

```

1 select *
2 from crime_scene_report
3 where date = 20180115 and type = 'murder' and city = 'SQL City'
4
5
6
7
8
9
10

```

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date	type	description	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

```

1 --create a cte to hold the crime scene report info:
2
3 with csr as (
4   select *
5   from crime_scene_report
6   where date = 20180115 and type = 'murder' and city = 'SQL City'
7 )
8
9 select * from csr
10

```

```

43 --Find out more about witness #1: "lives at the last house on 'Northwestern Dr'"
44
45 select *
46 from person
47 where lower(address_street_name) = 'northwestern dr'
48 order by address_number desc

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id	name	license_id	address_number	address_street_name	ssn
14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949
17729	Lasonrya Wildey	439686	3824	Northwestern Dr	917817122

```

37 --Find out more about witness #2: "named Annabel, lives somewhere on 'Franklin Ave'".
38
39 select *
40 from person
41 where lower(name) like '%annabel%'
42 and lower(address_street_name) = 'franklin ave'

```

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

```

25 -- Add a CTE to hold the info for the two witnesses
26
27 with witnesses as (
28   select *
29   from person
30   where
31     lower(address_street_name) = 'northwestern dr'
32     or (lower(name) like '%annabel%'
33       and lower(address_street_name) = 'franklin ave'
34     )
35   )
36
37 select *
38 from witnesses
39
40 order by address_street_name,
41 address_number desc
42
43 limit 2;

```

id	name	license_id	address_number	address_street_name	ssn
16371	Annabel Miller	490173	103	Franklin Ave	318771143
14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949

```
-- Observed that the interview table has a person_id column  
-- that can be joined with the witness CTE using the IDs of the two witnesses:  
56  
57 select w.id,  
58 w.name,  
59 i.transcript  
60 from witnesses w  
61 left join interview i  
62 on i.person_id=w.id  
63 where w.id in ('16371',  
64 '14887')
```

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

```

76 -- Using the info from Morty's statement we get that:
77 -- GENDER: male
78 -- MEMBERSHIP STATUS: gold
79 -- MEMBERSHIP ID: 48Z.....
80 -- PLATE NUMBER: H42W
81
82 -- We can join the person table with drivers_license table on person_id
83 -- to get the suspect's plate number, gender and name;
84
85 -- Store the results of this in a CTE potential_suspects.
86
87 with potential_suspects as (
88   select p.id as person_id,
89   p.name,
90   d.age,
91   d.gender,
92   d.plate_number,
93   p.license_id,
94   p.address_number
95   from person p
96   left join drivers_license d
97   on p.license_id=d.id
98   where d.plate_number like '%H42W%'
99 )
100
101 select * from potential_suspects
102

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person_id	name	age	gender	plate_number	license_id	address_number
51739	Tushar Chandra	21	male	4H42WR	664760	312
67318	Jeremy Bowers	30	male	0H42W2	423327	530
78193	Maxine Whitely	21	female	H42W0X	183779	110

```

96 -- Left joined the get_fit_now_member table on person_id and
97 -- was able to exclude two of the suspects..
98
99 -- PS.. Membership _ID matches the one given by Morty
100 -- in his statement also Membership_Status.
101
102 --Good job in spilling the tea, Morty!
103 -- #scorpioVibes #theNancyDrewofSQL #mortyBringsTheReceipts
104
105 with potential_suspects as (
106   select p.id as person_id,
107   p.name,
108   d.age,
109   d.gender,
110   d.plate_number,
111   p.license_id,
112   p.address_number
113   from person p
114   left join drivers_license d
115   on p.license_id=d.id
116   where d.plate_number like '%H42W%'
117 )
118
119 select s.person_id,
120 s.name,
121 s.gender,
122 s.plate_number,
123 m.id as GFN_member_id,
124 m.membership_status
125 from potential_suspects s
126 left join get_fit_now_member m on s.person_id=m.person_id
127
128 order by m.id desc
129

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person_id	name	gender	plate_number	GFN_member_id	membership_status
67318	Jeremy Bowers	male	0H42W2	48Z55	gold
51739	Tushar Chandra	male	4H42WR	null	null
78193	Maxine Whitley	female	H42W0X	null	null

```

100 -- Left joined the get_fit_now_check_in table to validate Annabel's statement
101 -- and yes, it is a match!
102 -- At this moment, Jeremy Bowers is your primary suspect!
103
104 with potential_suspects as (
105   select p.id as person_id,
106   p.name,
107   d.age,
108   d.gender,
109   d.plate_number,
110   p.license_id,
111   p.address_number
112   from person p
113   left join drivers_license d
114   on p.license_id=d.id
115   where d.plate_number like '%H42W%'
116 )
117
118 select s.person_id,
119 s.name,
120 s.gender,
121 s.plate_number,
122 m.id as GFN_member_id,
123 m.membership_status,
124 c.check_in_date,
125 c.check_in_time,
126 c.check_out_time
127 from potential_suspects s
128 left join get_fit_now_member m on s.person_id=m.person_id
129 left join get_fit_now_check_in c on m.id=c.membership_id
130
131 order by m.id desc
132 |

```

person_id	name	gender	plate_number	GFN_member_id	membership_status	check_in_date	check_i
67318	Jeremy Bowers	male	0H42W2	48Z55	gold	20180109	1530

```

133 -- Primary suspect identified, we invited him to the police station for some questioning.
134 -- Below is his statement:
135
136 select p.id as person_id,
137 p.name,
138 d.plate_number,
139 m.id as GFN_member_id,
140 m.membership_status,
141 c.check_in_date,
142 --c.check_in_time,
143 --c.check_out_time
144 i.transcript
145 from person p
146 left join drivers_license d on p.id=d.id
147 left join get_fit_now_member m on p.id=m.person_id
148 left join get_fit_now_check_in c on m.id=c.membership_id
149 left join interview i on p.id=i.person_id
150 where p.id = 67318
151

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person_id	name	plate_number	GFN_member_id	membership_status	check_in_date	transcript
67318	Jeremy Bowers	null	48Z55	gold	20180109	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.

```

152 -- Using the info collected during the suspect's statement we were able to narrow down
153 -- the potential masterminds behind the heinous crime:
154
155 -- Spoiler Alert: it seems that we have two celebrities among them! Shook!
156
157 with potential_masterminds as (
158     select p.id as person_id,
159         p.name,
160         d.age,
161         d.gender,
162         d.height,
163         d.hair_color,
164         d.car_make,
165         d.car_model
166     from person p
167     left join drivers_license d on p.license_id=d.id
168     where d.gender = 'female'
169     and d.car_make = 'Tesla'
170     and d.car_model = 'Model S'
171     and d.hair_color = 'red'
172     and d.height between 65 and 67
173 )
174
175 select * from potential_masterminds
176

```

person_id	name	age	gender	height	hair_color	car_make	car_model
78881	Red Korb	48	female	65	red	Tesla	Model S
90700	Regina George	65	female	66	red	Tesla	Model S
99716	Miranda Priestly	68	female	66	red	Tesla	Model S

```

152 -- Upon joining the facebook_event_checkin table, we were able to verify one suspect did
153 -- three SQL Symphony Concerts in 2017, exactly how Jeremy Bowers stated in his statement:
154
155 with potential_masterminds as (
156     select p.id as person_id,
157     p.name,
158     p.age,
159     p.gender,
160     p.height,
161     p.hair_color,
162     p.car_make,
163     p.car_model,
164     f.event_name,
165     f.date
166     from person p
167     left join drivers_license d on p.license_id=d.id
168     left join facebook_event_checkin f on p.id=f.person_id
169     where d.gender = 'female'
170     and d.car_make = 'Tesla'
171     and d.car_model = 'Model S'
172     and d.hair_color = 'red'
173     and d.height between 65 and 67
174 )
175
176 select * from potential_masterminds
177
178 order by date desc
179

```

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person_id	name	age	gender	height	hair_color	car_make	car_model	event_name	date
99716	Miranda Priestly	68	female	66	red	Tesla	Model S	SQL Symphony Concert	20171229
99716	Miranda Priestly	68	female	66	red	Tesla	Model S	SQL Symphony Concert	20171212
99716	Miranda Priestly	68	female	66	red	Tesla	Model S	SQL Symphony Concert	20171206

```
--  
180 select p.id as person_id,  
181 p.name,  
182 i.transcript  
183 from person p  
184 left join interview i on p.id=i.person_id  
185 where p.id = 99716  
186
```

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person_id	name	transcript
99716	Miranda Priestly	null

Check your solution

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!

Short reflection on this exercise:

“As an avid Agatha Christie fan, I genuinely enjoyed this exercise.

The end was a bit too rushed, and I was expecting more suspects to be involved.

I will share this exercise with my teammates at work and challenge them to complete the exercise as well!”