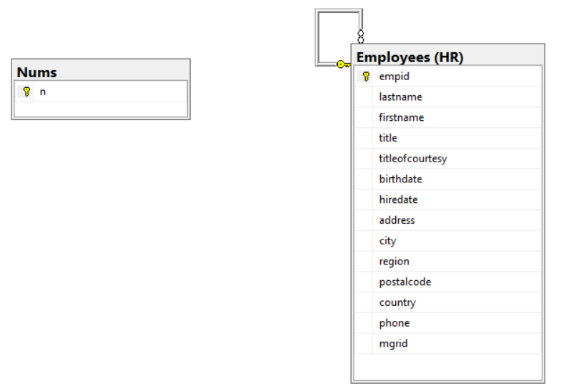
1) Write a query that generates 5 copies out of each employee row

|  |  |
| --- | --- |
| Table Name | Column Name |
| HR.Employees | Empid  Firstname  Lastname |
| Dbo.Nums | n |

SELECT

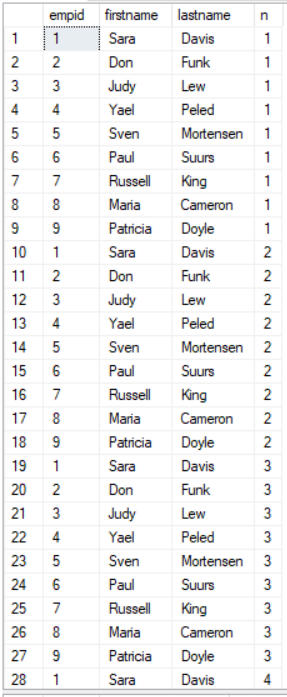
E.empid, E.firstname, E.lastname, N.n

FROM HR.Employees AS E

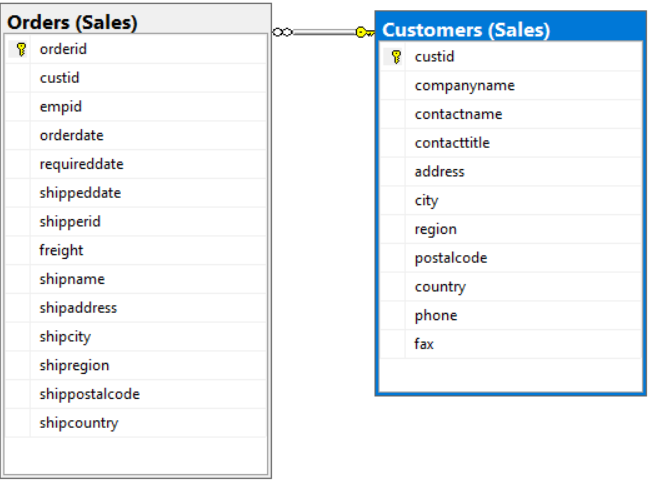
CROSS JOIN dbo.Nums AS N

WHERE N.n <= 5

ORDER BY n, empid;



2) Return customers with orders placed on Feb 12, 2016 along with their orders



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customer | Custid  Companyname |
| Sales.Orders | custid |

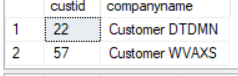
SELECT C.custid, C.companyname

FROM Sales.Customers AS C

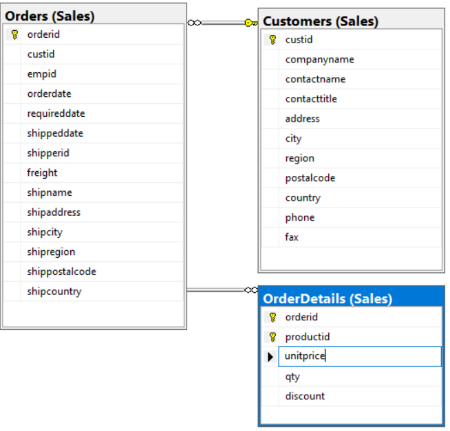
LEFT OUTER JOIN Sales.Orders AS O

ON O.custid = C.custid

WHERE O.orderid IS NULL;



3) Return customers and their orders including customers who placed no orders



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  country |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  orderid |

SELECT C.custid, COUNT( DISTINCT O.orderid) AS numorders, SUM(OD.qty) AS totalqty

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

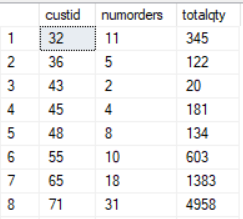
ON O.custid = C.custid

INNER JOIN Sales.OrderDetails AS OD

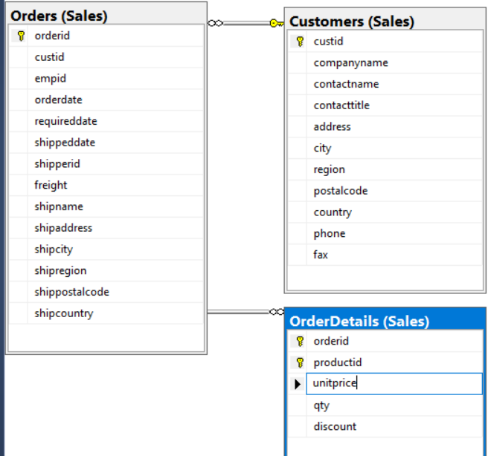
ON OD.orderid = O.orderid

WHERE C.country = N'USA'

GROUP BY C.custid;



4) Return customers and their orders



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  country |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  orderid |

SELECT C.custid, COUNT( DISTINCT O.orderid) AS numorders, SUM(OD.qty) AS totalqty

FROM Sales.Customers AS C

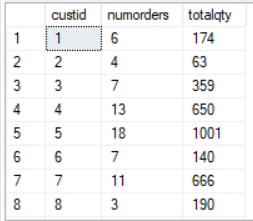
INNER JOIN Sales.Orders AS O

ON O.custid = C.custid

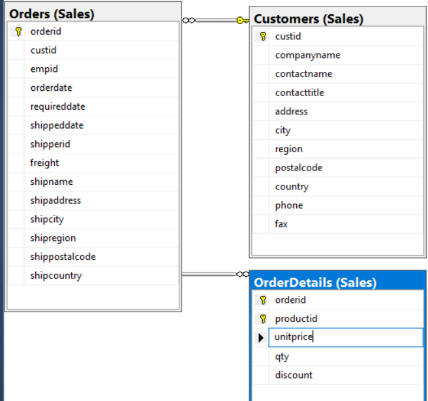
INNER JOIN Sales.OrderDetails AS OD

ON OD.orderid = O.orderid

GROUP BY C.custid;



5) Write a query that is similar to the above query but where country is from japan



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  country |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  orderid |

SELECT C.custid, COUNT( DISTINCT O.orderid) AS numorders, SUM(OD.qty) AS totalqty

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

ON O.custid = C.custid

INNER JOIN Sales.OrderDetails AS OD

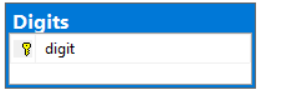
ON OD.orderid = O.orderid

WHERE C.country = N'JPN'

GROUP BY C.custid;



6) Write a query that produces a sequence of integers in the range 1 through 1000



|  |  |
| --- | --- |
| Table Name | Column Name |
| Dbo.digits | digit |

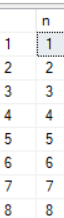
SELECT D3.digit \* 100 + D2.digit \* 10 + D1.digit + 1 AS n

FROM dbo.Digits AS D1

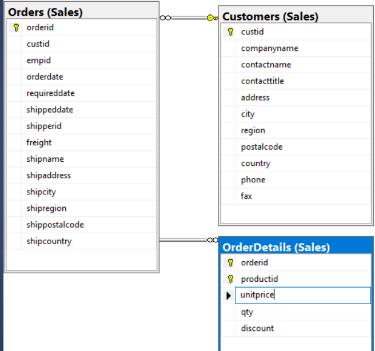
CROSS JOIN dbo.Digits AS D2

CROSS JOIN dbo.Digits AS D3

ORDER BY n;



7) Write a query that matches customers with their orders



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

SELECT C.custid, C.companyname, O.orderid, OD.productid, OD.qty

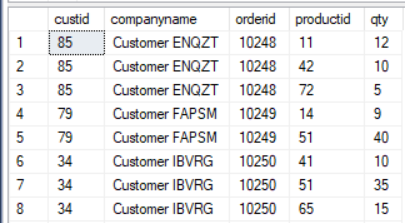
FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

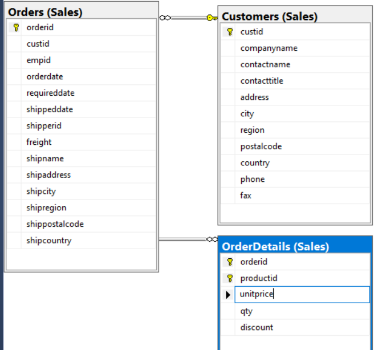
ON C.custid = O.custid

INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid;



8) Write a query that has Sales.Customers and matches with Sales.Orders after that matches with Sales.OrderDetails



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

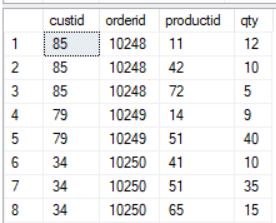
FROM Sales.Customers AS C

LEFT OUTER JOIN Sales.Orders AS O

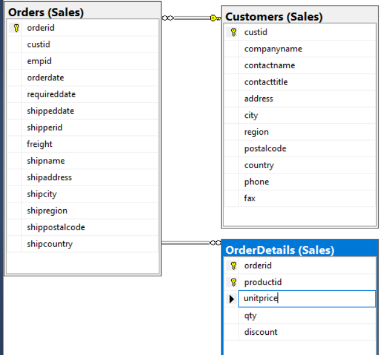
ON C.custid = O.custid

INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid;



9) Write a query that's similar to the previous query but also includes customers wth no orders



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

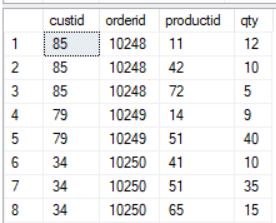
FROM Sales.Customers AS C

LEFT OUTER JOIN Sales.Orders AS O

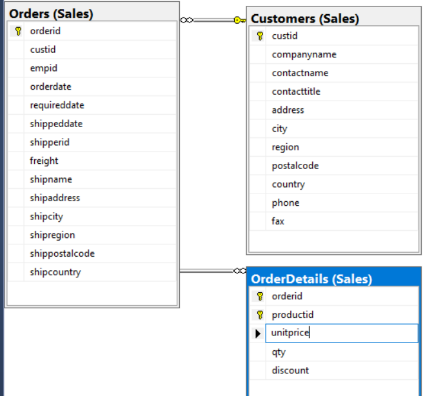
ON C.custid = O.custid

LEFT OUTER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid;



10) Write a query that's similar to the previous query but also includes customers wth no orders by orderid in ascending order



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | Sort Order |
| Sales.Orders | orderid | ASC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

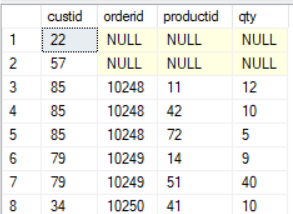
LEFT OUTER JOIN Sales.Orders AS O

ON C.custid = O.custid

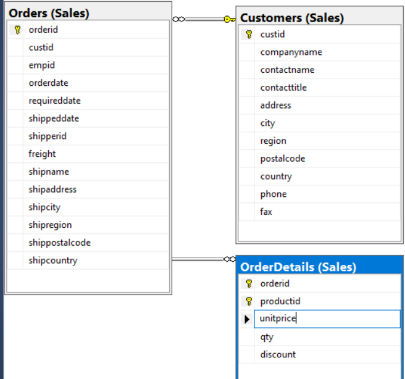
LEFT OUTER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

ORDER BY O.orderid ASC;



11) Write a query that's similar to the previous query but also includes customers wth no orders in ascending order of custid



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | Sort Order |
| Sales.Orders | Custid | ASC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

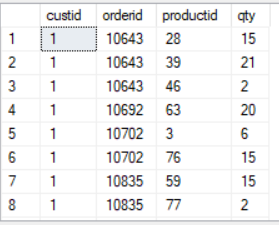
LEFT OUTER JOIN Sales.Orders AS O

ON C.custid = O.custid

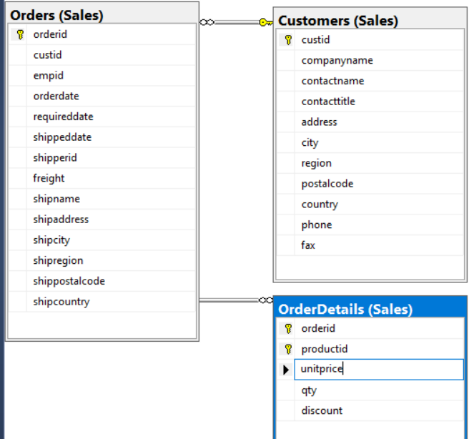
LEFT OUTER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

ORDER BY C.custid;



12) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

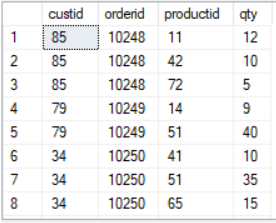
FROM Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

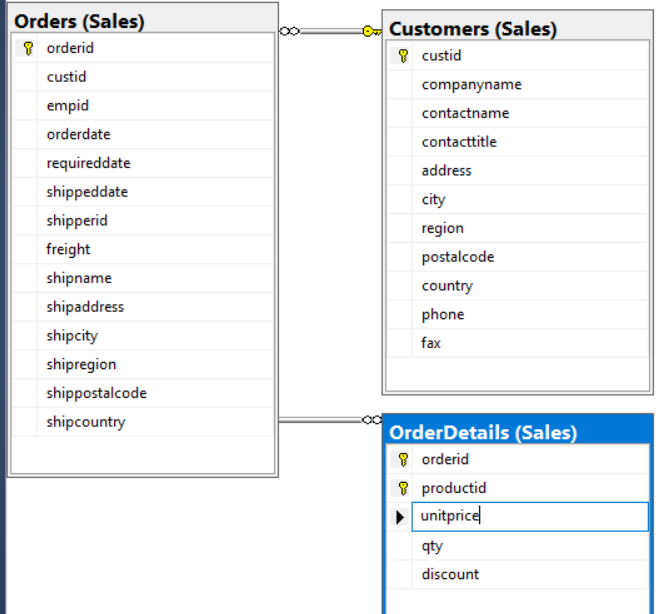
ON O.orderid = OD.orderid

RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid;



13) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails ordered by custid



|  |  |  |  |
| --- | --- | --- | --- |
| Table Name | | Column Name | |
| Sales.Customers | | Custid  companyname | |
| Sales.Orders | | Orderid  custid | |
| Sales.OrderDetails | | Qty  Orderid  productid | |
| Table Name | Column Name | | Sort Order |
| Sales.Orders | Custid | | N/A |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Orders AS O

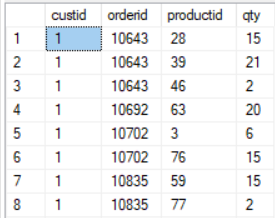
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

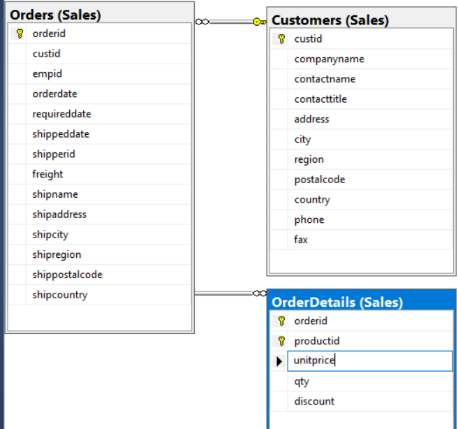
RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid

ORDER BY C.custid;



14) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails ordered by orderid in descending order



|  |  |  |  |
| --- | --- | --- | --- |
| Table Name | | Column Name | |
| Sales.Customers | | Custid  companyname | |
| Sales.Orders | | Orderid  custid | |
| Sales.OrderDetails | | Qty  Orderid  productid | |
| Table Name | Column Name | | Sort Order |
| Sales.Orders | orderid | | DESC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Orders AS O

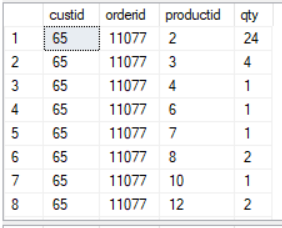
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

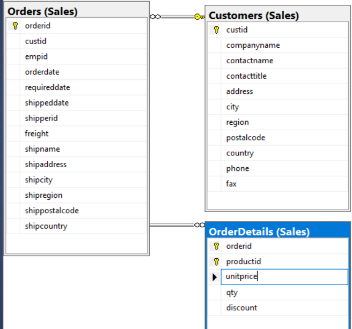
RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid

ORDER BY O.orderid DESC;



15) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails ordered by productid in ascending order



|  |  |  |  |
| --- | --- | --- | --- |
| Table Name | | Column Name | |
| Sales.Customers | | Custid  companyname | |
| Sales.Orders | | Orderid  custid | |
| Sales.OrderDetails | | Qty  Orderid  productid | |
| Table Name | Column Name | | Sort Order |
| Sales.Orders | productid | | ASC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Orders AS O

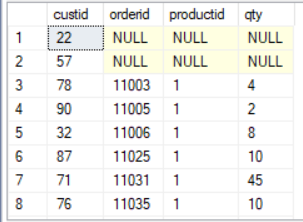
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

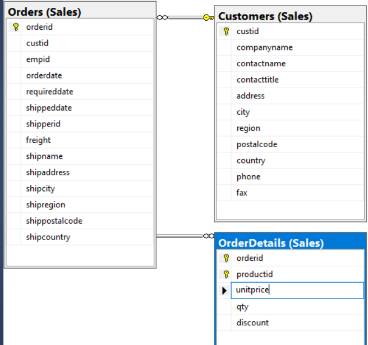
RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid

ORDER BY OD.productid ASC;



16) Write a query that's similar to the above query but preserves Orders and OrderDetails as an independent unit



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

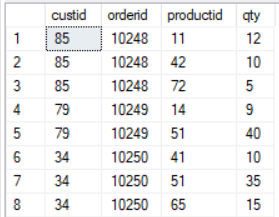
LEFT OUTER JOIN

(Sales.Orders AS O

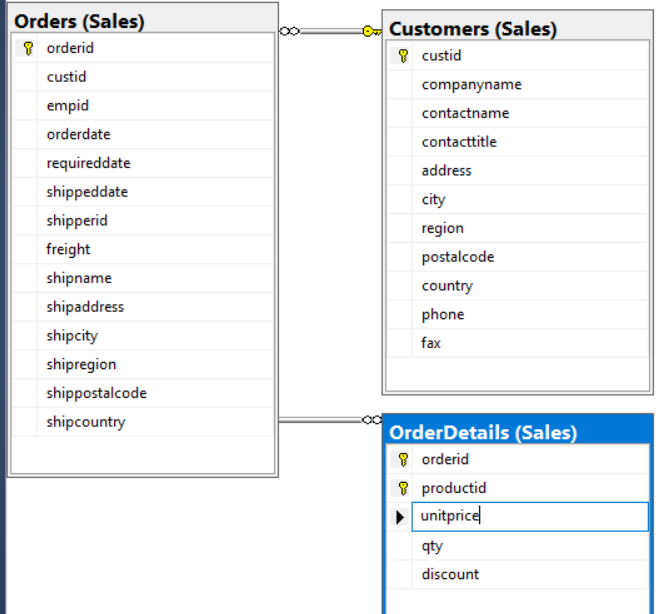
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid)

ON C.custid = O.custid;



17) Write a query that's similar to the above query but preserves Orders and OrderDetails as an independent unit in descending order by productid



|  |  |  |  |
| --- | --- | --- | --- |
| Table Name | | Column Name | |
| Sales.Customers | | Custid  companyname | |
| Sales.Orders | | Orderid  custid | |
| Sales.OrderDetails | | Qty  Orderid  productid | |
| Table Name | Column Name | | Sort Order |
| Sales.Orders | productid | | DESC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

LEFT OUTER JOIN

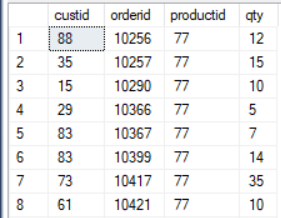
(Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

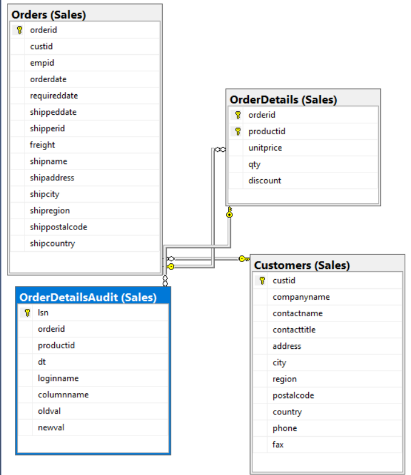
ON O.orderid = OD.orderid)

ON C.custid = O.custid

ORDER BY OD.productid DESC;



18) Write a query that matches customers with their orders including their order details audit



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |
| Sales.OrderDetailsAudit | orderid |

SELECT C.custid, C.companyname, O.orderid, OD.productid, OD.qty, ODA.orderid

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

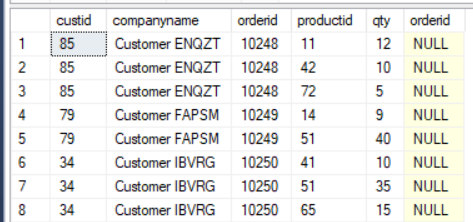
ON C.custid = O.custid

INNER JOIN Sales.OrderDetails AS OD

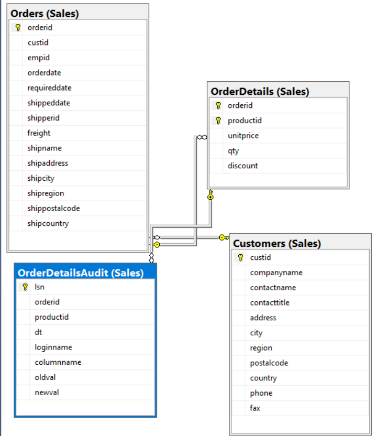
ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit as ODA

ON OD.orderid = ODA.orderid;



19) Return customers and their orders including customers who placed no orders and with their order detail audit



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |
| Sales.OrderDetailsAudit | orderid |

SELECT C.custid, COUNT( DISTINCT ODA.orderid) AS numorders, SUM(OD.qty) AS totalqty

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

ON O.custid = C.custid

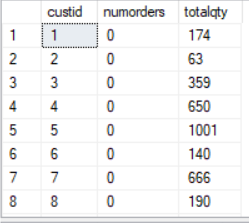
INNER JOIN Sales.OrderDetails AS OD

ON OD.orderid = O.orderid

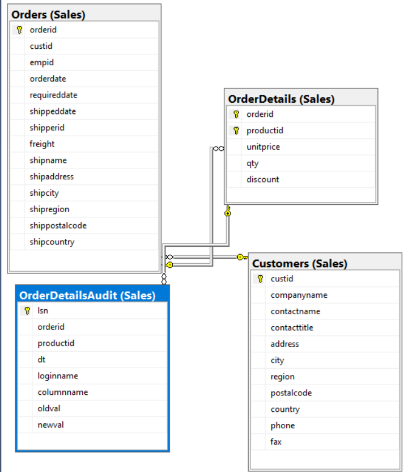
LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

ON O.orderid = ODA.orderid

GROUP BY C.custid;



20) Write a query that matches customers with their orders including their order details audit in ascending order of ordered



|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | |
| Sales.Customers | Custid  companyname | |
| Sales.Orders | Orderid  custid | |
| Sales.OrderDetails | Qty  Orderid  productid | |
| Sales.OrderDetailsAudit | orderid | |
| Table Name | Column Name | Sort Order |
| Sales.OrderDetailsAudit | Ordered | ASC |

SELECT C.custid, C.companyname, O.orderid, OD.productid, OD.qty, ODA.orderid

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

ON C.custid = O.custid

INNER JOIN Sales.OrderDetails AS OD

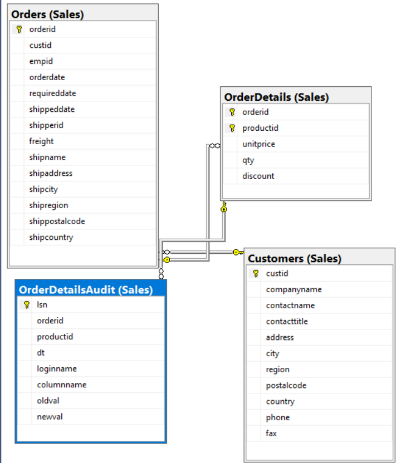
ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit as ODA

ON OD.orderid = ODA.orderid

ORDER BY ODA.orderid ASC;

21) Write a query that matches customers with their orders including their order details audit in descending order of orderid



|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | |
| Sales.Customers | Custid  companyname | |
| Sales.Orders | Orderid  custid | |
| Sales.OrderDetails | Qty  Orderid  productid | |
| Sales.OrderDetailsAudit | orderid | |
| Table Name | Column Name | Sort Order |
| Sales.OrderDetailsAudit | Ordered | ASC |

SELECT C.custid, C.companyname, O.orderid, OD.productid, OD.qty, ODA.orderid

FROM Sales.Customers AS C

INNER JOIN Sales.Orders AS O

ON C.custid = O.custid

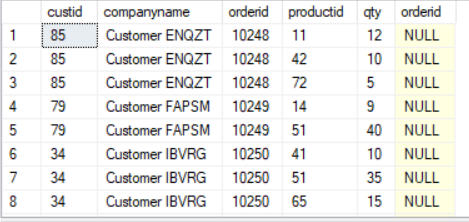
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

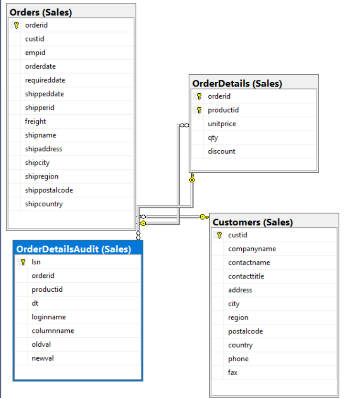
LEFT OUTER JOIN Sales.OrderDetailsAudit as ODA

ON OD.orderid = ODA.orderid

ORDER BY ODA.orderid DESC;



22) Write a query that's similar to the above query but preserves Orders, OrderDetails, and OrderDetailsAudit as an independent unit



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |
| Sales.OrderDetailsAudit | orderid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

LEFT OUTER JOIN

(Sales.Orders AS O

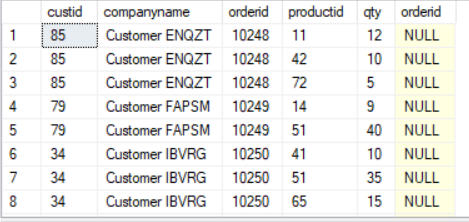
INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

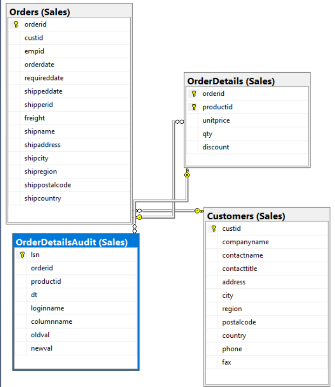
LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

ON OD.orderid = ODA.orderid)

ON C.custid = O.custid;



23) Write a query that's similar to the above query but preserves Orders, OrderDetails, and OrderDetailsAudit as an independent unit in Ascending order by ordered



|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | |
| Sales.Customers | Custid  companyname | |
| Sales.Orders | Orderid  custid | |
| Sales.OrderDetails | Qty  Orderid  productid | |
| Sales.OrderDetailsAudit | orderid | |
| Table Name | Column Name | Sort Order |
| Sales.OrderDetailsAudit | Orderid | ASC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

LEFT OUTER JOIN

(Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

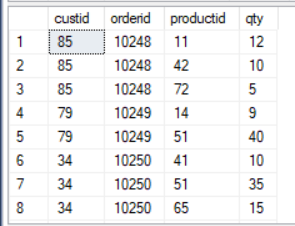
ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

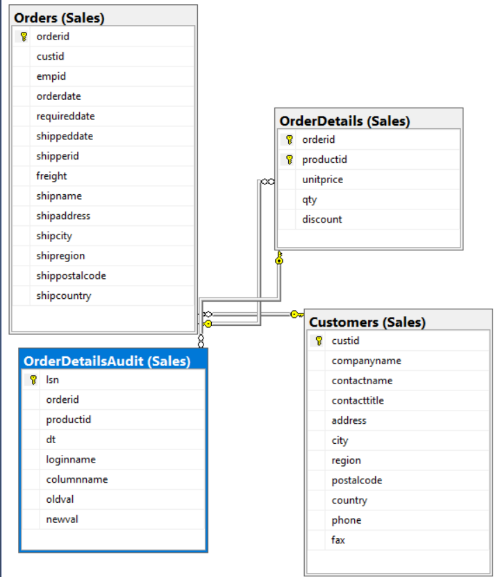
ON OD.orderid = ODA.orderid)

ON C.custid = O.custid

ORDER BY O.orderid ASC;



24) Write a query that's similar to the above query but preserves Orders, OrderDetails, and OrderDetailsAudit as an independent unit in Descending order by ordered



|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | |
| Sales.Customers | Custid  companyname | |
| Sales.Orders | Orderid  custid | |
| Sales.OrderDetails | Qty  Orderid  productid | |
| Sales.OrderDetailsAudit | orderid | |
| Table Name | Column Name | Sort Order |
| Sales.OrderDetailsAudit | Orderid | DESC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Customers AS C

LEFT OUTER JOIN

(Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

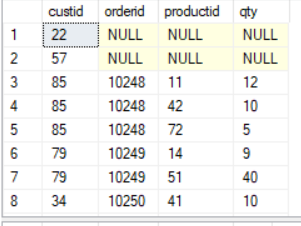
ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

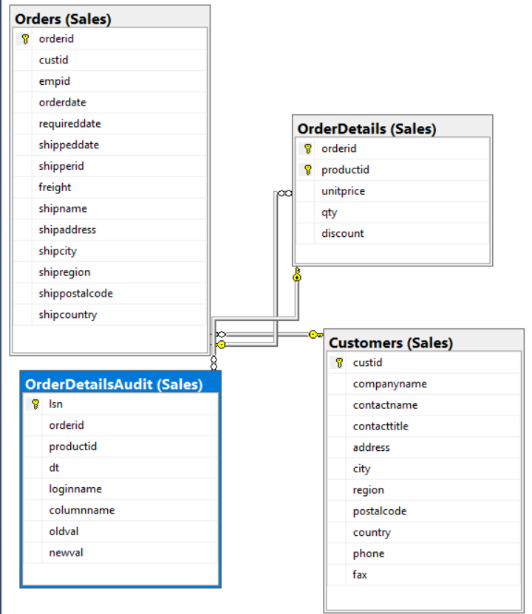
ON OD.orderid = ODA.orderid)

ON C.custid = O.custid

ORDER BY O.orderid DESC;



25) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails ordered by custid



|  |  |
| --- | --- |
| Table Name | Column Name |
| Sales.Customers | Custid  companyname |
| Sales.Orders | Orderid  custid |
| Sales.OrderDetails | Qty  Orderid  productid |
| Sales.OrderDetailsAudit | orderid |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

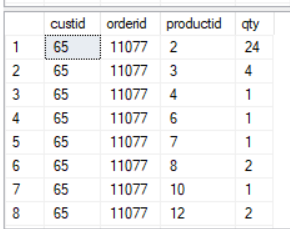
ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

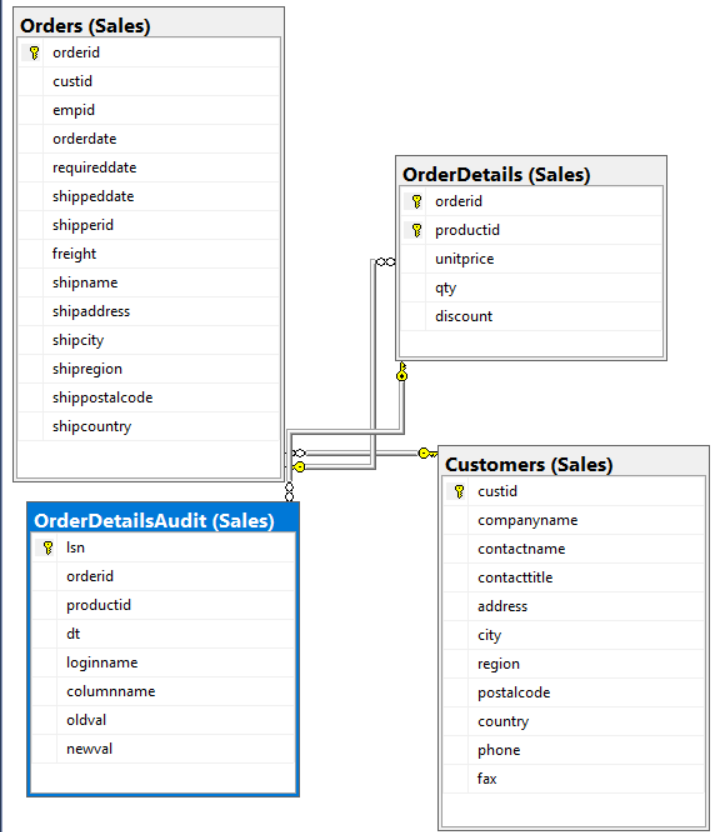
ON OD.orderid = ODA.orderid

RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid;



26) Write a query that keeps Sales.Customers and joins with Sales.Order and Sales.OrderDetails ordered by custid in ascending order



|  |  |  |
| --- | --- | --- |
| Table Name | Column Name | |
| Sales.Customers | Custid  companyname | |
| Sales.Orders | Orderid  custid | |
| Sales.OrderDetails | Qty  Orderid  productid | |
| Sales.OrderDetailsAudit | orderid | |
| Table Name | Column Name | Sort Order |
| Sales.OrderDetailsAudit | Orderid | DESC |

SELECT C.custid, O.orderid, OD.productid, OD.qty

FROM Sales.Orders AS O

INNER JOIN Sales.OrderDetails AS OD

ON O.orderid = OD.orderid

LEFT OUTER JOIN Sales.OrderDetailsAudit AS ODA

ON OD.orderid = ODA.orderid

RIGHT OUTER JOIN Sales.Customers AS C

ON O.custid = C.custid

ORDER BY C.custid ASC;

