

SQL MURDER MYSTERY

WINTER INTERNSHIP
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MURDER IN THE CITY

There's been a Murder in SQL City! The SQL Murder Mystery is designed to be both a self-directed lesson to learn SQL concepts and commands and a fun game for experienced SQL users to solve an intriguing crime.



Where..?

RETRIEVING THE DATA



SQL CITY

MURDER OCCURED

MON	TUE	WED	THU	FRI	SAT	SUN
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

DATE

Murder occurred on
jan-15th-2018

LET'S FIND..!

SQL Query:

Select * from crime _ scene _ report where date = '20180115' and type = 'murder' and city = 'SQL City'

Result:

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

WITNESS 1

Security footage shows that there were 2 witnesses.

The first witness lives at the last house on “Northwestern Dr”

SQL Query:

```
SELECT *  
FROM person  
WHERE address_street_name = "Northwestern Dr"  
ORDER BY address_number DESC  
LIMIT 1;
```

Result:

	id	name	license_id	address_number	address_street_name	\
0	14887	Morty Schapiro	118009	4919	Northwestern Dr	
		ssn				
0	111564949					



WITNESS 2

Second witness named “Annabel” lives somewhere on “Franklin Ave”

SQL Query:

```
Query_2_2 = ""
```

```
SELECT *
```

```
FROM person
```

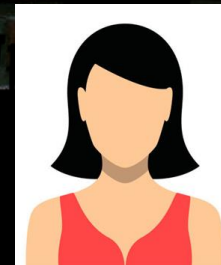
```
WHERE address_street_name = 'Franklin Ave'
```

```
AND name LIKE '%Annabel%';
```

```
""
```

```
pd.read_sql_query(Query_2_2,conn)
```

Result:



	id	name	license_id	address_number	address_street_name	ssn
0	16371	Annabel Miller	490173	103	Franklin Ave	318771143

INTERVIEWING WITNESS

```
SQL Query:  
Query_3 = ""  
SELECT *  
FROM interview  
WHERE person_id IN (14887,16371);  
""  
pd.read_sql_query(Query_3, conn)
```

RESULT:

	person_id	transcript
0	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".
1	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.

INVESTIGATING WITH CLUES

Clues:

1. Member of get fit now Gym
2. Membership status = "Gold"
3. Car plate includes "H42W"



CHECK GYM DATABASE

SQL Query:

```
Query_4_1 = ""  
SELECT *  
FROM get_fit_now_member  
WHERE id LIKE '48Z%' AND membership_status = 'gold';  
""  
pd.read_sql_query(Query_4_1,conn)
```

Result:

	id	person_id	name	membership_start_date	membership_status
0	48Z7A	28819	Joe Germuska	20160305	gold
1	48Z55	67318	Jeremy Bowers	20160101	gold

CHECK CAR DETAILS

SQL Query:

```
Query_5 = ""
```

```
SELECT *
```

```
FROM drivers_license
```

```
WHERE plate_number LIKE '%H42W%';
```

```
""
```

```
pd.read_sql_query(Query_5,conn)
```

Result:

	id	age	height	eye_color	hair_color	gender	plate_number	car_make	car_model
0	183779	21	65	blue	blonde	female	H42W0X	Toyota	Prius
1	423327	30	70	brown	brown	male	0H42W2	Chevrolet	Spark LS
2	664760	21	71	black	black	male	4H42WR	Nissan	Altima



CHECK FOR PERSONAL DETAILS

SQL Query:

```
Query_6 = '''
```

```
SELECT *
```

```
FROM person
```

```
WHERE license_id IN (183779, 423327, 664760);
```

```
'''
```

```
pd.read_sql_query(Query_6,conn)
```

Result:

	id	age	height	eye_color	hair_color	gender	plate_number	car_make	car_model
0	183779	21	65	blue	blonde	female	H42W0X	Toyota	Prius
1	423327	30	70	brown	brown	male	0H42W2	Chevrolet	Spark LS
2	664760	21	71	black	black	male	4H42WR	Nissan	Altima

MEMBERSHIP STATUS AT THE GYM

SQL Query:

```
Query_7 = ""
```

```
SELECT *
```

```
FROM get_fit_now_member
```

```
WHERE person_id IN (51739,67318,78193);
```

```
""
```

```
pd.read_sql_query(Query_7,conn)
```

Result:

	id	person_id	name	membership_start_date	membership_status
0	48Z55	67318	Jeremy Bowers	20160101	gold

INTERVIEWING JEREMY BOWERS:

SQL Query:

query_8 = ""

SELECT *

FROM interview

WHERE person_id = "67318";

""

murderer_transcript = pd.read_sql_query(query_8, conn)

print(murderer_transcript)

Result:

	person_id	transcript
0	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.\n

FINDING THE MASTERMIND

Interview Keynotes:

Gender: Female

Height: Between 65" and 67"

Hair: Red

Car: Tesla Model S

Concert – SQL Symphony Concert x3 in December



SOLVING LAST CLUE

- SQL Query:

Query_8_2 = ""

SELECT p.*, dl.car_make, dl.car_model, dl.hair_color, dl.height

FROM person as p

INNER JOIN drivers_license as dl on dl.id = p.license_id

INNER JOIN facebook_event_checkin as fb_event on p.id = fb_event.person_id

WHERE car_make = 'Tesla' AND car_model = 'Model S' AND hair_color = 'red' AND height
BETWEEN 65 AND 67;

""

pd.read_sql_query(Query_8_2, conn)

Result:

	id	name	license_id	address_number	address_street_name	ssn	car_make	car_model	hair_color	height
0	99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Tesla	Model S	red	66
1	99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Tesla	Model S	red	66
2	99716	Miranda Priestly	202298	1883	Golden Ave	987756388	Tesla	Model S	red	66





MASTERMIND OF TRUE CRIME

Miranda Priestly



THANK YOU