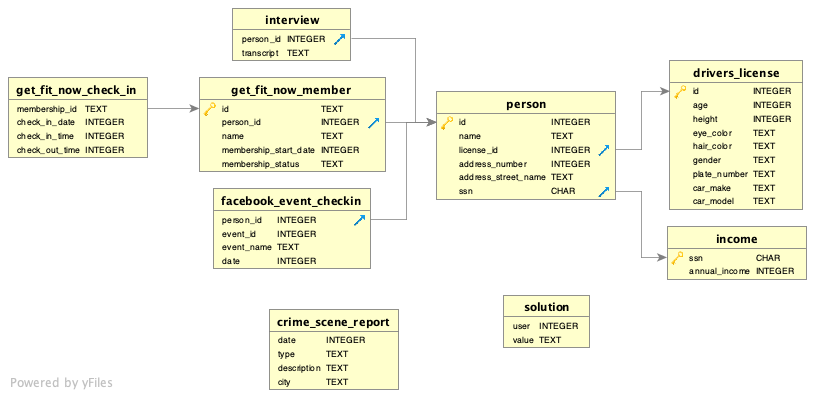
SQL MURDER MYSTERY SOLUTION

<https://mystery.knightlab.com/>

Context:  
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.

Step 1: Understanding the data structure:



Step 2: gathering information

SELECT description FROM crime\_scene\_report

WHERE date = '20180115' AND type = 'murder' AND city = 'SQL City'

Output:

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".

Step 3: Identifying the witnesses:

WITH witness1 AS (

SELECT id FROM person

WHERE address\_street\_name = 'Northwestern Dr'

ORDER BY address\_number DESC LIMIT 1

), witness2 AS (

SELECT id FROM person

WHERE INSTR(name, 'Annabel') > 0 AND address\_street\_name = 'Franklin Ave'

), witnesses AS (

SELECT \*, 1 AS witness FROM witness1

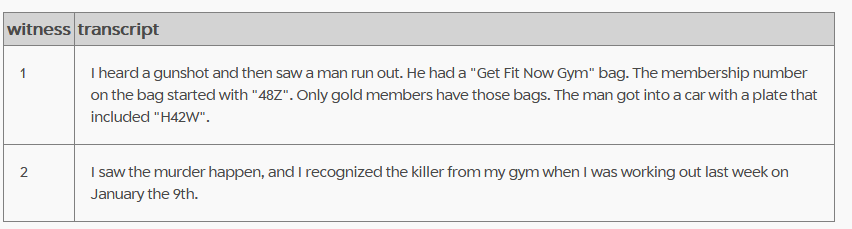
UNION

SELECT \*, 2 AS witness FROM witness2

)

SELECT witness, transcript FROM witnesses

LEFT JOIN interview ON witnesses.id = interview.person\_id



Step 3: Identifying the murderer:

WITH gym\_checkins AS (

SELECT person\_id, name

FROM get\_fit\_now\_member

LEFT JOIN get\_fit\_now\_check\_in ON get\_fit\_now\_member.id = get\_fit\_now\_check\_in.membership\_id

WHERE membership\_status = 'gold'

AND check\_in\_date = '20180109' -- Witness 2 recognized him on January the 9th

), suspects AS (

SELECT gym\_checkins.person\_id, gym\_checkins.name, plate\_number, gender

FROM gym\_checkins

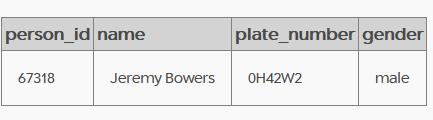
LEFT JOIN person ON gym\_checkins.person\_id = person.id

LEFT JOIN drivers\_license ON person.license\_id = drivers\_license.id

)

SELECT \* FROM suspects

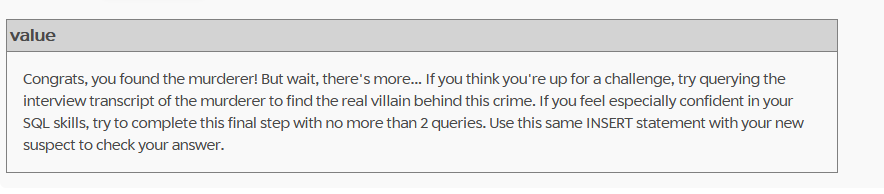
WHERE INSTR(plate\_number, 'H42W') > 0 AND gender = 'male'



Step 4: Entering the solution

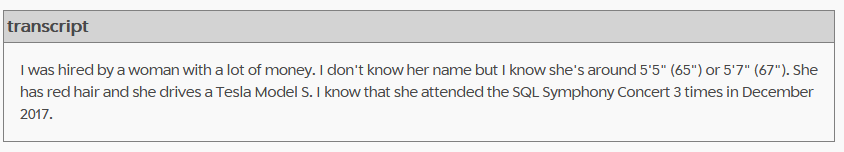
INSERT INTO solution VALUES (1, "Jeremy Bowers");

SELECT value FROM solution;



Step 5: Continuing the investigation

SELECT transcript FROM interview WHERE person\_id = 67318



Step 6: Finding the true murderer

WITH red\_haired\_tesla\_drivers AS (

SELECT id AS license\_id

FROM drivers\_license

WHERE gender = 'female' AND hair\_color = 'red'

AND car\_make = 'Tesla' AND car\_model = 'Model S'

AND height >= 64 AND height <= 68

), rich\_suspects AS (

SELECT person.id AS person\_id, name, annual\_income

FROM red\_haired\_tesla\_drivers AS rhtd

LEFT JOIN person ON rhtd.license\_id = person.license\_id

LEFT JOIN income ON person.ssn = income.ssn

), symphony\_attenders AS (

SELECT person\_id, COUNT(1) AS n\_checkins

FROM facebook\_event\_checkin

WHERE event\_name = 'SQL Symphony Concert'

GROUP BY person\_id

HAVING n\_checkins = 3

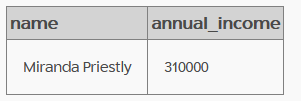
)

SELECT name, annual\_income

FROM rich\_suspects

INNER JOIN symphony\_attenders

ON rich\_suspects.person\_id = symphony\_attenders.person\_id



Step 7: Entering the solution

INSERT INTO solution VALUES (1, "Miranda Priestly");

SELECT value FROM solution;

