Queries for Scenario

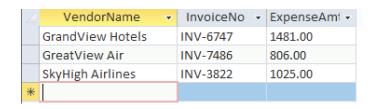
Scenario 1: a) Identify vendors who have been paid and have valid receipt records to ensure accurate financial tracking and policy compliance.

SELECT VendorName, VendorCategory, InvoiceNo, Amount AS PaidAmount, TotalAmt As ReceiptTotal FROM Travel_Vendor v, Expense_Record er, Payment_Record pr, Receipts r
WHERE v.VendorID = er.VendorID AND er.ExpenseID = pr.ExpenseID AND er.ExpenseID = r.ExpenseID

4	VendorName -	VendorCate -	InvoiceNo -	PaidAmount -	ReceiptTota -
	SkyHigh Airlines	Airline	INV-3822	\$525.00	\$525.00
	World Car Service	Taxi	INV-5167	\$430.00	\$430.00
	JetLink Airlines	Airline	INV-9003	\$881.00	\$881.00
	GoCar Rentals	Car	INV-3886	\$1,351.00	\$1,351.00
	TravelSecure	Other	INV-8505	\$745.00	\$745.00

b) Identify vendors with recorded expenses that have not yet been paid, to track pending payments and manage outstanding liabilities.

SELECT VendorName, InvoiceNo, er.ExpenseAmt
FROM (Travel_Vendor v INNER JOIN Expense_Record er ON v.VendorID = er.VendorID)
LEFT OUTER JOIN Payment_Record pr ON er.ExpenseID = pr.ExpenseID
WHERE pr.PaymentNo IS NULL



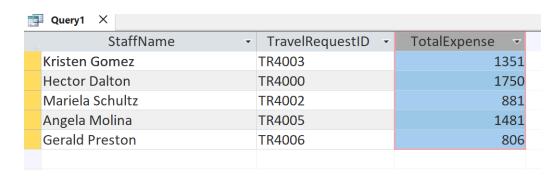
Scenario 2: Identify expenses that exceed their category's maximum allowed amount to detect policy violations and prevent overspending.

SELECT e.ExpenseID, e.ExpenseAmt, c.CategoryMaxLimit
FROM Expense_Record e
INNER JOIN ExpenseCategory c ON e.ExpenseCategory = c.ExpenseCategory

```
WHERE e.ExpenseAmt > (
       SELECT CategoryMaxLimit
       FROM ExpenseCategory
       WHERE ExpenseCategory = e.ExpenseCategory
);
    ExpenseID - ExpenseAmi -
                                CategoryMa: -
   X3000
                  1750.00
                                     $1,500.00
   X3001
                  330.00
                                      $300.00
   X3002
                  881.00
                                     $1,500.00
   X3004
                  745.00
                                      $600.00
                                     $1,500.00
   X3006
                  806.00
```

Scenario 3: List the names of employees, the travel request ID, and total expense amount only for those travel requests whose total expenses exceed \$800.

SELECT e.StaffName, tr.TravelRequestID, (SELECT SUM(er.ExpenseAmt)
FROM Expense_Record AS er
WHERE er.TravelRequestID = tr.TravelRequestID) AS TotalExpense
FROM Employee AS e
INNER JOIN Travel_Request AS tr ON e.StaffID = tr.StaffID
WHERE (SELECT SUM(er.ExpenseAmt)
FROM Expense_Record AS er
WHERE er.TravelRequestID = tr.TravelRequestID) > 800



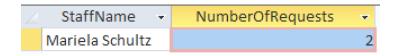
Scenario 4: Identify all departments located in cities that start with "S."

SELECT *
FROM department
WHERE location LIKE 'S*'

	Departmentl -	DeptName	*	Location -
	1003	Sales		San Francisco
	1005	HR		Seattle
-				

Scenario 5: List employees who have submitted more than one travel request to monitor frequent travel and optimize resource allocation.

SELECT StaffName, COUNT(TravelRequestId) AS NumberOfRequests
FROM Staff s INNER JOIN Travel_Request tr
ON s.StaffID = tr.StaffID
GROUP BY StaffName
HAVING COUNT(TravelRequestId) > 1;



Scenario 6: Show the number of days it took to upload digital copies of receipts in the system.

SELECT e.ExpenseID, e.ExpenseDate, r.UploadDate, DateDiff("d", e.ExpenseDate, r.UploadDate) AS DaysToUpload
FROM Expense_Record AS e
INNER JOIN Receipts AS r ON e.ExpenseID = r.ExpenseID
ORDER BY DateDiff("d", e.ExpenseDate, r.UploadDate) DESC;

4	ExpenseID -	ExpenseDati -	UploadDate -	DaysToUplo: 🕶
	X3004	3/9/2025	3/10/2025	1
	X3003	3/8/2025	3/9/2025	1
	X3002	3/29/2025	3/30/2025	1
	X3001	4/8/2025	4/9/2025	1
	X3000	3/19/2025	3/20/2025	1
*				

Scenario 7: Find all payments made by a credit card; this can help auditors find out how many times the employees use their company card.

SELECT * FROM Payment_Record WHERE PaymentType = "Credit Card";

	PaymentNo - Amount		PaymentRec +	PaymentTyp -	ExpenseID	Ŧ
	P6001	\$430.00	4/10/2025	Credit Card	X3001	
	P6003	\$1,351.00	3/10/2025	Credit Card	X3003	
*						

Scenario 8: Identify the highest receipt amount to flag for audit review, ensuring spending stays within policy limits.

SELECT TOP 1

FORMAT(TotalAmt, '\$#,##0.00') AS MaxReceiptAmount, ReceiptNo, ExpenseID

FROM Receipts

ORDER BY TotalAmt DESC;



Scenario 9: Identify the highest receipt amount to flag for audit review, ensuring spending stays within policy limits.

SELECT e.StaffName, 'No Expenses' AS ExpenseStatus

FROM Employee e

WHERE e.StaffID NOT IN (SELECT tr.StaffID FROM Travel_request tr INNER JOIN Expense_Record er ON tr.TravelRequestId = er.TravelRequestID)

UNION

SELECT e.StaffName, 'Has Expenses' AS ExpenseStatus

FROM Employee e

WHERE e.StaffID IN (SELECT tr.StaffID FROM Travel_request tr INNER JOIN Expense_Record er ON tr.TravelRequestId = er.TravelRequestID)

4	StaffName 🔻	ExpenseStatus 🔻		
	Angela Molina	Has Expenses		
	Carlee Yu	No Expenses		
	Gerald Preston	Has Expenses		
	Hector Dalton	Has Expenses		
	Kristen Gomez	Has Expenses		
	Mariela Schultz	Has Expenses		
	Reid Stein	Has Expenses		

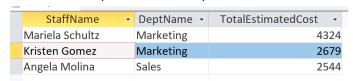
Scenario 10: List all vendors in the Flight, Hotel, or Transportation categories along with their contact emails for communication and record-keeping.

SELECT VendorName, VendorCategory, VendorEmail FROM Travel_Vendor
WHERE VendorCategory
IN ('Flight', 'Hotel', 'Transportation')



Scenario 11: List the top 3 employees who submitted travel requests with the highest total estimated costs. Include the employee's name, department, and their total estimated travel costs.

SELECT TOP 3 s.StaffName, d.DeptName, SUM(tr.EstimatedCost) AS TotalEstimatedCost FROM (Travel_Request AS tr INNER JOIN Staff AS s ON tr.StaffID = s.StaffID) INNER JOIN Department AS d ON s.DepartmentID = d.DepartmentID GROUP BY s.StaffName, d.DeptName ORDER BY SUM(tr.EstimatedCost) DESC



Scenario 12: Retrieve all approval requests submitted after April 21, 2025, ordered by the approval date.

SELECT *
FROM approval_track
WHERE ApprovalDate > #04/21/2025#

ORDER BY ApprovalDate;

4	ApprovalID -	ApprovalSta 🕶	ApprovalDat -	ApprovalComments	Ŧ	StaffID	*
	A8000	Approved	4/26/2025	Let finance know if plans change.		E3442	
	A8005	Approved	4/28/2025	Safe travels and please follow policy.		E3445	
	A8007	Pending	4/29/2025	Staying within budget is a concern.		E3451	
	A8003	Rejected	5/2/2025	Please submit receipts.		E3450	
	A8001	Pending	5/3/2025	Identify key meeting dates.		E3450	
*							

Scenario 13: Find the earliest and latest payment dates recorded in the system to analyze the payment timeline.

SELECT MIN(PaymentRecordDate) AS FirstPayment, MAX(PaymentRecordDate) AS LastPayment FROM Payment_Record;

