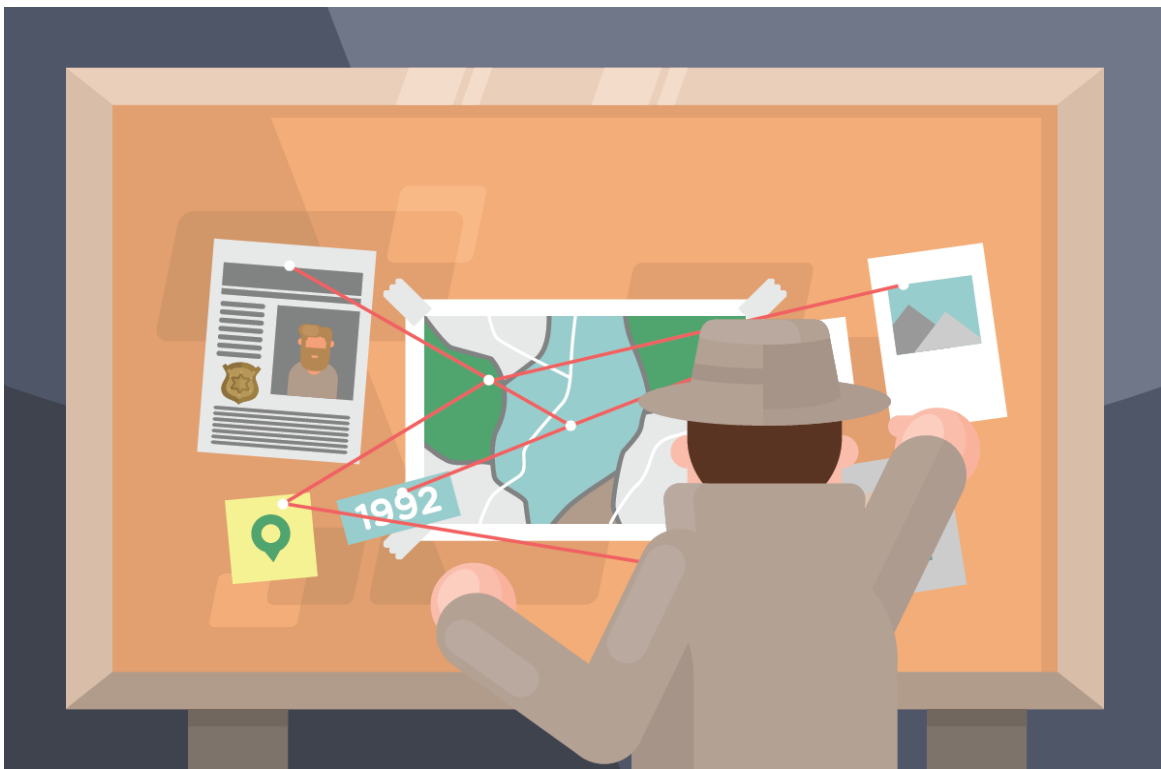


SQL Murder Mystery

Can you find out whodunnit?

About: This document contains SQL codes used to solve the murder mystery puzzle published on <https://mystery.knightlab.com/>. The SQL Murder Mystery was created by Joon Park and Cathy He, who designed it as a self-directed lesson to learn SQL concepts and commands. The assignment is done via a credited course in college under our professor Mr. Abdul Majed Raja.



Source: Knight lab

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Information provided: 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

SOLUTION PROCESS

1)Use case - Preliminary look at the data and understand what the crime report mentions about the murder.

Query -

```
select *  
from crime_scene_report  
where date = 20180115 AND type = "murder" 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 Dr". The second witness, named Annabel, lives somewhere on "Franklin Ave".	SQL City

2)Use case - To shortlist data based on the information given.

Query -

```
select *  
from person  
where address_street_name = "Northwestern Dr" or name = "Annabelle"
```

Result :

Id	name	license_id	address_number	address_street_name	ssn
10010	Muoi Cary	385336	741	Northwestern Dr	828638512
12711	Norman Apolito	667757	599	Northwestern Dr	778264744
14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949
15171	Weldon Penso	336999	311	Northwestern Dr	131379495
17729	Lasonya Wildey	439686	3824	Northwestern Dr	917817122
18376	Josh Shi	653712	1091	Northwestern Dr	193899001
19420	Cody Schiel	890431	3524	Northwestern Dr	947110049
22239	Dusty Sigafus	710517	1125	Northwestern Dr	724386723
23044	Val Portlock	924989	3143	Northwestern Dr	100593316
23960	Kristopher Lagerberg	658777	1392	Northwestern Dr	492912529

3)Use case - To check all the events happening on 15th january 2018.

Query -

select *

from facebook_event_checkin

where date = 20180115

Result:

person_id	event_id	event_name	date
56269	1753	"I just need enough to tide me over until I need more."	20180115
12272	2831	Kinkler's Second Law:	20180115
94218	1200	If a listener nods his head when you're explaining your program, wake	20180115
73091	104	"Diet."	20180115
20227	2513	It seems like the less a statesman amounts to, the more he loves the	20180115
29596	6072	-- Mark Twain	20180115
43451	5155	eat.	20180115
71108	1056	effort to teach them good manners.	20180115
39959	2513	Democracy is a form of government that substitutes election by the	20180115
38423	8548	pedestrians.	20180115

4)Use case - To understand if the murder was in the gym on the 15th of January 2018.

Query -

select *

from get_fit_now_check_in

where check_in_date = 20180115

Results -

membership_id	check_in_date	check_in_time	check_out_time
D2KY6	20180115	746	836
344VM	20180115	1087	1195
3BRSC	20180115	354	825
HM6U8	20180115	525	800

5)Use case - To join two tables via the license id to get a rough idea of all the people and the compatibility between the tables.

Query -

```

select *
from person P
Join drivers_license D
ON P.license_id = D.id

```

Results:

	name	license_id	address_number	address_street_name	ssn	id	age	height
30	Christoper Peteuil	993845	624	Bankhall Ave	747714076	993845	46	5'10"
37	Kourtney Calderwood	861794	2791	Gustavus Blvd	477972044	861794	54	5'6"
10	Muoi Cary	385336	741	Northwestern Dr	828638512	385336	24	5'8"
16	Era Moselle	431897	1987	Wood Glade St	614621061	431897	22	5'4"
25	Trena Hornby	550890	276	Daws Hill Way	223877684	550890	45	5'10"
27	Antione Godbolt	439509	2431	Zelham Dr	491650087	439509	56	5'10"
34	Kyra Buen	920494	1873	Sleigh Dr	332497972	920494	56	5'10"
39	Francesco Agundez	278151	736	Buswell Dr	861079251	278151	87	5'10"

6)Use case - To join two tables and get the name, address, and license id of individuals living in suspected areas through the license Id.

Query -

```

select name, address_street_name, license_id
from person P
Join drivers_license D
ON P.license_id = D.id
where address_street_name in("Northwestern Dr", "Franklin Ave")

```

Results:

name	address_street_name	license_id
Muoi Cary	Northwestern Dr	385336
Wilmer Wolever	Franklin Ave	509484
Norman Apolito	Northwestern Dr	667757
Morty Schapiro	Northwestern Dr	118009
Weldon Penso	Northwestern Dr	336999
Annabel Miller	Franklin Ave	490173
Johnnie Schee	Franklin Ave	968887
Lasonya Wildey	Northwestern Dr	439686
Carleen Etoll	Franklin Ave	356746
Codv Schiel	Northwestern Dr	890431

7)Use case - To find the id of Annabelle Miller

Query -

select *

from person

where name = "Annabel Miller"

Results:

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

8)Use case - Find the name of the event that Annabelle Miller went to.

Query-

select *

from facebook_event_checkin

where person_id = 16371

Result:

person_id	event_id	event_name	date
16371	4719	The Funky Grooves Tour	20180115

9)Use case - To find the id of the people who attended the given event on 15th Jan 2018

Query:

select *

from facebook_event_checkin

where event_id = 4719 AND date = 20180115

Result

person_id	event_id	event_name	date
14887	4719	The Funky Grooves Tour	20180115
16371	4719	The Funky Grooves Tour	20180115
67318	4719	The Funky Grooves Tour	20180115

10)Use case - To find the name of the people with the following Id who attended the event.

Query:

select *

from person

Where id in(14887,16371,67318)

Result:

id	name	license_id	address_number	address_street_name	ssn
14887	Morty Schapiro	118009	4919	Northwestern Dr	111564949
16371	Annabel Miller	490173	103	Franklin Ave	318771143
67318	Jeremy Bowers	423327	530	Washington Pl, Apt 3A	871539279

11) Use case - To find what statement did Jeremy bower give in his interview

Query:

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

Result:

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.

```
select *  
from facebook_event_checkin  
where date LIKE "201712%"
```

12) Use case- To identify individuals that match the description given by Jeremy in his statement.

Query:

```
select *  
from drivers_license  
where hair_color = "red" AND car_make = "Tesla"
```

id	age	height	eye_color	hair_color	gender	plate_number	car_make	car_model
202298	68	66	green	red	female	500123	Tesla	Model S
291182	65	66	blue	red	female	08CM64	Tesla	Model S
736081	79	69	brown	red	male	GCAQ6Y	Tesla	Model S
918773	48	65	black	red	female	917UU3	Tesla	Model S

13) Use case - Joining tables to extract the details of people with red hair and a Tesla.

Query:

```
select *  
from person P  
join drivers_license D  
ON P.license_id = D.id  
where hair_color = "red" AND car_make = "Tesla"
```

id	name	license_id	address_number	address_street_name	ssn	id	age	height
57410	Cletus Zoeller	736081	2987	Kingham Way	924648898	736081	79	69
78881	Red Korb	918773	107	Camerata Dr	961388910	918773	48	65
90700	Regina George	291182	332	Maple Ave	337169072	291182	65	66
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	202298	68	66

14) Use case - Identify individuals who visited the SQL Symphony concert in December 2017.

Query:

select *

from facebook_event_checkin

where date LIKE "201712%" AND event_name = "SQL Symphony Concert"

11173	1143	SQL Symphony Concert	20171223
79312	1143	SQL Symphony Concert	20171203
69325	1143	SQL Symphony Concert	20171206
24556	1143	SQL Symphony Concert	20171207
24556	1143	SQL Symphony Concert	20171221
24556	1143	SQL Symphony Concert	20171224
99716	1143	SQL Symphony Concert	20171206
99716	1143	SQL Symphony Concert	20171212
99716	1143	SQL Symphony Concert	20171229
67318	1143	SQL Symphony Concert	20171206

15) Use case - Joining tables and creating a new table called “redhair_tesla” to find the name of the person who matches the description given by Jeremy.

Query:

Create table redhair_tesla as
 select name, address_street_name, license_id
 from person P
 Join drivers_license D
 ON P.license_id = D.id
 where hair_color = "red" AND car_make = "Tesla"

name	address_street_name	license_id
Cletus Zoeller	Kingham Way	736081
Red Korb	Camerata Dr	918773
Regina George	Maple Ave	291182
Miranda Priestly	Golden Ave	202298

16) Use case- Create a new table called redhair_tesla2 by merging two more tables with more details and joining it with a new table.

Query:

select *
 from redhair_tesla2 R
 join facebook_event_checkin F
 ON R.id = F.person_id

57410	Cletus Zoeller	736081	2987	Kingham Way	924648898	Cletus Zoeller	Kingham
57410	Cletus Zoeller	736081	2987	Kingham Way	924648898	Cletus Zoeller	Kingham
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden Ave
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden Ave
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden Ave

17) Use case - To verify who attended the SQL Symphony concert thrice.

Query:

```

select *
from redhair_tesla2 R
join facebook_event_checkin F
ON R.id = F.person_id
where event_name = "SQL Symphony Concert"

```

id	name	license_id	address_number	address_street_name	ssn	name:1	address_
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden /
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden /
99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Miranda Priestly	Golden /

Hence, the murderer was Jeremy bowers, who was instructed to do so by Miranda Priestly.



CAUGHT YOU!