A DATA-DRIVEN INVESTIGATION USING SQL

SQL MURDER MYSTERY

EVERYONE'S A SUSPECT

CAN YOU FIGURE OUT WHO DID WHAT?

October 15, 2025
9 PM onwards
TechNova Inc.

INVESTIGATED BY: DIVYANSHI DOSER

INTRODUCTION

THIS PROJECT FOCUSES ON SOLVING A FICTIONAL MURDER CASE USING SQL. BY ANALYZING KEYCARD LOGS, PHONE CALL RECORDS, EMPLOYEE ALIBIS, AND PHYSICAL EVIDENCE, THE GOAL IS TO IDENTIFY THE KILLER USING PURE SQL-BASED INVESTIGATION

THIS PROJECT ENHANCES:

- SQL LOGIC
- QUERY BUILDING
- CRITICAL THINKING
- REAL-WORLD DATA ANALYSIS SKILLS

PROJECT OBJECTIVE

AS A LEAD DATA ANALYST:

- ✓ **DETERMINE WHO COMMITTED THE CRIME**
- ✓ **IDENTIFY WHERE AND WHEN IT HAPPENED**
- ✓ **PROVE HOW THE EVIDENCE MATCHES THE SUSPECT**
- ✓ **USE ONLY SQL QUERIES FOR THE INVESTIGATION**

CASE BACKGROUND

- ✓ COMPANY: TECHNOVA INC.
- ✓ INCIDENT LOCATION: CEO OFFICE
- ✓ DATE & TIME: 15 OCTOBER 2025, 9 PM
- ✓ CEO FOUND DEAD AT HIS DESK

DATASET OVERVIEW

TABLES USED:

- ✓ **EMPLOYEES – BASIC EMPLOYEE DETAILS**
- ✓ **KEYCARD_LOGS – ROOM ENTRY/EXIT TIMESTAMPS**
- ✓ **CALLS – MOBILE CALL RECORDS**
- ✓ **ALIBIS – CLAIMED WHEREABOUTS**
- ✓ **EVIDENCE – PHYSICAL FINDINGS FROM ROOMS**

EACH DATASET CONTAINS HIDDEN CLUES THAT MUST BE CONNECTED LOGICALLY.

INVESTIGATION APPROACH STEP 1

CRIME SCENE ANALYSIS

```
SELECT * FROM evidence
WHERE room LIKE "CEO Office“
ORDER BY found_time;
```

RESULT

- ✓ **EVIDENCE FOUND BETWEEN 21:05 - 21:10**
- ✓ **CRIME ESTIMATED AT AROUND 9 PM**
- ✓ **MULTIPLE CLUES CONFIRM CEO OFFICE AS THE CRIME SCENE:**
  - **FINGERPRINT ON DESK**
  - **KEYCARD SWIPE LOGS MISMATCH**

INVESTIGATION APPROACH STEP 2

KEYCARD LOG VERIFICATION

```
SELECT k.log_id, k.employee_id, e.name, k.room, k.entry_time,
k.exit_time
FROM keycard_logs AS k
JOIN employees AS e
ON k.employee_id = e.employee_id
WHERE k.room LIKE "CEO Office"
AND
k.entry_time BETWEEN '2025-10-15 20:30' AND '2025-10-15 21:10' ;
```

RESULT

- ✓ **ONLY ONE PERSON ACCESSED THE CEO OFFICE BETWEEN 20:50-21:00**
- ✓ **EMPLOYEE NAME: DAVID KUMAR**

INVESTIGATION APPROACH STEP 3

ALIBI CROSS CHECK

```
SELECT a.*, k.room AS actual_location, k.entry_time, k.exit_time
FROM alibis AS a
JOIN keycard_logs AS k
ON a.employee_id = k.employee_id
WHERE a.claimed_location != k.room;
```

RESULT

- ✓ **DAVID KUMAR CLAIMED THAT HE WAS IN THE SERVER ROOM AT 20:50 BUT SQL KEYCARD LOGS SHOWS THAT HE WAS INSIDE THE CEO OFFICE AT THE SAME TIME.**
- ✓ **THIS PROVIDES: FALSE ALIBI**

INVESTIGATION APPROACH STEP 4

SUSPICIOUS CALL ACTIVITY

```
SELECT c.*, e.name
FROM calls AS c
JOIN employees AS e
ON c.caller_id = e.employee_id
WHERE c.call_time BETWEEN '2025-10-15 20:50' AND '2025-10-15 21:10'
ORDER BY c.call_time ASC;
```

RESULT

CALL RECORDS REVEAL:

- ✓ **AT 20:55, DAVID MADE A CALL**
- ✓ **DURATION: 45 SECONDS**
- ✓ **THIS CALL HAPPENED MINUTES BEFORE THE MURDER**

INVESTIGATION APPROACH STEP 5

COMBINED FINDINGS

MOVEMENT + ALIBI + CALLS

```
WITH office_visitors AS (
    SELECT k.employee_id, k.entry_time, k.exit_time  FROM keycard_logs k
    WHERE k.room = 'CEO Office' AND k.entry_time BETWEEN '2025-10-15 20:30' AND '2025-10-15 21:10' ),
alibi_claims AS (
    SELECT a.employee_id, a.claimed_location, a.claim_time  FROM alibis a
    WHERE a.claim_time BETWEEN '2025-10-15 20:30' AND '2025-10-15 21:10' ),
suspicious_calls AS (
    SELECT DISTINCT c.caller_id AS employee_id  FROM calls c
    WHERE c.call_time BETWEEN '2025-10-15 20:50' AND '2025-10-15 21:10'
    UNION
    SELECT DISTINCT c.receiver_id AS employee_id  FROM calls c
    WHERE c.call_time BETWEEN '2025-10-15 20:50' AND '2025-10-15 21:10')
SELECT o.employee_id, e.name, o.entry_time, o.exit_time,  ac.claimed_location, ac.claim_time,
CASE
WHEN sc.employee_id IS NOT NULL THEN 'Yes' ELSE 'No' END AS suspecious_call
FROM office_visitors AS o JOIN employees AS e ON o.employee_id = e.employee_id
JOIN alibi_claims AS ac ON o.employee_id = ac.employee_id
JOIN suspicious_calls AS sc ON o.employee_id = sc.employee_id
ORDER BY o.entry_time;
```

INVESTIGATION APPROACH STEP 5

COMBINED FINDINGS

MOVEMENT + ALIBI + CALLS

RESULT

- ✓ ALL SQL FINDINGS POINT TOWARD THE SAME PERSON: " DAVID KUMAR "
- ✓ ACCESS LOGS: PRESENT AT THE CRIME SCENE
- ✓ ALIBI: LIED ABOUT BEING ELSEWHERE
- ✓ CALLS: MADE A CALL MOMENTS BEFORE
- ✓ DEATH EVIDENCE: MATCHES TIMELINE AND MOVEMENT
- ✓ THUS, ALL CLUES CONVERGE ON ONE INDIVIDUAL

INVESTIGATION APPROACH STEP 6

IDENTIFYING THE KILLER

KILLER NAME REVEAL

```
SELECT e.name AS killer FROM employees AS e
WHERE e.employee_id = (
    SELECT k.employee_id FROM keycard_logs AS k
    WHERE k.room LIKE "CEO Office"
    AND k.entry_time BETWEEN '2025-10-15 20:30' AND '2025-10-15 21:10' )
AND
e.employee_id IN (
    SELECT a.employee_id  FROM alibis AS a
    WHERE a.claimed_location != "CEO Office"
   AND a.claim_time BETWEEN '2025-10-15 20:30' AND '2025-10-15 21:10')
AND e.employee_id IN (
    SELECT c.caller_id FROM calls AS c
    WHERE c.call_time BETWEEN '2025-10-15 20:50' AND '2025-10-15 21:10');
```

INVESTIGATION COMPLETED

FINAL CONCLUSION

❑ **KILLER IDENTIFIED: DAVID KUMAR (EMPLOYEE ID 4)**

REASON

- ✓ ENTERED CEO OFFICE RIGHT DURING THE MURDER WINDOW
- ✓ PROVIDED A FALSE ALIBI
- ✓ MADE SUSPICIOUS CALLS AT THE EXACT TIME
- ✓ EVIDENCE FOUND IN THE OFFICE ALIGNS WITH HIS PRESENCE
- ✓ HE IS THE ONLY PERSON MATCHING ALL CLUES

SQL MURDER MYSTERY

THANK YOU

THANK YOU FOR REVIEWING THIS PROJECT. HAPPY TO CONNECT AND DISCUSS MORE ANALYTICS PROJECTS

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