README: Transaction Monitoring SQL Pack

📌 Project Name:  
Internal Audit — Transaction Monitoring Pack

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🎯 Objective:  
This project contains practical SQL scripts to detect anomalies and red flags in transactions — exactly how an auditor or compliance analyst would monitor risks in real operations.

# 1️⃣ Duplicate Payments Check

Flags duplicate invoices by matching vendor ID, invoice number, and amount.  
Audit Purpose: Helps detect duplicate or erroneous payments.

Key SQL:

SELECT vendor\_id, amount, invoice\_number,  
 COUNT(\*) AS occurrence\_count  
FROM transactions  
GROUP BY vendor\_id, amount, invoice\_number  
HAVING COUNT(\*) > 1;

# 2️⃣ High-Value Payments

Lists transactions over a threshold amount.  
Audit Purpose: Identify high-value payments that may require extra approval or scrutiny.

Key SQL:

SELECT transaction\_id, invoice\_number, amount, status  
FROM transactions  
WHERE amount > 50000.0  
ORDER BY amount DESC;

# 3️⃣ Weekend Transactions

Finds transactions done on weekends (Saturday & Sunday).  
Audit Purpose: Detect unusual payments outside normal business days.

Key SQL:

SELECT transaction\_id, transaction\_date  
FROM transactions  
WHERE strftime('%w', transaction\_date) IN ('0', '6');

# 4️⃣ Wrong Approver Department

Flags transactions approved by employees outside the Finance department.  
Audit Purpose: Segregation of duties control — only Finance should approve payments.

Key SQL:

SELECT transactions.transaction\_id, transactions.amount,  
 transactions.approved\_by, employees.department  
FROM transactions  
INNER JOIN employees  
 ON transactions.approved\_by = employees.employee\_id  
WHERE employees.department <> 'Finance';

# 5️⃣ High-Risk Vendors

Lists payments made to vendors marked as High Risk.  
Audit Purpose: Highlights payments requiring due diligence or extra checks.

Key SQL:

SELECT transactions.invoice\_number, transactions.vendor\_id,  
 transactions.transaction\_date, vendors.risk\_rating  
FROM transactions  
INNER JOIN vendors  
 ON transactions.vendor\_id = vendors.vendor\_id  
WHERE vendors.risk\_rating = 'High';

# 📌 How to Use

• Open your SQLite DB.  
• Load the transactions, employees, and vendors tables.  
• Copy-paste each SQL block or run the full `.sql` script.  
• Review results → Investigate exceptions → Flag to management.

# 🏆 Skills Used

• Joins (INNER JOIN)  
• Grouping (GROUP BY, HAVING)  
• Date functions (strftime)  
• Sorting & filtering  
• Real-world audit scenarios

# ⚡ Next Steps

• Convert these SQL insights into Power BI dashboards.  
• Automate monitoring using scheduled queries.  
• Publish scripts on GitHub for portfolio showcase.

# ✔️ Contact

Built by Roozan Aggarwal  
Domain: Internal Audit → Data Analytics pivot 🚀