We will use primary key ‘Id’ as foreign key ‘person_id’ in the interview table

```
select * from Interview where person_id in (14887,16371);
```

```
1 select * from Interview where person_id in (14887,16371);
```

RUN ⇩ RESET

person_id	transcript
14887	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".
16371	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 specific information is given to us

- 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".
- January the 9th.

We will explore the get_fit_now_member to find out

```
select * from get_fit_now_member where membership_status = 'gold
and id like '%48Z%';
```

```
select * from get_fit_now_member where membership_status = 'gold' and id like '%48Z%
```

RUN ⇩ RESET

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

We have two records so its difficult to tell who the murderer is so we will check on the other information given to us like Car plate number.

Suspect 1:

Joe Germuska , id = **28819**

Suspect 2:

Jeremy Bowers , id = **67318**

Now we have the person_id of both the suspects. We will use license_id as a foreign key in drivers_license to join the two tables and find out which suspect has a car number plate like "H42W".

```
select
p.name, p.id ,plate_number
from person p left
join drivers_license d on p.license_id = d.id
where p.id in(28819,67318) and d.plate_number like '%H42W%';
```

```sql
select
p.name, p.id ,plate_number
from person p left
join drivers_license d on p.license_id = d.id
where p.id in(28819,67318) and d.plate_number like '%H42W%';
```

RUN ⇩ RESET

name	Id	plate_number
Jeremy Bowers	67318	0H42W2

According to this query Jeremy Bowers might be our Culprit.

Lets check it

Check your solution

Did you find the killer?

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

        SELECT value FROM solution;
```

RUN ⇩ RESET

value
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. If you feel especially confident in your SQL skills, try to complete this final step with no more than 2 queries. Use this same INSERT statement with your new suspect to check your answer.

YES!!!!! We got it Jeremy Bowers is our Murderer.

Challenge

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. If you feel especially confident in your SQL skills, try to complete this final step with no more than 2 queries. Use this same INSERT statement with your new suspect to check your answer.

Now lets find the brains behind this

As we have the id of the murderer. we will interview him to know what he has to say.

```
select * from interview where person_id = 67318;
```

```
1 select * from interview where person_id = 67318;
```

RUN ⇩ RESET

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 Tesla Model S. I know that she attended the SQL Symphony Concert 3 times in December 2017.

jeremy Bowers has given us a lot of information about the brains lets see what we can 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.

Lets interview the murder so what he have to say

```
select * from interview where person_id = 67318;
```


```
1 select * from interview where person_id = 67318;
```

RUN ⇩ RESET

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 Tesla Model S. I know that she attended the SQL Symphony Concert 3 times in December 2017.

Murderer statement:

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.

we will use this information to reach the brains behind this murder

: we will use multiple join

```
select p.name , d.hair_color ,i.annual_income, d.gender ,f.event
d.car_make, d.height , d.car_model from person p
left join drivers_license d on p.license_id = d.id
left join facebook_event_checkin f on f.person_id = p.id
left join income i on i.ssn = p.ssn
where hair_color = "red" and gender = "female"
and car_make = "Tesla" and car_model = "Model S"
and d.height between 65 and 67 and f.event_name = "SQL Symphony
and f.date between '20171201' and '20171231';
```

```sql
select p.name , d.hair_color ,i.annual_income, d.gender ,f.event_name,f.date ,
d.car_make, d.height , d.car_model from person p
left join drivers_license d on p.license_id = d.id
left join facebook_event_checkin f on f.person_id = p.id
left join income i on i.ssn = p.ssn
where hair_color = "red" and gender = "female"
and car_make = "Tesla" and car_model = "Model S"
and d.height between 65 and 67 and f.event_name = "SQL Symphony Concert"
and f.date between '20171201' and '20171231';
```

RUN ⇩ RESET

name	hair_color	annual_income	gender	event_name	date	car_make	height	car_model
Miranda Priestly	red	310000	female	SQL Symphony Concert	20171206	Tesla	66	Model S
Miranda Priestly	red	310000	female	SQL Symphony Concert	20171212	Tesla	66	Model S
Miranda Priestly	red	310000	female	SQL Symphony Concert	20171229	Tesla	66	Model S

Due to this record Miranda Priestly is the brains behind this murder.

lets check

Did you find the killer?

```
1 INSERT INTO solution VALUES (1, 'Miranda Priestly');
2
3         SELECT value FROM solution;
```

RUN ⇩ RESET

value
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!

Looks like Miranda Priestly is going to stay behind Bars .