IT Assignment Coversheet

Course:	PROG8080 – Database Management
Program Coordinator:	David Allison
Professor/Instructor:	Mark Morell

Assignment #:	5
Assignment Type:	☒ Individual ☐ Pair ☒ Team
Date Submitted:	October 10th, 2019

Student Information

Name	Uploaded (for instructor)
Aparna Tomar	☒

IT Standards Marking Sheet

Programming & SQL Standards - 1% each			
	P1 Meaningful Identifiers		P20 Code Module Size and Focus
	P2 Prefixes & Hungarian Notation		P21 Single Point of Exit
	P3 Identifier Case Conventions		P22 Disabled Code & Misleading
	P4 Header Comments		P23 Each Class in a File Named
	P5 Method Comments		P24 Class Organization
	P9 "Magic" Numbers and Strings		P25 Unwise Coding Practice
	P10 Constant Scope		SQL1 Table Names
	P11 Indentation		SQL2 Column Names
	P12 Line Length and Wrapping		SQL3 Keywords & Function Names
	P13 Blank Lines		SQL4 Header Comments
	P14 Code Crowding		SQL5 Output Messages
	P15 Space Around Binary Operators		SQL6 Implementation Comments
	P16 Space After Delimiters		SQL7 Formatting
	P17 Curly Brace Alignment		SQL8 Subquery IN and =
	P19 Global Variables		

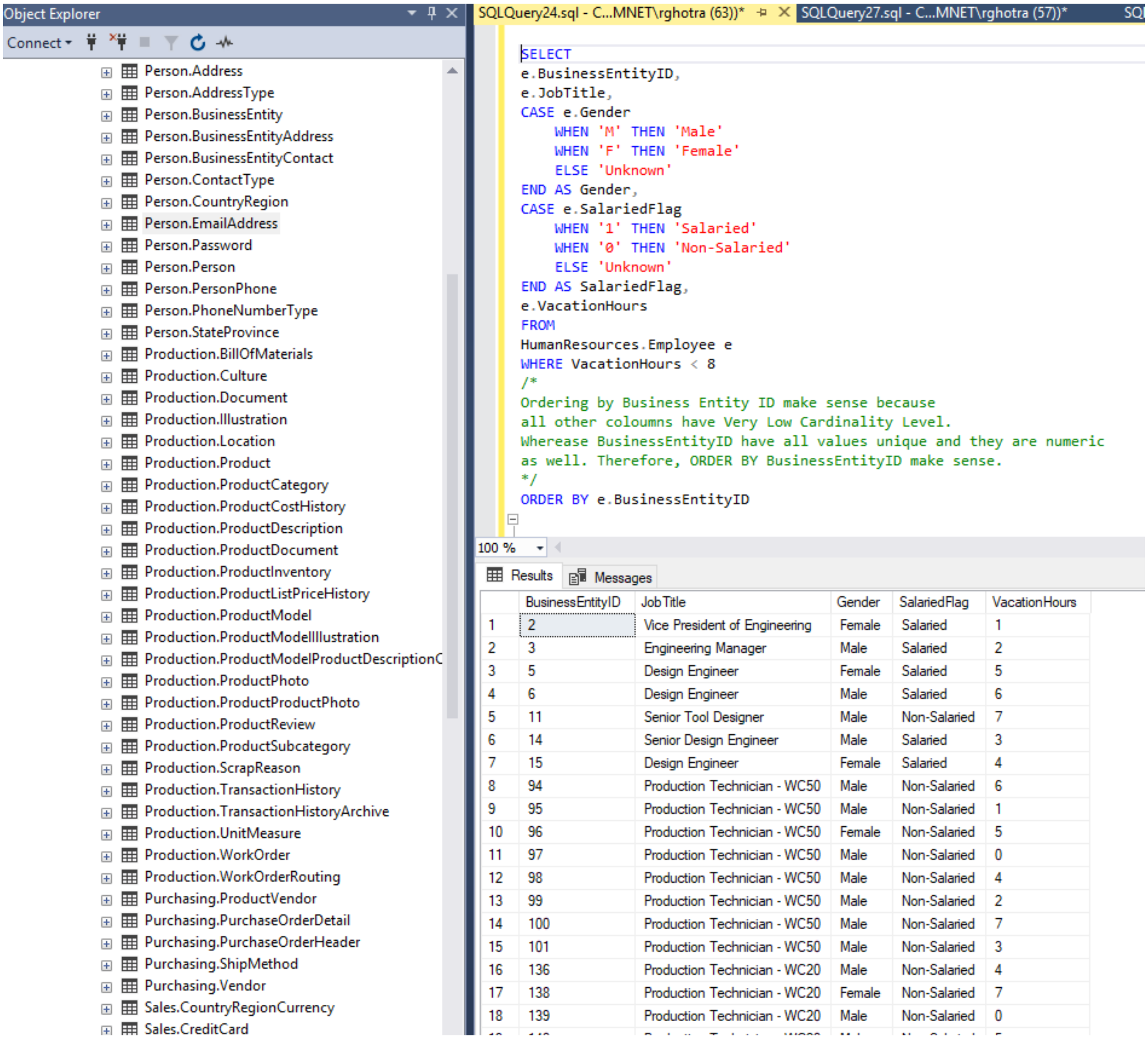
Base Mark:	
Standards Penalties: - %	-
Late Penalties: - %	-
Final Mark:	

Late Assignments

Days Late	**Penalty %**
1	5
2	10
3	20
4	40
5	60
6	80
7	100

Question #	Question	Score
1	Retrieve data from the HumanResrouces.Employee table for employees who have taken **less than 8 hours of vacation** (VacationHours). Show the following information in the results: • Employee ID • Job Title • Gender converted for entries for “Male” and “Female” • The “SalariedFlag” column displayed as: ○ 1 = “Salaried” ○ 0 = “Non-Salaried” ○ Anything Else = “Unknown” • Vacation Hours Order the data in a way that makes sense to you and include a comment to describe why you decided to sort it the way you did	3
2	Using a subquery in the *SELECT* portion of your query, retrieve a list of Product names from the Production.Product table that are **Red** in colour and get the **total quantity** of those products ordered from the Sales.SalesOrderDetail table. Sort your results in descending order by total quantity ordered.	2
3	Using a **NOT IN** subquery in the *WHERE* portion of your query, retrieve a list of the following data: • Product Name • Product Number • Product Weight From the Production.Product table. Get only products that are **Black** that **do NOT** have any sales in the Sales.SalesOrderDetail table. Order your results in ascending order by product name.	3
4	Re-write the exact same query as #3 above using a **NOT EXISTS** subquery	2
5	Write a SQL statement to change the phone number in the Person.PersonPhone number for the person with the ID of 305 to 555-867-5309. Also change the ModifiedDate in the record to the current date and time.	2
6	Write a set of SQL statements in a **transaction** to: a. Delete entries in the Person.PersonPhone table where the phone number starts with the numbers 703 b. Delete entries in the Person.EmailAddress table where the email address starts with “AB” and the Email Address ID is greater than 5000 Commit the transaction	3
	Total	**15**

Ans1:

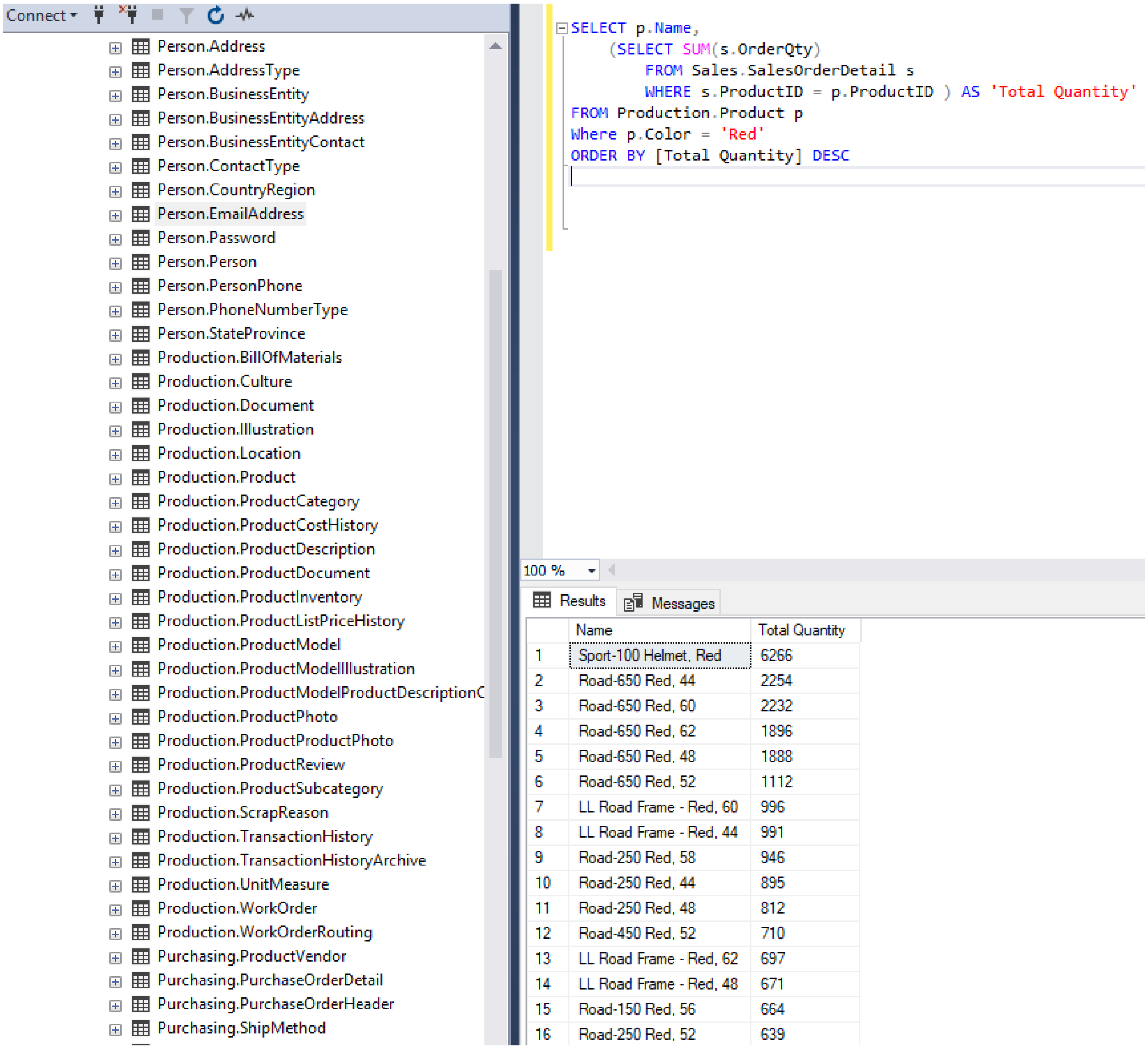

Object Explorer
Connect
SQLQuery24.sql - C...MNET\rghotra (63))*
SQLQuery27.sql - C...MNET\rghotra (57))*
SQ
100 %
Results
Messages

Person.Address
Person.AddressType
Person.BusinessEntity
Person.BusinessEntityAddress
Person.BusinessEntityContact
Person.ContactType
Person.CountryRegion
Person.EmailAddress
Person.Password
Person.Person
Person.PersonPhone
Person.PhoneNumberType
Person.StateProvince
Production.BillOfMaterials
Production.Culture
Production.Document
Production.Illustration
Production.Location
Production.Product
Production.ProductCategory
Production.ProductCostHistory
Production.ProductDescription
Production.ProductDocument
Production.ProductInventory
Production.ProductListPriceHistory
Production.ProductModel
Production.ProductModelIllustration
Production.ProductModelProductDescriptionC
Production.ProductPhoto
Production.ProductProductPhoto
Production.ProductReview
Production.ProductSubcategory
Production.ScrapReason
Production.TransactionHistory
Production.TransactionHistoryArchive
Production.UnitMeasure
Production.WorkOrder
Production.WorkOrderRouting
Purchasing.ProductVendor
Purchasing.PurchaseOrderDetail
Purchasing.PurchaseOrderHeader
Purchasing.ShipMethod
Purchasing.Vendor
Sales.CountryRegionCurrency
Sales.CreditCard

```
SELECT
e.BusinessEntityID,
e.JobTitle,
CASE e.Gender
    WHEN 'M' THEN 'Male'
    WHEN 'F' THEN 'Female'
    ELSE 'Unknown'
END AS Gender,
CASE e.SalariedFlag
    WHEN '1' THEN 'Salaried'
    WHEN '0' THEN 'Non-Salaried'
    ELSE 'Unknown'
END AS SalariedFlag,
e.VacationHours
FROM
HumanResources.Employee e
WHERE VacationHours < 8
/*
Ordering by Business Entity ID make sense because
all other coloumns have Very Low Cardinality Level.
Wherease BusinessEntityID have all values unique and they are numeric
as well. Therefore, ORDER BY BusinessEntityID make sense.
*/
ORDER BY e.BusinessEntityID
```

	BusinessEntityID	JobTitle	Gender	SalariedFlag	VacationHours
1	2	Vice President of Engineering	Female	Salaried	1
2	3	Engineering Manager	Male	Salaried	2
3	5	Design Engineer	Female	Salaried	5
4	6	Design Engineer	Male	Salaried	6
5	11	Senior Tool Designer	Male	Non-Salaried	7
6	14	Senior Design Engineer	Male	Salaried	3
7	15	Design Engineer	Female	Salaried	4
8	94	Production Technician - WC50	Male	Non-Salaried	6
9	95	Production Technician - WC50	Male	Non-Salaried	1
10	96	Production Technician - WC50	Female	Non-Salaried	5
11	97	Production Technician - WC50	Male	Non-Salaried	0
12	98	Production Technician - WC50	Male	Non-Salaried	4
13	99	Production Technician - WC50	Male	Non-Salaried	2
14	100	Production Technician - WC50	Male	Non-Salaried	7
15	101	Production Technician - WC50	Male	Non-Salaried	3
16	136	Production Technician - WC20	Male	Non-Salaried	4
17	138	Production Technician - WC20	Female	Non-Salaried	7
18	139	Production Technician - WC20	Male	Non-Salaried	0

Ans2:

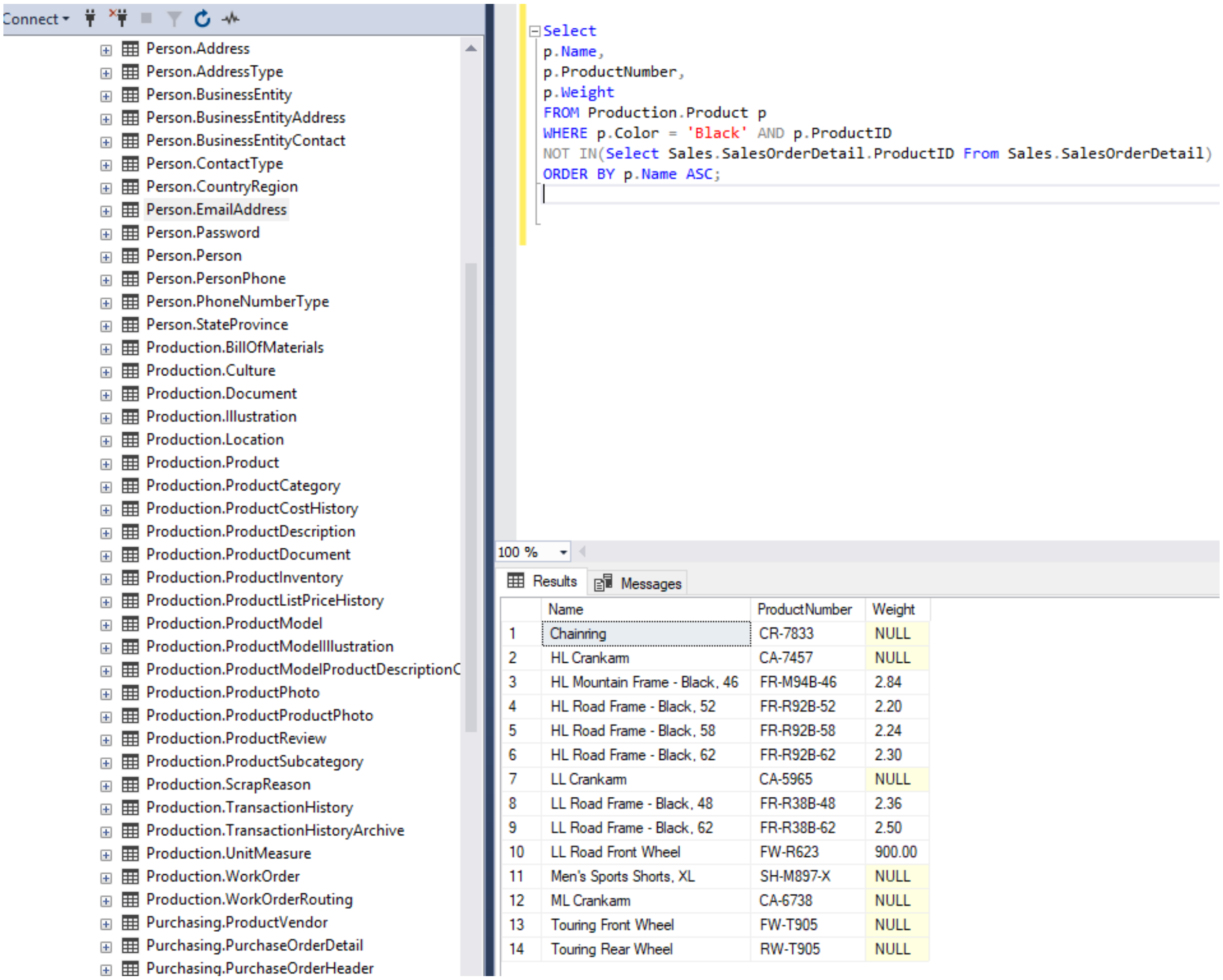


- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContact
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person
- Person.PersonPhone
- Person.PhoneNumberType
- Person.StateProvince
- Production.BillOfMaterials
- Production.Culture
- Production.Document
- Production.Illustration
- Production.Location
- Production.Product
- Production.ProductCategory
- Production.ProductCostHistory
- Production.ProductDescription
- Production.ProductDocument
- Production.ProductInventory
- Production.ProductListPriceHistory
- Production.ProductModel
- Production.ProductModelIllustration
- Production.ProductModelProductDescriptionC
- Production.ProductPhoto
- Production.ProductProductPhoto
- Production.ProductReview
- Production.ProductSubcategory
- Production.ScrapReason
- Production.TransactionHistory
- Production.TransactionHistoryArchive
- Production.UnitMeasure
- Production.WorkOrder
- Production.WorkOrderRouting
- Purchasing.ProductVendor
- Purchasing.PurchaseOrderDetail
- Purchasing.PurchaseOrderHeader
- Purchasing.ShipMethod

```sql
SELECT p.Name,
    (SELECT SUM(s.OrderQty)
        FROM Sales.SalesOrderDetail s
        WHERE s.ProductID = p.ProductID ) AS 'Total Quantity'
FROM Production.Product p
Where p.Color = 'Red'
ORDER BY [Total Quantity] DESC
```

	Name	Total Quantity
1	Sport-100 Helmet, Red	6266
2	Road-650 Red, 44	2254
3	Road-650 Red, 60	2232
4	Road-650 Red, 62	1896
5	Road-650 Red, 48	1888
6	Road-650 Red, 52	1112
7	LL Road Frame - Red, 60	996
8	LL Road Frame - Red, 44	991
9	Road-250 Red, 58	946
10	Road-250 Red, 44	895
11	Road-250 Red, 48	812
12	Road-450 Red, 52	710
13	LL Road Frame - Red, 62	697
14	LL Road Frame - Red, 48	671
15	Road-150 Red, 56	664
16	Road-250 Red, 52	639

Ans3


Connect ▾
Person.Address
Person.AddressType
Person.BusinessEntity
Person.BusinessEntityAddress
Person.BusinessEntityContact
Person.ContactType
Person.CountryRegion
Person.EmailAddress
Person.Password
Person.Person
Person.PersonPhone
Person.PhoneNumberType
Person.StateProvince
Production.BillOfMaterials
Production.Culture
Production.Document
Production.Illustration
Production.Location
Production.Product
Production.ProductCategory
Production.ProductCostHistory
Production.ProductDescription
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Production.ProductListPriceHistory
Production.ProductModel
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Production.ProductModelProductDescriptionC
Production.ProductPhoto
Production.ProductProductPhoto
Production.ProductReview
Production.ProductSubcategory
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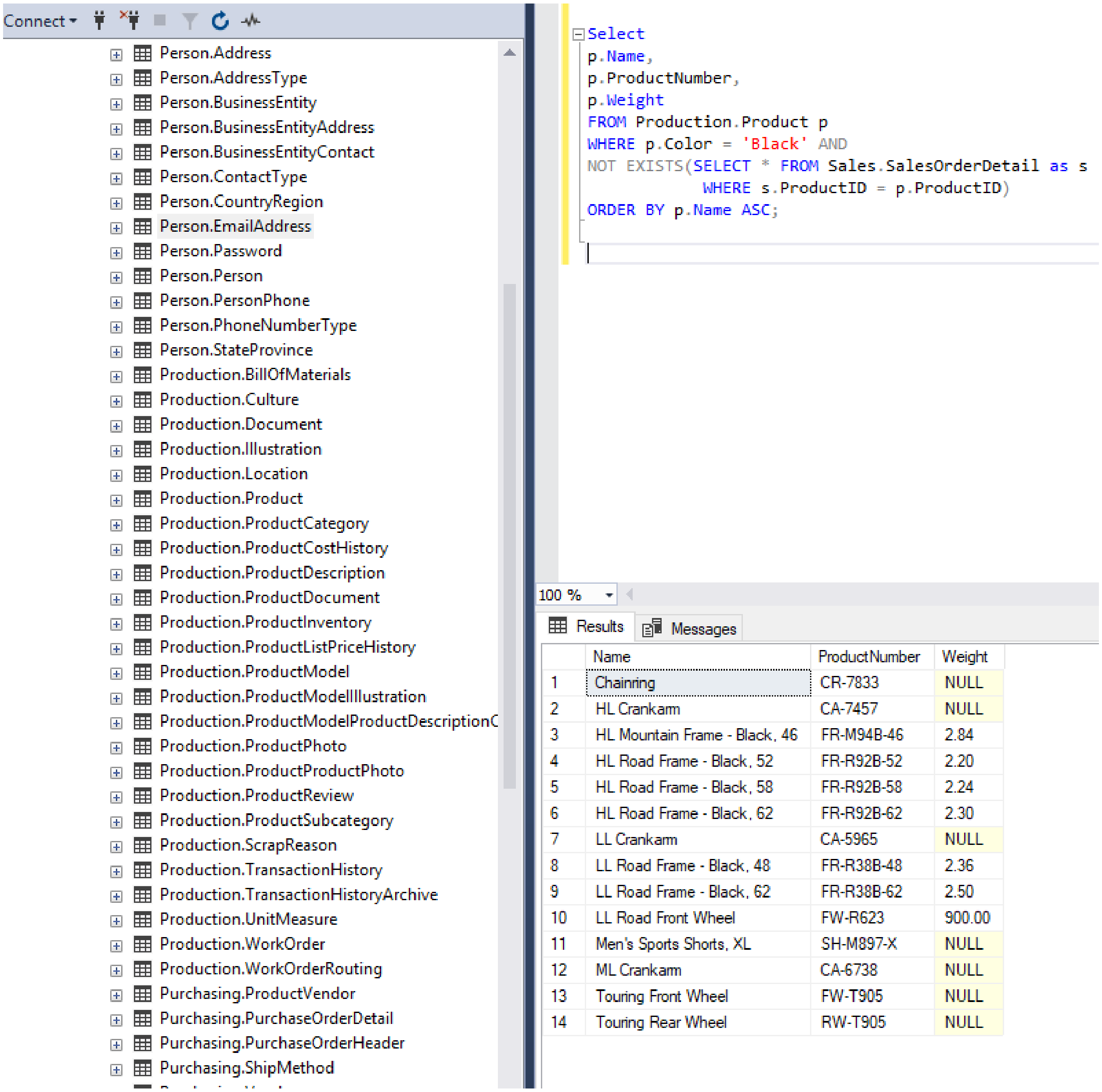
Production.TransactionHistory
Production.TransactionHistoryArchive
Production.UnitMeasure
Production.WorkOrder
Production.WorkOrderRouting
Purchasing.ProductVendor
Purchasing.PurchaseOrderDetail
Purchasing.PurchaseOrderHeader
100 %
Results
Messages

```
Select
p.Name,
p.ProductNumber,
p.Weight
FROM Production.Product p
WHERE p.Color = 'Black' AND p.ProductID
NOT IN(Select Sales.SalesOrderDetail.ProductID From Sales.SalesOrderDetail)
ORDER BY p.Name ASC;
```

	Name	ProductNumber	Weight
1	Chainring	CR-7833	NULL
2	HL Crankarm	CA-7457	NULL
3	HL Mountain Frame - Black, 46	FR-M94B-46	2.84
4	HL Road Frame - Black, 52	FR-R92B-52	2.20
5	HL Road Frame - Black, 58	FR-R92B-58	2.24
6	HL Road Frame - Black, 62	FR-R92B-62	2.30
7	LL Crankarm	CA-5965	NULL
8	LL Road Frame - Black, 48	FR-R38B-48	2.36
9	LL Road Frame - Black, 62	FR-R38B-62	2.50
10	LL Road Front Wheel	FW-R623	900.00
11	Men's Sports Shorts, XL	SH-M897-X	NULL
12	ML Crankarm	CA-6738	NULL
13	Touring Front Wheel	FW-T905	NULL
14	Touring Rear Wheel	RW-T905	NULL

Ans4:


Connect
Person.Address
Person.AddressType
Person.BusinessEntity
Person.BusinessEntityAddress
Person.BusinessEntityContact
Person.ContactType
Person.CountryRegion
Person.EmailAddress
Person.Password
Person.Person
Person.PersonPhone
Person.PhoneNumberType
Person.StateProvince
Production.BillOfMaterials
Production.Culture
Production.Document
Production.Illustration
Production.Location
Production.Product
Production.ProductCategory
Production.ProductCostHistory
Production.ProductDescription
Production.ProductDocument
Production.ProductInventory
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Production.ProductModel
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Production.ProductProductPhoto
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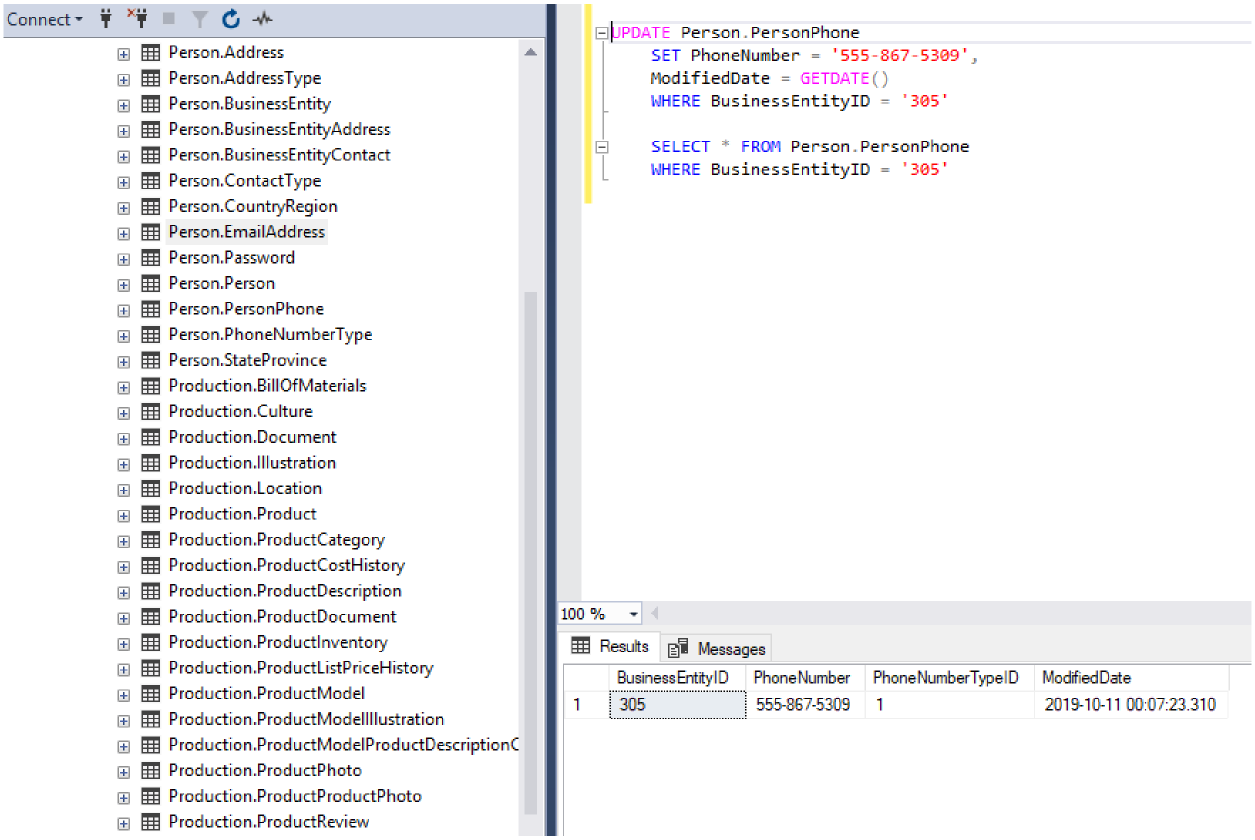
Production.ProductSubcategory
Production.ScrapReason
Production.TransactionHistory
Production.TransactionHistoryArchive
Production.UnitMeasure
Production.WorkOrder
Production.WorkOrderRouting
Purchasing.ProductVendor
Purchasing.PurchaseOrderDetail
Purchasing.PurchaseOrderHeader
Purchasing.ShipMethod
100 %
Results
Messages

```
Select
p.Name,
p.ProductNumber,
p.Weight
FROM Production.Product p
WHERE p.Color = 'Black' AND
NOT EXISTS(SELECT * FROM Sales.SalesOrderDetail as s
                WHERE s.ProductID = p.ProductID)
ORDER BY p.Name ASC;
```

	Name	ProductNumber	Weight
1	Chainring	CR-7833	NULL
2	HL Crankarm	CA-7457	NULL
3	HL Mountain Frame - Black, 46	FR-M94B-46	2.84
4	HL Road Frame - Black, 52	FR-R92B-52	2.20
5	HL Road Frame - Black, 58	FR-R92B-58	2.24
6	HL Road Frame - Black, 62	FR-R92B-62	2.30
7	LL Crankarm	CA-5965	NULL
8	LL Road Frame - Black, 48	FR-R38B-48	2.36
9	LL Road Frame - Black, 62	FR-R38B-62	2.50
10	LL Road Front Wheel	FW-R623	900.00
11	Men's Sports Shorts, XL	SH-M897-X	NULL
12	ML Crankarm	CA-6738	NULL
13	Touring Front Wheel	FW-T905	NULL
14	Touring Rear Wheel	RW-T905	NULL

Ans5:

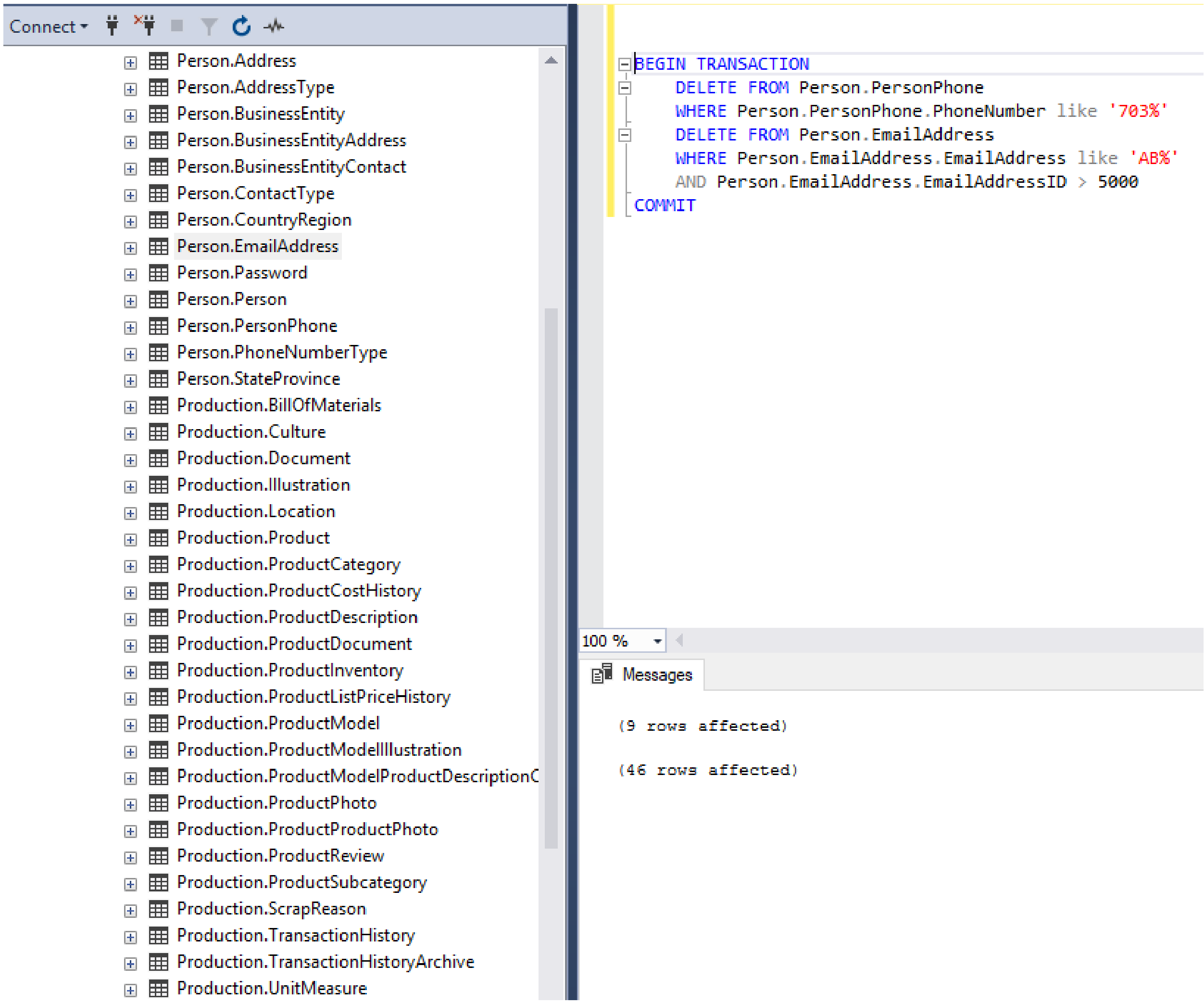


```
UPDATE Person.PersonPhone
    SET PhoneNumber = '555-867-5309',
    ModifiedDate = GETDATE()
    WHERE BusinessEntityID = '305'

    SELECT * FROM Person.PersonPhone
    WHERE BusinessEntityID = '305'
```

	BusinessEntityID	PhoneNumber	PhoneNumberTypeID	ModifiedDate
1	305	555-867-5309	1	2019-10-11 00:07:23.310

Ans6:


Connect
Person.Address
Person.AddressType
Person.BusinessEntity
Person.BusinessEntityAddress
Person.BusinessEntityContact
Person.ContactType
Person.CountryRegion
Person.EmailAddress
Person.Password
Person.Person
Person.PersonPhone
Person.PhoneNumberType
Person.StateProvince
Production.BillOfMaterials
Production.Culture
Production.Document
Production.Illustration
Production.Location
Production.Product
Production.ProductCategory
Production.ProductCostHistory
Production.ProductDescription
Production.ProductDocument
Production.ProductInventory
Production.ProductListPriceHistory
Production.ProductModel
Production.ProductModelIllustration
Production.ProductModelProductDescriptionC
Production.ProductPhoto
Production.ProductProductPhoto
Production.ProductReview
Production.ProductSubcategory
Production.ScrapReason
Production.TransactionHistory
Production.TransactionHistoryArchive
Production.UnitMeasure
100 %
Messages

```
BEGIN TRANSACTION
    DELETE FROM Person.PersonPhone
    WHERE Person.PersonPhone.PhoneNumber like '703%'
    DELETE FROM Person.EmailAddress
    WHERE Person.EmailAddress.EmailAddress like 'AB%'
    AND Person.EmailAddress.EmailAddressID > 5000
COMMIT
```

```
(9 rows affected)

(46 rows affected)
```