

Business Analytics

Assignment 1

SQL Queries

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Date of Submission
29/03/2023

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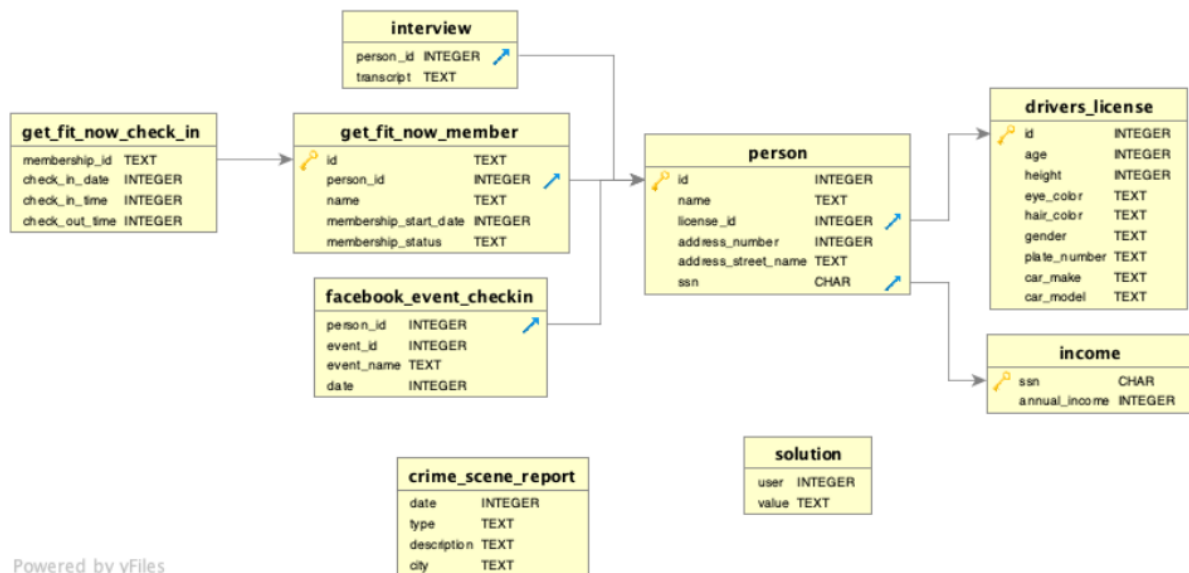
MA APPLIED ECONOMICS

DEPARTMENT OF ECONOMICS
CHRIST (DEEMED TO BE UNIVERSITY)
March 2023

SQL Murder Mystery by Northwestern University Knight Lab

Information we have been given:

- 1. A murder has been committed.**
- 2. The murder took place on 15th of January, 2018.**
- 3. The murder happened in SQL City.**
- 4. ERD**



SOLUTION

Step 1: From the table 'crime scene report' find the details about

(i) A murder

(ii) Which took place in SQL City

(iii) On 15th January 2018

```
SELECT * FROM crime_scene_report
```

```
WHERE date = '20180115'
```

```
AND city = 'SQL City'
```

```
AND type = 'murder';
```

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

Step 2: Find details from the table 'person' about

(i) Witness

a) Called Annabel

b) Living on Franklin Avenue

SELECT * FROM person

WHERE name **LIKE** 'Annabel%'

AND address_street_name = 'Franklin Ave';

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

(ii) Witness living in

a) Last house

b) On Northwestern Avenue

SELECT * FROM person

WHERE address_street_name = 'Northwestern Dr'

ORDER BY address number **DESC LIMIT 1**;

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

Step 3:

(i) Join the tables 'person' and interview and

(ii) Find interview transcripts of Annabel Miller and Morty Schapiro, with id 16371 and 14887 respectively

SELECT person.name, interview. Transcript

FROM person

JOIN interview **ON** person.id = interview.person_id

WHERE person.id = 16371 **OR** person.id = 14887;

name	transcript
Morty Schapiro	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".
Annabel Miller	I saw the murder happen, and I recognized the killer from my gym when I was working out last week on January the 9th.

Step 4:

(i) Join the tables

- a) **get_fit_now_check_in**
- b) **get_fit_now_member**
- c) **person**
- d) **drivers license**

(ii) Find the person who

- a) **Had Get Fit Now Gym membership**
- b) **Membership ID starting with 48Z**
- c) **Membership status gold**
- d) **Car with license number resembling H42W**
- e) **Attended Gym on 9th January 2018**

SELECT person.name

FROM get_fit_now_check_in

JOIN get_fit_now_member **ON** get_fit_now_check_in.membership_id =
get_fit_now_member.id

JOIN person **ON** get_fit_now_member.person_id = person.id

JOIN drivers license **ON** person.license_id = drivers_license.id

WHERE get_fit_now_member.id LIKE '48Z%'

AND get_fit_now_member.membership_status = 'gold'

AND get_fit_now_check_in.check_in_date = '20180109'

AND drivers_license.plate_number LIKE '%H42W%';

name
Jeremy Bowers

PERSON WHO CARRIED OUT THE MURDER: JEREMY BOWERS

Step 5:

(i) Join tables 'person' and 'interview' and

(ii) Find interview transcript of Jeremy Bowers

SELECT name, transcript **FROM** interview

JOIN person **ON** person.id = interview.person_id

WHERE name = 'Jeremy Bowers'

name	transcript
Jeremy Bowers	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.

Step 6:

(i) Join tables

- a) person
- b) facebook_event_checkin
- c) drivers_license

(ii) Find person who

- a) Is female
- b) Has height around 65" to 67"
- c) Has red hair
- d) Drives a car with car make: Tesla
- e) Drives a car with care model: Model S
- f) Attended SQL Symphony Concert
- g) Attended SQL Symphony Concert in December 2017
- h) Attended SQL Symphony Concert 3 times

SELECT name **FROM** person

JOIN facebook_event_checkin

ON person.id=facebook_event_checkin.person_id
JOIN drivers_license ON person.license_id = drivers_license.id
WHERE Height BETWEEN 65 AND 67
AND facebook_event_checkin.event_name LIKE '%SQL Symphony Concert%'
AND Date LIKE '201712%'
AND car_make = 'Tesla'
AND car_model = 'Model S'
AND Hair_color='red'
AND gender= 'female'
GROUP BY person.id;

name
Miranda Priestly

**PERSON WHO ORDERED THE MURDER: MIRANDA
PRIESTLY**