Fifty Ville   .SCHEMA

crime_scene_reports

id	INTEGER
year	INTEGER
month	INTEGER
day	INTEGER
street	TEXT
description	TEXT
PRIMARY KEY (id)	

bank_accounts

account_number	INTEGER
person_id	INTEGER
creation_year	INTEGER
FOREIGN KEY (person_id) REFERENCES people(id)	

passengers

flight_id	INTEGER
passport_number	INTEGER
seat	TEXT
FOREIGN KEY (flight_id) REFERENCES flights(id)	

interviews

id	INTEGER
name	TEXT
year	INTEGER
month	INTEGER
day	INTEGER
transcript	TEXT
PRIMARY KEY (id)	

airports

id	INTEGER
abbreviation	TEXT
full_name	TEXT
city	TEXT
PRIMARY KEY (id)	

people

id	INTEGER
name	TEXT
phone_number	TEXT
passport_number	INTEGER
license_plate	TEXT
PRIMARY KEY (id)	

phone_calls

id	INTEGER
caller	TEXT
receiver	TEXT
year	INTEGER
month	INTEGER
day	INTEGER
duration	INTEGER
PRIMARY KEY (id)	

atm_transactions

id	INTEGER
account_number	INTEGER
year	INTEGER
month	INTEGER
day	INTEGER
atm_location	TEXT
transaction_type	TEXT
amount	INTEGER
PRIMARY KEY (id)	

flights

id	INTEGER
origin_airport_id	INTEGER
destination_airport_id	INTEGER
year	INTEGER
month	INTEGER
day	INTEGER
hour	INTEGER
minute	INTEGER
PRIMARY KEY (id)	
FOREIGN KEY (origin_airport_id) REFERENCES airports(id)	
FOREIGN KEY (destination_airport_id) REFERENCES airports(id)	

bakery_security_logs

id	INTEGER
year	INTEGER
month	INTEGER
day	INTEGER
hour	INTEGER
minute	INTEGER
activity	TEXT
license_plate	TEXT
PRIMARY KEY (id)	

Fifty Ville

Belief: Thief stole the duck and shortly afterwards took a flight out of town with help of an accomplice

- *Who the thief is,*
- *What city the thief escaped to, and*
- *Who the thief's accomplice is who helped them escape*

*All we know is that the theft took place on **July 28, 2021** and that it took place on **Humphrey Street.***

QUERY 1

-- Looking for what report say about case and using filters about place and date

```
SELECT * FROM crime_scene_reports WHERE
      street = 'Humphrey Street' AND year=2021 AND month=7 AND day = 28;
```

295|2021|7|28|Humphrey Street | Theft of the CS50 duck took place at 10:15am at the Humphrey Street bakery. Interviews were conducted today with three witnesses who were present at the time - each of their interview transcripts mentions the bakery.

297|2021|7|28|Humphrey Street | Littering took place at 16:36. No known witnesses.

Case id: 295
Time: 10.15 am
Location: Humphrey Street
Witnesses: 3 of them mentions the bakery in transcripts

QUERY 2

-- Looking for witnesses' statements

```
SELECT * FROM interviews WHERE
     year = 2021 AND month = 7 AND day = 28 AND transcript LIKE '%bakery%';
```

161|Ruth|2021|7|28|Sometime within ten minutes of the theft, I saw the thief get into a car in the bakery parking lot and drive away. If you have security footage from the bakery parking lot, you might want to look for cars that left the parking lot in that time frame.

162|Eugene|2021|7|28|I don't know the thief's name, but it was someone I recognized. Earlier this morning, before I arrived at Emma's bakery, I was walking by the ATM on Leggett Street and saw the thief there withdrawing some money.

163|Raymond|2021|7|28|As the thief was leaving the bakery, they called someone who talked to them for less than a minute. In the call, I heard the thief say that they were planning to take the earliest flight out of Fifty Ville tomorrow. The thief then asked the person on the other end of the phone to purchase the flight ticket.

161: After 10 minutes of the theft, they escape with car from bakery parking lot
162: Thief was withdrawing money from ATM on Leggett Street in earlier this morning
163: Thief called someone before he escapes and ask for buying plane ticket for tomorrow morning

QUERY 3

-- Look at security logs specially 10 minutes after incident thief(s)'s escape

```sql
SELECT * FROM bakery_security_logs WHERE
    year = 2021 AND month = 7 AND day = 28 AND hour = 10 AND minute > 15 AND
minute < 25;
```

260|2021|7|28|10|16|exit|5P2BI95
261|2021|7|28|10|18|exit|94KL13X
262|2021|7|28|10|18|exit|6P58WS2
263|2021|7|28|10|19|exit|4328GD8
264|2021|7|28|10|20|exit|G412CB7
265|2021|7|28|10|21|exit|L93JTIZ
266|2021|7|28|10|23|exit|322W7JE   * most close to definition
267|2021|7|28|10|23|exit|0NTHK55   * most close to definition

QUERY 3.1

-- Find the license plate owners

```sql
SELECT id, name FROM people WHERE license_plate IN
    (SELECT license_plate FROM bakery_security_logs WHERE
        year = 2021 AND month = 7 AND day = 28 AND hour = 10 AND minute > 15
AND minute < 25);
```

221103|Vanessa
243696|Barry
396669|Iman
398010|Sofia
467400|Luca
514354|Diana
560886|Kelsey   * most close to definition
686048|Bruce   * most close to definition

QUERY 4

-- Check the phone records and look for caller

```sql
SELECT id, name FROM people WHERE phone_number IN
    (SELECT caller FROM phone_calls WHERE
        year = 2021 AND month = 7 AND day = 28 AND duration < 60);
```

395717|Kenny
398010|Sofia
438727|Benista
449774|Taylor
514354|Diana
560886|Kelsey
686048|Bruce
907148|Carina

QUERY 5

-- List of people from ATM records

```sql
SELECT id, name FROM people WHERE id IN
    (SELECT person_id FROM bank_accounts WHERE account_number IN
        (SELECT account_number FROM atm_transactions WHERE
            year = 2021 AND month = 7 AND day = 28 AND atm_location = 'Leggett
Street')
    );
```

```
395717|Kenny
396669|Iman
438727|Benista
449774|Taylor
458378|Brooke
467400|Luca
514354|Diana
686048|Bruce
948985|Kaelyn
```

QUERY 6

-- Passengers who flight the next day with earliest plane

```sql
SELECT id, name FROM people WHERE passport_number IN
    (SELECT passport_number FROM passengers WHERE flight_id IN
        (SELECT id FROM flights WHERE
            year = 2021 AND month = 7 AND day = 29
            AND origin_airport_id = (SELECT id FROM airports WHERE city =
'Fiftyville')
            ORDER BY hour LIMIT 1
        )
    );
```

```
395717|Kenny
398010|Sofia
449774|Taylor
467400|Luca
560886|Kelsey
651714|Edward
686048|Bruce
953679|Doris
```

-- Combine all data till now and see who are exist in all queries

```sql
SELECT id, name FROM people WHERE license_plate IN
    (SELECT license_plate FROM bakery_security_logs WHERE
        year = 2021 AND month = 7 AND day = 28 AND hour = 10 AND minute > 15
AND minute < 25)
INTERSECT
SELECT id, name FROM people WHERE phone_number IN
    (SELECT caller FROM phone_calls WHERE
        year = 2021 AND month = 7 AND day = 28 AND duration < 60)
INTERSECT
SELECT id, name FROM people WHERE id IN
    (SELECT person_id FROM bank_accounts WHERE account_number IN
        (SELECT account_number FROM atm_transactions WHERE
            year = 2021 AND month = 7 AND day = 28 AND atm_location = 'Leggett
Street' AND transaction_type = 'withdraw')
    )
INTERSECT
SELECT id, name FROM people WHERE passport_number IN
    (SELECT passport_number FROM passengers WHERE flight_id IN
        (SELECT id FROM flights WHERE
            year = 2021 AND month = 7 AND day = 29
            AND origin_airport_id = (SELECT id FROM airports WHERE city =
'Fiftyville')
            ORDER BY hour, minute LIMIT 1
        )
    );
```

686048|Bruce   *-- Thief*

```sql
SELECT * FROM people WHERE id = 686048;
```

686048 | Bruce | (367) 555-5533 | 5773159633 | 94KL13X

-- Which city was the plane going

```sql
SELECT city FROM airports WHERE id =
    (SELECT destination_airport_id FROM flights WHERE
        year = 2021 AND month = 7 AND day = 29 AND origin_airport_id =
        (SELECT id FROM airports WHERE city = 'Fiftyville')
    ORDER BY hour, minute LIMIT 1
    );
```

New York City *-- City*

-- Who help him

```sql
SELECT id, name FROM people WHERE phone_number =
    (SELECT receiver FROM phone_calls WHERE
        year = 2021 AND month = 7 AND day = 28 AND duration < 60 AND caller =
            (SELECT phone_number FROM people WHERE id = 686048)
    );
```

864400|Robin *-- Accomplice*

ANSWERS

The THIEF is: **BRUCE**
The city the thief ESCAPED TO: **NEW YORK CITY**
The ACCOMPLICE is: **ROBIN**