**Project : SQL**

**FINDING MURDER MYSTERY**

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.

Follow these steps to solve this challenge:

- Download the `sql-murder-mystery.db` file

- visit www.sqliteonline.com

- click on file, then open db and load in the database file you downloaded above

- write your SQL queries to see the different tables and the content

- use the schema diagram to navigate the different tables

- figure out who committed the crime with the details you remembered above

- create a word or txt document that contains your thought process, narrative and SQL codes written to arrive at the solution to the murder mystery

- submit a link to the word or txt document.

**Solution:**

**1.1** Based on the crime scene report, the documentation was on a **murder case** in **SQL city** on **Jan 15, 2018**, querying the crime scene report table, I discovered that the security footage shows that there were 2 witnesses.

***select date, description***

***from crime\_scene\_report***

***where date = "20180115"and city = "SQL City"and type = "murder";***

1. The first witness lives at the last house on "Northwestern Dr,".
2. The second witness, Annabel, lives on Franklin Ave".

**1.2** For more information on the two witnesses, I query the table called PERSON;

***select \****

***from person***

***where address\_street\_name = "Northwestern Dr"***

***order by address\_number DESC***

***limit 1;***

***select \****

***from person***

***where address\_street\_name = "Franklin Ave"and name LIke "Anna%";***

1. the first witness's name is Morty Schapiro with license\_id 118009 with id 14887. address 4979, ssn 111564949
2. second witness's name is Annabel Miller with license\_id 490173 with id 16371 address 103, ssn 318771143

**1.3** I went to the interview table to get information on their witness with id no;

***select \****

***from interview***

***where person\_id IN (14887,16371);***

The transcript from Morty (14887) is;

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".

The transcript from Annabel (16371) is;

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

**1.4** Further enquiry on the information gotten from Morty, I used the get\_fit\_now\_member table;

***select \****

***from get\_fit\_now\_member***

***where id like "48Z%" and membership\_status = "gold";***

There are two members with membership no starting with 48Z and they are gold member

Joe Germuska with person\_id **28819** mem start date 20160305 **id 48Z7A**

Jeremy Bowers with person\_id **67318** mem start date 20160101 **id 48Z55**

**1.5** Looking at the information Annabel gave, I joined two tables; get\_fit\_now\_check\_in and get\_fit\_now\_member. This also confirmed that they were both at the gym on the 9th Jan.

***select \****

***from get\_fit\_now\_check\_in***

***join get\_fit\_now\_member***

***on get\_fit\_now\_check\_in.membership\_id = get\_fit\_now\_member.id***

***where get\_fit\_now\_check\_in.membership\_id IN ("48Z7A", "48Z55");***

1.6 Running the plate number (drivers\_license table) with the personal information (Person table) for the part plate no given;

***select \****

***from person***

***full join drivers\_license***

***ON person.license\_id=drivers\_license.id***

***where drivers\_license.plate\_number LIKE "%H42W%";***

**This shows that Jeremy Bowers is the one with plate no 0H42W2. This investigation shows that Jeremy Bowers is the Murderer.**

1.7 On checking where Jeremy was on the 15th Jan 2018, the Facebook event shows that he was for the event called “The Funky Groove Tour”.

***select \****

***from facebook\_event\_checkin***

***where person\_id = 67318;***

1.8 I also check all the people in that event with a date too, I discovered that Morty Schapiro, Annabel Miller and Jeremy Bowers were at the event.

***select \****

***from facebook\_event\_checkin***

***where event\_name like "The Funky%" and date = 20180115;***

***Select facebook\_event\_checkin.person\_id, facebook\_event\_checkin.event\_name,facebook\_event\_checkin.date, person.id, person.name, person.license\_id***

***From facebook\_event\_checkin***

***Join person***

***On facebook\_event\_checkin.person\_id=person.id***

***Where person.id IN (14887, 16371, 67318);***

This shows that the three of them were at the event called “The Funky Groove Tour”

1.9 This led to more investigation and I had to check the interview table.

***select \****

***from interview***

***where person\_id = 67318;***

The transcript of the interview: 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.

2.0 I checked the information given by the driver\_license table for name(s);

***select \****

***from drivers\_license***

***where gender is "female"and hair\_color is "red" and car\_make is "Tesla" and car\_model is "Model S";***

I got three id: 202298, 291192, 918773

2.1 I ran the Id with personal information

***select \****

***from person***

***where license\_id IN (202298,291182,918773);***

Red Korb with id 78881 and license\_id 918773

Regina George with id 90700 and license\_id 291182

Miranda Priestly with id 99716 and license\_id 202298

2.2 I ran the event table with person table and I discovered the person that hired Jeremy Bowers

***select \****

***from facebook\_event\_checkin***

***full join person***

***on facebook\_event\_checkin.person\_id=person.id***

***where person.id IN (78881,90700,99716);***

***Based on the reporting table, Miranda Priestly hired Jeremy Bowers***