PrepInsta

SQL Murder Mystery

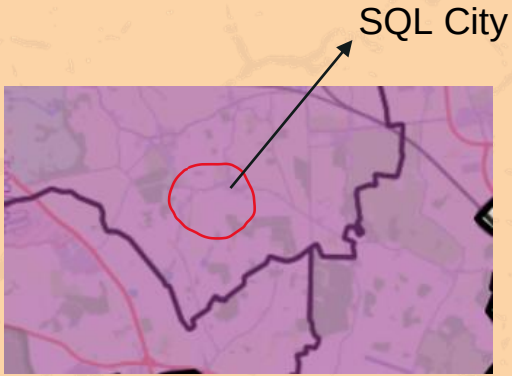
Winter Internship
Week-5 Task
-By Konga Srujana

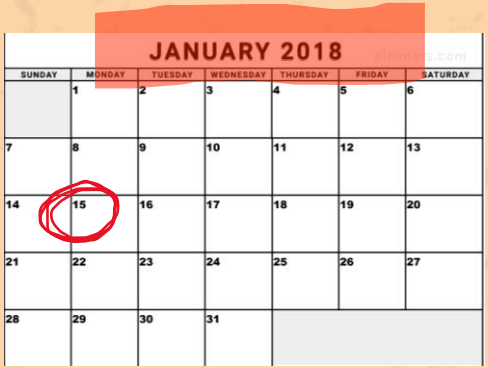
Murder in the city

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 DATA





01

Retrieve Crime scene report

Murder Occurred on jan 15 2018

02

Witness Personal details

Security footage shows that there are 2 witnesses

03

Interviewing Witness

We got some clues after interviewing the witnesses

04

Checking gym database

According to the clues the murderer is member of the gym

05

Investigating with clues

Got the details about murderer need to take an interview

06

Finding the masterminds

After the interview of murderer got to know that there is a true mastermind behind this crime.

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

```
Q2_1 = '''
SELECT *
FROM person
WHERE address_street_name = 'Northwestern Dr'
ORDER BY address_number DESC;
'''
pd.read_sql_query(Q2_1, conn)[:1]
Result:
```

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

Witness 2

```
Q2_2 = '''
SELECT *
FROM person
WHERE address_street_name =
'Franklin Ave'
AND name LIKE '%Annabel%';
'''
pd.read_sql_query(Q2_2,conn)
```

Result:

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

Interviewing witnesses

SQL Query:

```
Q3 = '''
SELECT *
FROM interview
WHERE person_id IN
   (14887,16371);
'''
pd.read_sql_query(Q3, conn)
```

	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 include 'H42W'

Check Gym Database

```
Q4_1 = '''
SELECT *
FROM  get_fit_now_member
WHERE id LIKE '48Z%' AND membership_status = 'gold';
'''
pd.read_sql_query(Q4_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

```
Q5 = '''
SELECT *
FROM drivers_license
WHERE plate_number  LIKE '%H42W%';
'''
pd.read_sql_query(Q5,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:
Q7 = '''
SELECT *
FROM get_fit_now_member
WHERE person_id IN (51739,67318,78193);
'''
pd.read_sql_query(Q7,conn)
```

Result:

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

Interviewing Jeremy Bowers

```
SQL Query:
Q8_1 = '''
SELECT *
FROM interview
WHERE person_id = 67318;
'''
pd.read_sql_query(Q8_1,conn)

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:
1.Gender: female
2.Hair_color: red
3.Height between 65 and 67
4.Car make: Tesla
5.Car_model: Model S
6.Attended facebook event 'Symphony Concert' 3 times in December 2017

Solving the last clue

```
Q8_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(Q8_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

Awesome Mystery

Thank You

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by
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