📄 SQL Analytics Bootcamp

The SQL Analyst's First Day

9:47 AM - First Day at AusRetail

📧 Email from Regional Manager

⏰ 4 urgent questions

🕐 Deadline: 11:00 AM (73 minutes)

Excel method: 2+ hours ❌

SQL method: 10 minutes ✅

The Challenge

AusRetail: Australian Retail Chain

- 50 stores (NSW, VIC, QLD)
- 5,000 products
- 100,000 transactions/quarter

4 Urgent Questions:

1. 1️⃣ Which stores in Victoria?
2. 2️⃣ Premium products over $500?
3. 3️⃣ Transaction volume Dec 3?
4. 4️⃣ Top-selling products this week?

Question 1 - Victoria Stores

REQUEST "List all Victorian stores for planning meeting"

SQL SOLUTION

```
SELECT store_name, suburb, manager_name
FROM stores
WHERE state = 'VIC';
```

18

Victorian stores identified

10s

Time taken

📊 Planning team has list instantly

Question 2 - Premium Products

REQUEST "Insurance audit needs products over $500 + profit margins"

SQL SOLUTION

```
SELECT product_name, unit_price,
       (unit_price - unit_cost) AS profit
FROM products
WHERE unit_price > 500;
```

INSIGHT Samsung TV: $899 price $449 profit (50% margin!)

💡 Premium electronics = massive margins

Question 3 - Transaction Volume

REQUEST "How many transactions Dec 3? Revenue? Avg basket?"

SQL SOLUTION

```
SELECT COUNT(*), SUM(amount), AVG(amount)
FROM transactions
WHERE transaction_date = '2024-12-03';
```

RESULT

- 2 transactions (avg day = 150)
- $709 revenue (avg day = $15K)

DECISION Reduce Thursday staff 30% 💰 Save $1,800 in wages

Question 4 - Top Sellers (JOIN!)

REQUEST "Top-selling products this week for restock prioritization"

THE CHALLENGE

- Transactions table: product_id (numbers)
- Products table: product_name (text)
- Need to CONNECT them

SQL SOLUTION

```
SELECT p.product_name, SUM(t.amount) AS revenue
FROM transactions t
INNER JOIN products p ON t.product_id = p.product_id
WHERE t.transaction_date >= '2024-12-01'
GROUP BY p.product_name
ORDER BY revenue DESC;
```

TOP SELLER Samsung TV: $2,697 revenue

⚠️ Stock-out = losing $400/day

📞 Urgent supplier restock

Business Impact - First Day Success

TIME BREAKDOWN

Started: 9:47 AM

Finished: 10:02 AM

Total: 15 minutes

Deadline: 11:00 AM (58 min early!)

BUSINESS VALUE

✓ Manager saved 2+ hours

✓ $400/day revenue identified (Samsung stock-out)

✓ $1,800 wages saved (staffing optimization)

✓ 3 problem stores flagged (potential $200K decision)

$50K+

operational improvements

From 4 SQL queries on Day 1

> **MANAGER'S THOUGHT** "This analyst just became my secret weapon"

What You Learned

7 SQL FUNDAMENTALS

01

SELECT

Choose columns

02

WHERE

Filter data

- Text: WHERE state = 'VIC'
- Numbers: WHERE price > 500
- Dates: WHERE date = '2024-12-03'

03

ORDER BY

Sort results

04

COUNT, SUM, AVG

Calculate metrics

05

INNER JOIN

Connect matching records

06

LEFT JOIN

Include non-matches (reveals problems!)

07

GROUP BY

Summarize by category

These 7 concepts = 80% of business analytics

Next Video Preview

VIDEO 2: Joining Data Like a Pro

Business Case: Telstra Churn Analysis

The Challenge: Find customers at risk of cancellation

The Stakes: $500K monthly revenue at risk

What You'll Learn:

- LEFT JOIN mastery
- Finding "missing" data
- Business impact of NULL values

Preview Question: "How do you find customers who PAY monthly but DON'T USE the network?"

See you there!