

Lab 8 Database Security pt2

The screenshot displays the SQL Server Enterprise Manager interface within an Oracle VirtualBox window. The left pane shows the Object Explorer with the 'Northwind' database selected. The central pane shows a SQL query being executed. The query is as follows:

```
1 use Northwind;
2 go
3 select Customerid, Employeeid, Orderdate
4 from orders
5 where customerid = 'ALFKI' and EmployeeID = '7'
6
7 Select * from orders where orderID = 10248
8
9
10 Update orders
11 set orderdate = '12-Apr-2025', Freight = '3.99'
12 Where Orderid = 10248;
13
14 Select * from orders where OrderID = 10248
15
16 Select @@identity as CurrUser;
```

The bottom pane shows the results of the query execution. The 'Results' tab displays the following data:

Customerid	Employeeid	Orderdate	
1	ALFKI	7	2025-04-28 00:00:00.000

OrderID	CustomerID	EmployeeID	OrderDate	RequiredDate	ShippedDate	ShipVia	Freight	ShipMethod	
1	10248	VINET	5	2025-04-12 00:00:00.000	1996-08-01 00:00:00.000	1996-07-16 00:00:00.000	3	3.99	Vins

Alert_Message	
1	A row was just modified in the Orders table

CurrUser	
1	11078

The status bar at the bottom indicates 'Query executed successfully.' and '1 rows'.

Above is screenshot of the alert and the data table being created. The order date should be 4/12/2025 and the freight number should be 3.99. After updating there should be an alert displayed saying there was a modification in the orders table. Afterwards the values of the orderdate should remain the same as not much change was made for it. The user Id should be 11078.

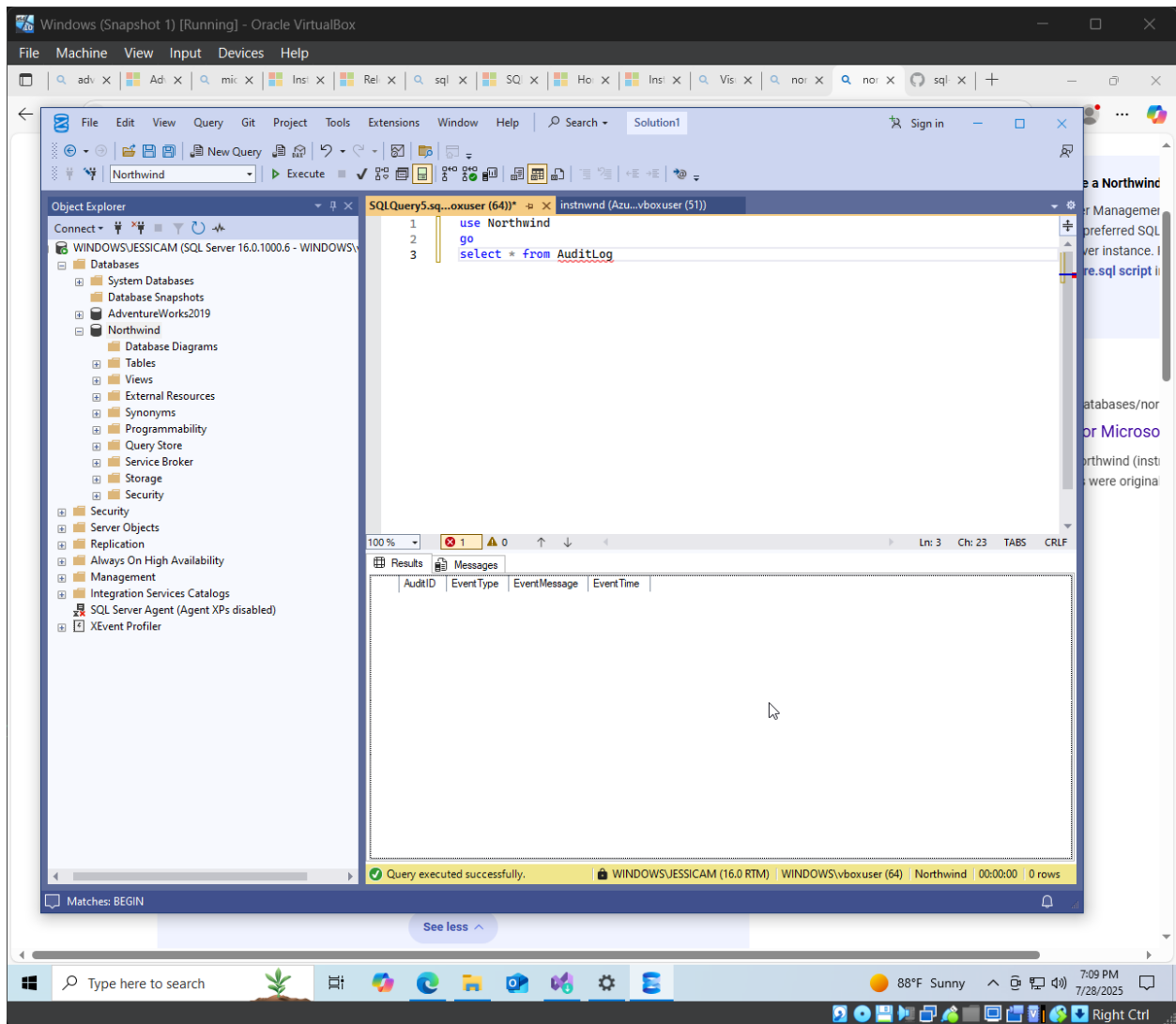
The screenshot displays the SQL Server Enterprise Manager interface within an Oracle VirtualBox window. The 'Object Explorer' on the left shows the 'Northwind' database selected. The central pane shows a SQL query script with the following code:

```
1 use Northwind;
2 go
3 select Customerid, Employeeid, Orderdate
4 from orders
5 where customerid = 'ALFKI' and EmployeeID = '7'
6
7 Select * from orders where orderID = 10248
8
9
10 Update orders
11 set orderdate = '12-Apr-2025', Freight = '3.99'
12 where Orderid = 10248;
13
14 Select * from orders where OrderID = 10248
15
16 Select @@identity as CurrUser;
17
18 Exec sp_helptext trgReminder
```

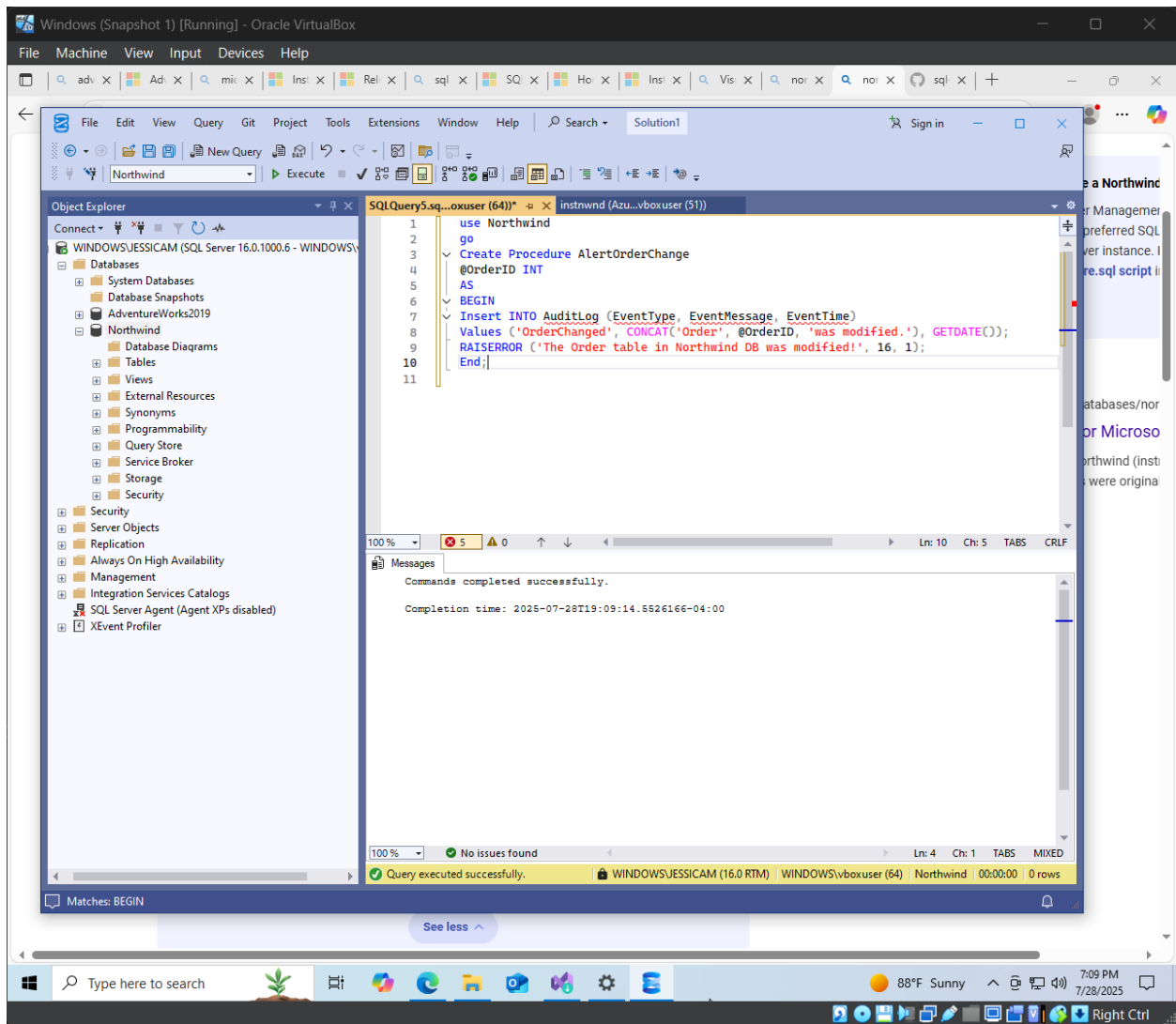
The 'Results' pane at the bottom shows the output of the query execution. It includes a table with columns: OrderID, CustomerID, EmployeeID, OrderDate, RequiredDate, ShippedDate, ShipVia, Freight, and ShipDate. The data row shows: 10248, VINET, 5, 2025-04-12 00:00:00.000, 1996-08-01 00:00:00.000, 1996-07-16 00:00:00.000, 3, 3.99, and V. Below this, the 'Alert_Message' pane shows the text: 'A row was just modifies in the Orders table'. The 'Text' pane shows the trigger definition for 'trgReminder'.

The status bar at the bottom indicates: 'Query executed successfully. WINDOWSJESSICAM (16.0 RTM) WINDOWS\vbouser (56) Northwind 00:00:00 10 rows'.

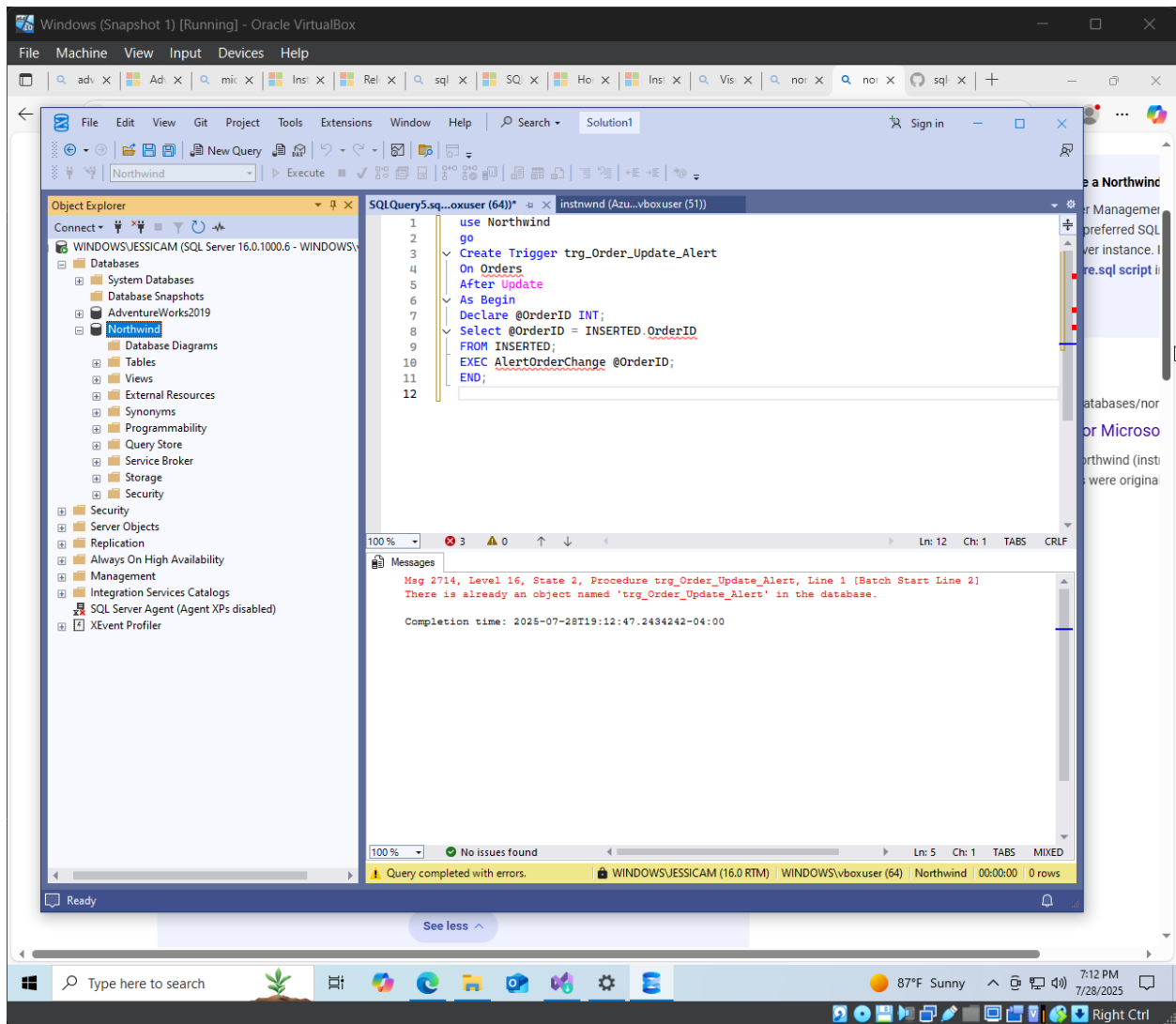
Next see the code that triggered the sproc. This is important for catching and acting on any problems. Can be good for automation and to reduce downtime.



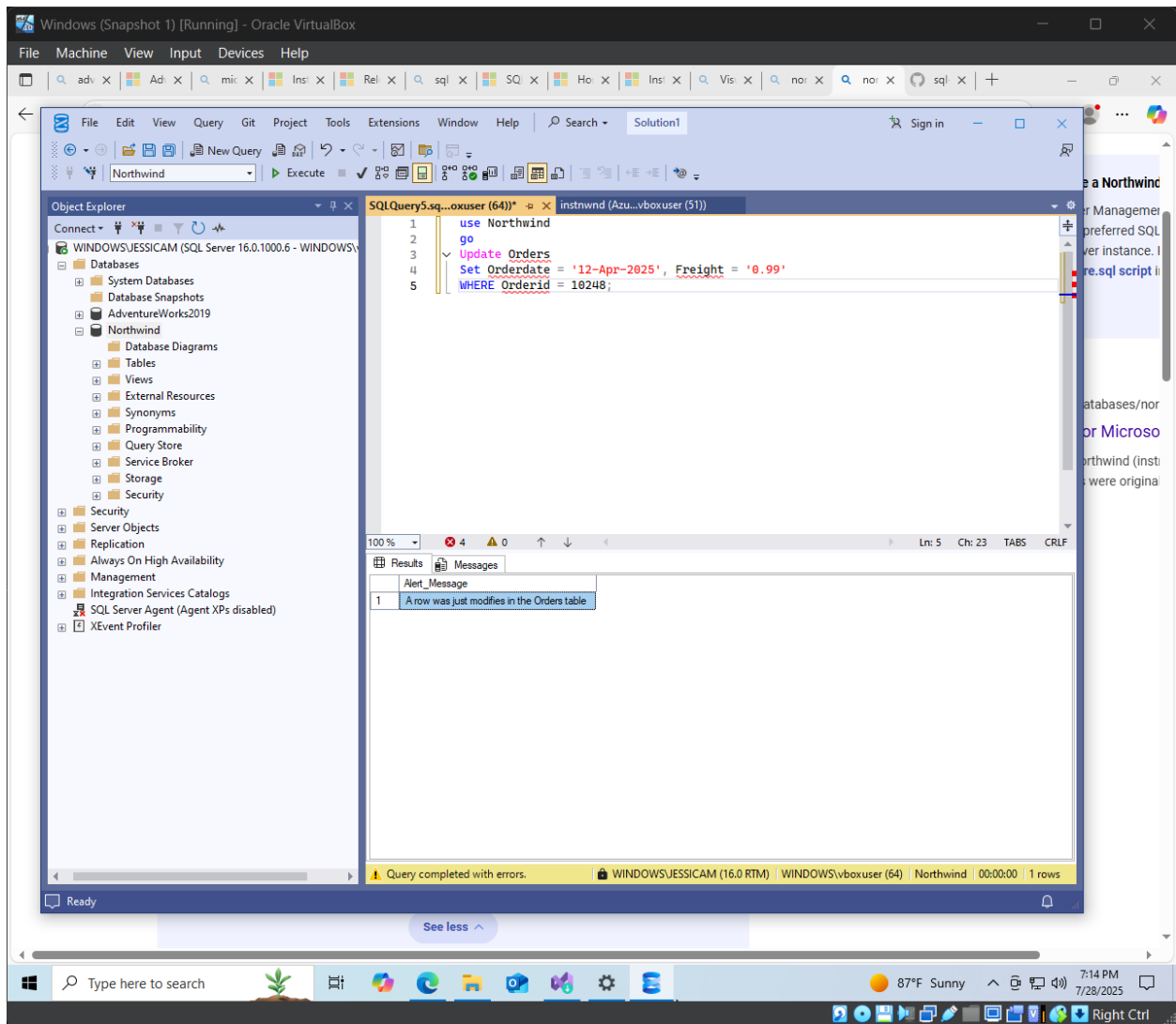
Create the Audit log which shouldn't contain anything.



Create a place where the alerts can be logged.



Next create a trigger that raises an alert.



Test the trigger to make sure it works. If anything was changed in the order table it will be alerted and logged.

Windows (Snapshot 1) [Running] - Oracle VirtualBox

File Machine View Input Devices Help

SQL Server Enterprise Edition (64-bit) - Northwind

```
1 use Northwind
2 go
3 select * from AuditLog
```

Object Explorer

- Connect
- Databases
 - System Databases
 - Database Snapshots
 - AdventureWorks2019
 - Northwind
 - Database Diagrams
 - Tables
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Query Store
 - Service Broker
 - Storage
 - Security
 - Security
 - Server Objects
 - Replication
 - Always On High Availability
 - Management
 - Integration Services Catalogs
 - SQL Server Agent (Agent XPs disabled)
 - XEvent Profiler

Results

AuditID	Event Type	EventMessage	Event Time
1	OrderChanged	Order10248was modified.	2025-07-28 19:14:18.337

Query executed successfully. WINDOWS\JESSICAM (16.0 RTM) WINDOWS\vbouser (64) Northwind 00:00:00 1 rows

See less

Outlook

Type here to search

87°F Sunny 7:16 PM 7/28/2025

Right Ctrl

Go into the Audit log where information on what has changed can be seen.