

LAB 4

Submitted by,

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Q1.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

Connect

Production.Product

Columns

- ProductID (PK, int, not null)
- Name (Name(nvarchar(50)))
- ProductNumber (nvarchar(255), not null)
- MakeFlag (Flag(bit), not null)
- FinishedGoodsFlag (Flag(bit), not null)
- Color (nvarchar(15), null)
- SafetyStockLevel (smallint, not null)
- ReorderPoint (smallint, not null)
- StandardCost (money, not null)
- ListPrice (money, not null)
- Size (nvarchar(5), null)
- SizeUnitMeasureCode (nvarchar(5), not null)
- WeightUnitMeasureCode (nvarchar(5), not null)
- Weight (decimal(8,2), not null)
- DaysToManufacture (int, not null)
- ProductLine (nchar(2), not null)
- Class (nchar(2), null)
- Style (nchar(2), null)
- ProductSubcategoryID (FK, int, not null)
- ProductModelID (FK, int, not null)
- SellStartDate (datetime, not null)
- SellEndDate (datetime, null)
- DiscontinuedDate (datetime, null)
- rowguid (uniqueidentifier, not null)
- ModifiedDate (datetime, not null)

Keys

Constraints

Triggers

Indexes

Statistics

Production.ProductCategory

Production.ProductCostHistory

Production.ProductDescription

Production.ProductDocument

Production.ProductInventory

Production.ProductListPriceHistory

Production.ProductModel

Production.ProductModelIllustration

Production.ProductModelPriceHistory

Production.ProductPhoto

Production.ProductProductPhoto

SQLQuery1.sql - L...VOMQ\Geedhu (65)*

```
use AdventureWorks2019
GO

-- Q1. Display all columns of all products.

select * from Production.Product
```

150 %

Results Messages

	ProductID	Name	ProductNumber	MakeFlag	FinishedGoodsFlag	Color	SafetyStockLevel	ReorderPoint	StandardCost	ListPrice	Size	SizeUnitMeasureCode	WeightUnitMeasureCode	Weight	Day
1	1	Adjustable Race	AR-5381	0	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
2	2	Bearing Ball	BA-8327	0	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
3	3	BB Ball Bearing	BE-2349	1	0	NULL	800	600	0.00	0.00	NULL	NULL	NULL	NULL	1
4	4	Headset Ball Bearings	BE-2908	0	0	NULL	800	600	0.00	0.00	NULL	NULL	NULL	NULL	0
5	316	Blade	BL-2036	1	0	NULL	800	600	0.00	0.00	NULL	NULL	NULL	NULL	1
6	317	LL Crankarm	CA-5965	0	0	Black	500	375	0.00	0.00	NULL	NULL	NULL	NULL	0
7	318	ML Crankarm	CA-6738	0	0	Black	500	375	0.00	0.00	NULL	NULL	NULL	NULL	0
8	319	HL Crankarm	CA-7457	0	0	Black	500	375	0.00	0.00	NULL	NULL	NULL	NULL	0
9	320	Chainring Bolts	CB-2903	0	0	Silver	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
10	321	Chainring Nut	CN-6137	0	0	Silver	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
11	322	Chainring	CR-7833	0	0	Black	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
12	323	Crown Race	CR-9981	0	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
13	324	Chain Stays	CS-2812	1	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	1
14	325	Decal 1	DC-8732	0	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
15	326	Decal 2	DC-9824	0	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	0
16	327	Down Tube	DT-2377	1	0	NULL	800	600	0.00	0.00	NULL	NULL	NULL	NULL	1
17	328	Mountain End Caps	EC-M092	1	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	1
18	329	Road End Caps	EC-R098	1	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	1
19	330	Touring End Caps	EC-T209	1	0	NULL	1000	750	0.00	0.00	NULL	NULL	NULL	NULL	1
20	331	Fork End	FE-3760	1	0	NULL	800	600	0.00	0.00	NULL	NULL	NULL	NULL	1
21	332	Freewheel	FH-2981	0	0	Silver	500	375	0.00	0.00	NULL	NULL	NULL	NULL	0

Query executed successfully.

LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 504 rows

Q2.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Production.Product
 - Columns
 - ProductID (PK, int, not null)
 - Name (nvarchar(50), not null)
 - ProductNumber (nvarchar(25), not null)
 - MakeFlag (Flag(bit), not null)
 - FinishedGoodsFlag (Flag(bit), not null)
 - Color (nvarchar(15), null)
 - SafetyStockLevel (smallint, not null)
 - ReorderPoint (smallint, not null)
 - StandardCost (money, not null)
 - ListPrice (money, not null)
 - Size (nvarchar(5), null)
 - SizeUnitMeasureCode (char(1), not null)
 - WeightUnitMeasureCode (char(1), not null)
 - Weight (decimal(8,2), not null)
 - DaysToManufacture (int, not null)
 - ProductLine (nchar(2), not null)
 - Class (nchar(2), null)
 - Style (nchar(2), null)
 - ProductSubcategoryID (int, not null)
 - ProductModelID (FK, int, not null)
 - SellStartDate (datetime, not null)
 - SellEndDate (datetime, null)
 - DiscontinuedDate (datetime, null)
 - rowguid (uniqueidentifier, not null)
 - ModifiedDate (datetime, not null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - Production.ProductCategory
 - Production.ProductCostHistory
 - Production.ProductDescription
 - Production.ProductDocument
 - Production.ProductInventory
 - Production.ProductListPriceHistory
 - Production.ProductModel
 - Production.ProductModelIllustration
 - Production.ProductModelProductPhoto
 - Production.ProductPhoto
 - Production.ProductProductPhoto

-- Q2. Display primary key, product name, number, list price of all products.

```
select ProductID, Name, ProductNumber, ListPrice from Production.Product
```

150 %

Results Messages

	ProductID	Name	ProductNumber	ListPrice
1	1	Adjustable Race	AR-5381	0.00
2	2	Bearing Ball	BA-8327	0.00
3	3	BB Ball Bearing	BE-2349	0.00
4	4	Headset Ball Bearings	BE-2908	0.00
5	316	Blade	BL-2036	0.00
6	317	LL Crankarm	CA-5965	0.00
7	318	ML Crankarm	CA-6738	0.00
8	319	HL Crankarm	CA-7457	0.00
9	320	Chaining Bolts	CB-2903	0.00
10	321	Chaining Nut	CN-6137	0.00
11	322	Chaining	CR-7833	0.00
12	323	Crown Race	CR-9981	0.00
13	324	Chain Stays	CS-2812	0.00
14	325	Decal 1	DC-8732	0.00
15	326	Decal 2	DC-9824	0.00
16	327	Down Tube	DT-2377	0.00
17	328	Mountain End Caps	EC-M092	0.00
18	329	Road End Caps	EC-R098	0.00
19	330	Touring End Caps	EC-T209	0.00
20	331	Fork End	FE-3760	0.00
21	332	Freewheel	FH-2981	0.00
22	341	Flat Washer 1	FW-1000	0.00

Query executed successfully.

LAPTOP-21U2VOMQ (16.0 RTM) | LAPTOP-21U2VOMQ\Geedhu... | AdventureWorks2019 | 00:00:00 | 504 rows

Q3.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Connect
- Production.Product
 - Columns
 - ProductID (PK, int, not null)
 - Name (Name(nvarchar(50)))
 - ProductNumber (nvarchar(255), not null)
 - MakeFlag (Flag(bit), not null)
 - FinishedGoodsFlag (Flag(bit), not null)
 - Color (nvarchar(15), null)
 - SafetyStockLevel (smallint, not null)
 - ReorderPoint (smallint, not null)
 - StandardCost (money, not null)
 - ListPrice (money, not null)
 - Size (nvarchar(5), null)
 - SizeUnitMeasureCode (nvarchar(5), not null)
 - WeightUnitMeasureCode (nvarchar(5), not null)
 - Weight (decimal(8,2), not null)
 - DaysToManufacture (int, not null)
 - ProductLine (nvarchar(2), not null)
 - Class (nvarchar(2), null)
 - Style (nvarchar(2), null)
 - ProductSubcategoryID (FK, int, not null)
 - ProductModelID (FK, int, not null)
 - SellStartDate (datetime, not null)
 - SellEndDate (datetime, null)
 - DiscontinuedDate (datetime, null)
 - rowguid (uniqueidentifier, not null)
 - ModifiedDate (datetime, not null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - Production.ProductCategory
 - Production.ProductCostHistory
 - Production.ProductDescription
 - Production.ProductDocument
 - Production.ProductInventory
 - Production.ProductListPriceHistory
 - Production.ProductModel
 - Production.ProductModelIllustration
 - Production.ProductModelPriceHistory
 - Production.ProductPhoto
 - Production.ProductProductPhoto

SQLQuery1.sql - L...VOMQ\Geedhu (65))*

SQLLab4.sql - LAP...VOMQ\Geedhu (72))*

```
-- Q3. Display product id, product name, number, list price of all products
--where list price is $0 .00.

select ProductID,Name,ProductNumber,ListPrice from Production.Product where ListPrice = 0.00
```

150 %

Results Messages

	ProductID	Name	ProductNumber	ListPrice
1	1	Adjustable Race	AR-5381	0.00
2	2	Bearing Ball	BA-8327	0.00
3	3	BB Ball Bearing	BE-2349	0.00
4	4	Headset Ball Bearings	BE-2908	0.00
5	316	Blade	BL-2036	0.00
6	317	LL Crankarm	CA-5965	0.00
7	318	ML Crankarm	CA-6738	0.00
8	319	HL Crankarm	CA-7457	0.00
9	320	Chaining Bolts	CB-2903	0.00
10	321	Chaining Nut	CN-6137	0.00
11	322	Chaining	CR-7833	0.00
12	323	Crown Race	CR-9981	0.00
13	324	Chain Stays	CS-2812	0.00
14	325	Decal 1	DC-8732	0.00
15	326	Decal 2	DC-9824	0.00
16	327	Down Tube	DT-2377	0.00
17	328	Mountain End Caps	EC-M092	0.00
18	329	Road End Caps	EC-R098	0.00
19	330	Touring End Caps	EC-T209	0.00
20	331	Fork End	FE-3760	0.00
21	332	Freewheel	FH-2981	0.00
22	341	Flat Washer 1	FW-1000	0.00

Query executed successfully.

LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 200 rows

Ready Ln 37 Col 93 Ch 93 INS

Q4.

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))'.

Object Explorer: The left pane shows the 'Production.Product' table expanded under the 'Columns' folder. The columns listed include ProductID (PK, int, not null), Name (nvarchar(50)), ProductNumber (nvarchar(25)), MakeFlag (bit, not null), FinishedGoodsFlag (bit), Color (nvarchar(15), null), SafetyStockLevel (smallint), ReorderPoint (smallint), StandardCost (money, not null), ListPrice (money, not null), Size (nvarchar(5), null), SizeUnitMeasureCode (char(10)), WeightUnitMeasureCode (char(10)), Weight (decimal(8,2), null), DaysToManufacture (int), ProductLine (nvarchar(2), null), Class (nvarchar(2), null), Style (nvarchar(2), null), ProductSubcategoryID (FK, int), ProductModelID (FK, int), SellStartDate (datetime), SellEndDate (datetime), DiscontinuedDate (datetime), rowguid (uniqueidentifier), and ModifiedDate (datetime).

SQL Query: The main editor shows the following SQL query:

```
-- Q4. Display product id, product name, number, list price of all products
--where list price greater than $0 but less then $10.

select ProductID,Name,ProductNumber,ListPrice from Production.Product
where ListPrice > 0.00 and ListPrice < 10.00
```

Results: The bottom pane shows the results of the query, displaying 13 rows of data. The columns are ProductID, Name, ProductNumber, and ListPrice.

ProductID	Name	ProductNumber	ListPrice
709	Mountain Bike Socks, M	SO-B909-M	9.50
710	Mountain Bike Socks, L	SO-B909-L	9.50
712	AWC Logo Cap	CA-1098	8.99
870	Water Bottle - 30 oz.	WB-H098	4.99
871	Mountain Bottle Cage	BC-M005	9.99
872	Road Bottle Cage	BC-R205	8.99
873	Patch Kit/8 Patches	PK-7098	2.29
874	Racing Socks, M	SO-R809-M	8.99
875	Racing Socks, L	SO-R809-L	8.99
877	Bike Wash - Dissolver	CL-9009	7.95
921	Mountain Tire Tube	TT-M928	4.99
922	Road Tire Tube	TT-R982	3.99
923	Touring Tire Tube	TT-T092	4.99

Status Bar: The bottom status bar indicates 'Query executed successfully.' and shows the current session information: 'LAPTOP-21U2VOMQ (16.0 RTM) | LAPTOP-21U2VOMQ\Geedhu... | AdventureWorks2019 | 00:00:00 | 13 rows'.

Q5.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio'. The menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains icons for New Query, Open, Save, Undo, Redo, and Execute. The Object Explorer on the left shows the 'Production.Product' table expanded, listing columns such as ProductID, Name, ProductNumber, MakeFlag, FinishedGoodsFlag, Color, SafetyStockLevel, ReorderPoint, StandardCost, ListPrice, Size, SizeUnitMeasureCode, WeightUnitMeasureCode, Weight, DaysToManufacture, ProductLine, Class, Style, ProductSubcategoryID, ProductModelID, SellStartDate, SellEndDate, DiscontinuedDate, rowguid, and ModifiedDate. The main query editor displays the following SQL code:

```
-- Q5. Display product id, product name, number, list price of all products
--where list price either 9.5 or 2.29

select ProductID,Name,ProductNumber,ListPrice from Production.Product
where ListPrice = 9.50 or ListPrice = 2.29
```

The 'Results' tab at the bottom shows the output of the query as a table with 4 columns: ProductID, Name, ProductNumber, and ListPrice. The table contains 3 rows of data.

	ProductID	Name	ProductNumber	ListPrice
1	709	Mountain Bike Socks, M	SO-B909-M	9.50
2	710	Mountain Bike Socks, L	SO-B909-L	9.50
3	873	Patch Kit/8 Patches	PK-7098	2.29

Q6.

SQLLab4.sql - LAPTOP-21U2VOMQ.AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person
 - Columns
 - BusinessEntityID (PK, FK)
 - PersonType (nvarchar(2), not null)
 - NameStyle (NameStyleID)
 - Title (nvarchar(8), null)
 - FirstName (Name(nvarchar(50)))
 - MiddleName (Name(nvarchar(50)))
 - LastName (Name(nvarchar(50)))
 - Suffix (nvarchar(10), null)
 - EmailPromotion (int, not null)
 - AdditionalContactInfo (xml)
 - Demographics (XML(PersonDemographics))
 - rowguid (uniqueidentifier)
 - ModifiedDate (datetime)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
- 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.ProductModelPriceHistory
- Production.ProductPhoto
- Production.ProductProductPhoto

-- Q6. Concatenate Last Name, First Name and Middle Name from the Person table with appropriate commas and spaces between the data.

```
select concat(LastName, ', ', FirstName, ', ', MiddleName) as FullName from Person.Person
```

150 %

Results Messages

	FullName
1	Abbas, Syed, E
2	Abel, Catherine, R.
3	Abercrombie, Kim,
4	Abercrombie, Kim,
5	Abercrombie, Kim, B
6	Abolrous, Hazem, E
7	Abolrous, Sam,
8	Acevedo, Humberto,
9	Achong, Gustavo,
10	Ackerman, Pilar,
11	Ackerman, Pilar, G
12	Adams, Aaron, B
13	Adams, Adam,
14	Adams, Alex, C
15	Adams, Alexandra, J
16	Adams, Allison, L
17	Adams, Amanda, P
18	Adams, Amber,
19	Adams, Andrea, M
20	Adams, Angel,
21	Adams, Bailey,
22	Adams, Ben.

Query executed successfully.

LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 19,972 rows

Q7.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'AdventureWorks2019'. The 'Object Explorer' on the left shows the database structure, including tables like 'HumanResources.Employee'. The 'Query Editor' in the center contains a SQL query to select distinct job titles from the 'HumanResources.Employee' table, ordered by job title in descending order. The 'Results' pane at the bottom displays the output of the query, showing 22 rows of job titles, with 'Vice President of Sales' at the top and 'Production Technician - WC45' at the bottom. The status bar at the bottom indicates the query was executed successfully and returned 67 rows.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Connect
- External Tables
- Graph Tables
- dbo.AWBuildVersion
- dbo.DatabaseLog
- dbo.ErrorLog
- HumanResources.Department
- HumanResources.Employee
 - Columns
 - BusinessEntityID (PK, FK)
 - NationalIDNumber (nvarchar(256))
 - LoginID (nvarchar(256))
 - OrganizationNode (hierarchyid)
 - OrganizationLevel (int)
 - JobTitle (nvarchar(50), not null)
 - BirthDate (date, not null)
 - MaritalStatus (nchar(1), not null)
 - Gender (nchar(1), not null)
 - HireDate (date, not null)
 - SalariedFlag (Flag(bit), not null)
 - VacationHours (smallint)
 - SickLeaveHours (smallint)
 - CurrentFlag (Flag(bit), not null)
 - rowguid (uniqueidentifier)
 - ModifiedDate (datetime)
- Keys
- Constraints
- Triggers
- Indexes
- Statistics
- HumanResources.Employee
- HumanResources.Employee
- HumanResources.JobCandidate
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContact
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person

SQLQuery1.sql - L...VOMQ\Geedhu (65)* SQLLab4.sql - LAP...VOMQ\Geedhu (72)*

```
-- Q7. Display distinct job titles from employee table and sort them in descending order.  
  
select distinct JobTitle from HumanResources.Employee order by JobTitle desc
```

150 %

Results Messages

	JobTitle
1	Vice President of Sales
2	Vice President of Production
3	Vice President of Engineering
4	Tool Designer
5	Stocker
6	Shipping and Receiving Supervisor
7	Shipping and Receiving Clerk
8	Senior Tool Designer
9	Senior Design Engineer
10	Scheduling Assistant
11	Sales Representative
12	Research and Development Manager
13	Research and Development Engineer
14	Recruiter
15	Quality Assurance Technician
16	Quality Assurance Supervisor
17	Quality Assurance Manager
18	Purchasing Manager
19	Purchasing Assistant
20	Production Technician - WC60
21	Production Technician - WC50
22	Production Technician - WC45

Query executed successfully. LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 67 rows

Q8.

SQLLab4.sql - LAPTOP-21U2VOMQ.AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- External Tables
- Graph Tables
- dbo.AWBuildVersion
- dbo.DatabaseLog
- dbo.ErrorLog
- HumanResources.Department
- HumanResources.Employee
 - Columns
 - BusinessEntityID (PK, FK)
 - NationalIDNumber (nvarchar(256))
 - LoginID (nvarchar(256))
 - OrganizationNode (hierarchyid)
 - OrganizationLevel (int)
 - JobTitle (nvarchar(50))
 - BirthDate (date, not null)
 - MaritalStatus (nchar(1))
 - Gender (nchar(1), not null)
 - HireDate (date, not null)
 - SalariedFlag (Flag(bit), not null)
 - VacationHours (smallint)
 - SickLeaveHours (smallint)
 - CurrentFlag (Flag(bit), not null)
 - rowguid (uniqueidentifier)
 - ModifiedDate (datetime)
- Keys
- Constraints
- Triggers
- Indexes
- Statistics
- HumanResources.Employee
- HumanResources.Employee
- HumanResources.JobCandidate
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContact
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person

SQLQuery1.sql - L...VOMQ\Geedhu (65)*

SQLLab4.sql - LAP...VOMQ\Geedhu (72)*

```
-- Q8. Display employee id as "ID", job title as "Job Title" and HireDate as "Date Hired"

select LoginID as ID, JobTitle as "Job Title", HireDate as "Date Hired" from HumanResources.Employee
```

150 %

Results Messages

	ID	Job Title	Date Hired
1	adventure-works\ken0	Chief Executive Officer	2009-01-14
2	adventure-works\terri0	Vice President of Engineering	2008-01-31
3	adventure-works\roberto0	Engineering Manager	2007-11-11
4	adventure-works\rob0	Senior Tool Designer	2007-12-05
5	adventure-works\gail0	Design Engineer	2008-01-06
6	adventure-works\jossef0	Design Engineer	2008-01-24
7	adventure-works\dylan0	Research and Development Manager	2009-02-08
8	adventure-works\diane1	Research and Development Engineer	2008-12-29
9	adventure-works\gigi0	Research and Development Engineer	2009-01-16
10	adventure-works\michael6	Research and Development Manager	2009-05-03
11	adventure-works\ovidiu0	Senior Tool Designer	2010-12-05
12	adventure-works\thierry0	Tool Designer	2007-12-11
13	adventure-works\janice0	Tool Designer	2010-12-23
14	adventure-works\michael8	Senior Design Engineer	2010-12-30
15	adventure-works\sharon0	Design Engineer	2011-01-18
16	adventure-works\david0	Marketing Manager	2007-12-20
17	adventure-works\kevin0	Marketing Assistant	2007-01-26
18	adventure-works\john5	Marketing Specialist	2011-02-07
19	adventure-works\mary2	Marketing Assistant	2011-02-14
20	adventure-works\wanida0	Marketing Assistant	2011-01-07
21	adventure-works\terry0	Marketing Specialist	2009-03-02
22	adventure-works\sarva0	Marketing Specialist	2008-12-12

Query executed successfully.

LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 290 rows

Q9.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Connect
- dbo.DatabaseLog
- dbo.ErrorLog
- HumanResources.Department
- HumanResources.Employee
 - Columns
 - BusinessEntityID (PK, FK)
 - NationalIDNumber (nvarchar(15))
 - LoginID (nvarchar(256))
 - OrganizationNode (hierarchyid)
 - OrganizationLevel (smallint)
 - JobTitle (nvarchar(50), not null)
 - BirthDate (date, not null)
 - MaritalStatus (nvarchar(1), not null)
 - Gender (nvarchar(1), not null)
 - HireDate (date, not null)
 - SalariedFlag (Flag(bit), not null)
 - VacationHours (smallint)
 - SickLeaveHours (smallint)
 - CurrentFlag (Flag(bit), not null)
 - rowguid (uniqueidentifier)
 - ModifiedDate (datetime)
- Keys
- Constraints
- Triggers
- Indexes
- Statistics
- HumanResources.Employee
- HumanResources.Employee
- HumanResources.JobCandidate
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContact
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person
 - Columns
 - BusinessEntityID (PK, FK)
 - PersonType (nvarchar(2), not null)

SQLQuery1.sql - L...VOMQ\Geedhu (65))* SQLLab4.sql - LAP...VOMQ\Geedhu (72))*

```
-- Q9. Display employee last and first name as "Employee Name", job title as "Job Title",  
--hire date as "Date Hired" and sort data by last then first name.  
  
select concat(P.LastName, ' ', P.FirstName) as "Employee Name", E.JobTitle as "Job title",  
E.HireDate as "Date Hired" from Person.Person P join HumanResources.Employee E  
on P.BusinessEntityID = E.BusinessEntityID order by p.LastName, p.FirstName
```

150 %

Results Messages

	Employee Name	Job title	Date Hired
1	Abbas, Syed	Pacific Sales Manager	2013-03-14
2	Abercrombie, Kim	Production Technician - WC60	2010-01-16
3	Abolrous, Hazem	Quality Assurance Manager	2009-02-28
4	Ackerman, Pilar	Shipping and Receiving Supervisor	2009-01-02
5	Adams, Jay	Production Technician - WC60	2009-03-05
6	Ajenstat, François	Database Administrator	2009-01-17
7	Alberts, Amy	European Sales Manager	2012-04-16
8	Alderson, Greg	Production Technician - WC45	2008-12-02
9	Alexander, Sean	Quality Assurance Technician	2008-12-28
10	Altman, Gary	Facilities Manager	2009-12-02
11	Anderson, Nancy	Production Technician - WC60	2009-01-02
12	Ansman-Wolfe, Pamela	Sales Representative	2011-05-31
13	Ariffin, Zainal	Document Control Manager	2009-01-04
14	Bacon, Dan	Application Specialist	2009-01-11
15	Baker, Bryan	Production Technician - WC60	2009-01-21
16	Baker, Mary	Production Technician - WC10	2009-12-25
17	Barbieri, Angela	Production Technician - WC50	2009-01-20
18	Barber, David	Assistant to the Chief Financial Officer	2009-01-12
19	Barreto de Maltos, Paula	Human Resources Manager	2008-12-06
20	Benshoof, Wanida	Marketing Assistant	2011-01-07
21	Berg, Karen	Application Specialist	2009-02-16
22	Berg, Karen	Document Control Assistant	2009-02-09

Query executed successfully. LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 290 rows

Q10.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Connect
- dbo.DatabaseLog
- dbo.ErrorLog
- HumanResources.Department
- HumanResources.Employee
 - Columns
 - BusinessEntityID (PK, FK)
 - NationalIDNumber (nva
 - LoginID (nvarchar(256)
 - OrganizationNode (hier
 - OrganizationLevel (Com
 - JobTitle (nvarchar(50), n
 - BirthDate (date, not null
 - MaritalStatus (nchar(1),
 - Gender (nchar(1), not nu
 - HireDate (date, not null)
 - SalariedFlag (Flag(bit), n
 - VacationHours (smallint
 - SickLeaveHours (smallin
 - CurrentFlag (Flag(bit), n
 - rowguid (uniqueidentifi
 - ModifiedDate (datetime
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
- HumanResources.EmployeeE
- HumanResources.Employeeef
- HumanResources.JobCandid
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddres
- Person.BusinessEntityContac
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person
 - Columns
 - BusinessEntityID (PK, FK)
 - PersonType (nchar(2), n

SQLQuery1.sql - L...VOMQ\Geedhu (65))* SQLLab4.sql - LAP...VOMQ\Geedhu (72))*

```
-- Q10. Display employee name, job title and Age

select concat(LastName, ' ', FirstName, ' ', MiddleName) as "Employee Name", JobTitle,
DATEDIFF(YY, BirthDate, getdate()) as Age
from Person.Person P join HumanResources.Employee E on P.BusinessEntityID = E.BusinessEntityID
```

150 %

Results Messages

	Employee Name	JobTitle	Age
1	Sánchez, Ken, J	Chief Executive Officer	54
2	Duffy, Terri, Lee	Vice President of Engineering	52
3	Tamburello, Roberto,	Engineering Manager	49
4	Walters, Rob,	Senior Tool Designer	49
5	Erickson, Gail, A	Design Engineer	71
6	Goldberg, Jossef, H	Design Engineer	64
7	Miller, Dylan, A	Research and Development Manager	36
8	Margheim, Diane, L	Research and Development Engineer	37
9	Matthew, Gigi, N	Research and Development Engineer	44
10	Raheem, Michael,	Research and Development Manager	39
11	Cracium, Ovidiu, V	Senior Tool Designer	45
12	D'Hers, Thierry, B	Tool Designer	64
13	Galvin, Janice, M	Tool Designer	34
14	Sullivan, Michael, I	Senior Design Engineer	44
15	Salavaria, Sharon, B	Design Engineer	62
16	Bradley, David, M	Marketing Manager	48
17	Brown, Kevin, F	Marketing Assistant	36
18	Wood, John, L	Marketing Specialist	45
19	Dempsey, Mary, A	Marketing Assistant	45
20	Benshoof, Wanida, M	Marketing Assistant	48
21	Eminhizer, Terry, J	Marketing Specialist	37
22	Hampadounsatava, Sariva, E	Marketing Specialist	36

Query executed successfully. LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 290 rows

Q11.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

- Connect
- dbo.DatabaseLog
- dbo.ErrorLog
- HumanResources.Department
- HumanResources.Employee
 - Columns
 - BusinessEntityID (PK, FK)
 - NationalIDNumber (nvarchar(256))
 - LoginID (nvarchar(256))
 - OrganizationNode (hierarchyid)
 - OrganizationLevel (smallint)
 - JobTitle (nvarchar(50))
 - BirthDate (date, not null)
 - MaritalStatus (nchar(1))
 - Gender (nchar(1), not null)
 - HireDate (date, not null)
 - SalariedFlag (Flag(bit), not null)
 - VacationHours (smallint)
 - SickLeaveHours (smallint)
 - CurrentFlag (Flag(bit), not null)
 - rowguid (uniqueidentifier)
 - ModifiedDate (datetime)
- Keys
- Constraints
- Triggers
- Indexes
- Statistics
- HumanResources.Employee
- HumanResources.Employee
- HumanResources.JobCandidate
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContact
- Person.ContactType
- Person.CountryRegion
- Person.EmailAddress
- Person.Password
- Person.Person
 - Columns
 - BusinessEntityID (PK, FK)
 - PersonType (nchar(2), not null)

SQLQuery1.sql - L...VOMQ\Geedhu (65)* SQLLab4.sql - LAP...VOMQ\Geedhu (72)*

```
-- Q11. Display only one employee who has the most vacation hours. Display employee name,
--job title and vacation hours.

select TOP 1 concat(LastName, ', ', FirstName, ', ', MiddleName) as "Employee Name", JobTitle,
VacationHours
from Person.Person P join HumanResources.Employee E on P.BusinessEntityID = E.BusinessEntityID
order by VacationHours desc
```

150 %

Results Messages

	Employee Name	JobTitle	VacationHours
1	Sánchez, Ken, J	Chief Executive Officer	99

Query executed successfully. LAPTOP-21U2VOMQ (16.0 RTM) LAPTOP-21U2VOMQ\Geedhu... AdventureWorks2019 00:00:00 1 rows

Q 12.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'SQLLab4.sql - LAPTOP-21U2VOMQ.AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))'.

The Object Explorer on the left shows the database structure for 'AdventureWorks2019'. The 'Sales' folder is expanded, showing tables like 'Sales.SalesPersonQuotaHistory', 'Sales.SalesReason', 'Sales.SalesTaxRate', and 'Sales.SalesTerritory'. The 'Sales.SalesTerritory' table is selected, showing its columns: 'TerritoryID (PK, int, not null)', 'Name (Name(nvarchar(50), not null)', 'CountryRegionCode (FK, nvarchar(3), not null)', 'Group (nvarchar(50), not null)', 'SalesYTD (money, not null)', 'SalesLastYear (money, not null)', 'CostYTD (money, not null)', 'CostLastYear (money, not null)', 'rowguid (uniqueidentifier, not null)', and 'ModifiedDate (datetime, not null)'. It also shows keys, constraints, triggers, indexes, and statistics.

The main query editor shows the following SQL query:

```
-- Q12. Display the number of sales territories as "Number of Sales Territories".
select count(TerritoryID) as "Number of Sales Territories" from Sales.SalesTerritory
```

The Results pane at the bottom shows the output of the query:

	Number of Sales Territories
1	10

Q13.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'AdventureWorks2019'. The Object Explorer on the left shows the 'Sales' database expanded, with the 'SalesTerritory' table selected. The main query editor contains the following SQL code:

```
-- Q13. Add up the sales year to date for all sales territories and display as "Sum of All Sales".  
select sum(SalesYTD) as "Sum of ALL Sales" from Sales.SalesTerritory
```

Below the query editor, the 'Results' pane shows the output of the query:

	Sum of ALL Sales
1	52751209.9534

Q 14.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'AdventureWorks2019'. The Object Explorer on the left shows the database structure, including tables like Sales.SalesPersonQuotaHistory, Sales.SalesReason, Sales.SalesTaxRate, Sales.SalesTerritory, and Sales.SalesTerritoryHistory. The main query editor displays a SQL query for Q14, which calculates the sum, average, minimum, and maximum of SalesYTD for all sales territories. The query is as follows:

```
-- Q14. Display sum of all SalesYTD sales as "Sum of All Sales", average sale as "Average Sale",  
--minimum sale as "Minimum Sale" and maximum sale as "Maximum Sale".  
  
select sum(SalesYTD) as "Sum of ALL Sales", avg(SalesYTD) as "Average Sale",  
min(SalesYTD) as "Minimum Sale", max(SalesYTD) as "Maximum Sale" from Sales.SalesTerritory
```

The Results pane at the bottom shows the output of the query, which is a single row with four columns: Sum of ALL Sales, Average Sale, Minimum Sale, and Maximum Sale. The values are 52751209.9534, 5275120.9953, 2402176.8476, and 10510853.8739 respectively.

	Sum of ALL Sales	Average Sale	Minimum Sale	Maximum Sale
1	52751209.9534	5275120.9953	2402176.8476	10510853.8739

Q 15:

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the current file is 'SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))' - Microsoft SQL Server Management Studio. The menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains various icons for file operations, query execution, and window management. The Object Explorer on the left shows the database structure, with the 'Person' schema expanded, revealing tables like 'Person.Address', 'Person.BusinessEntity', and 'Person.CountryRegion'. The 'Person.CountryRegion' table is selected, showing its columns: 'CountryRegionCode' (PK), 'Name' (nvarchar(50)), and 'ModifiedDate' (datetime). The main query editor displays the following SQL script:

```
-- Q15. Insert a new CountryRegion record in [Person].[CountryRegion]. Display new region that has been inserted.  
  
insert into Person.CountryRegion (CountryRegionCode,Name) Values ('AND','Andaman and Nicobar Islands');  
  
select * from Person.CountryRegion where CountryRegionCode = 'AND'
```

The Results pane at the bottom shows the output of the query, displaying a single record with the following details:

	CountryRegionCode	Name	ModifiedDate
1	AND	Andaman and Nicobar Islands	2023-06-14 19:17:02.517

The Solution Explorer on the right shows the project structure, including 'Solution 'Solution1' (0 projects)' and 'Miscellaneous Files' containing 'SQLLab4.sql' and 'SQLQuery1.sql'.

Q16:

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))'.

The Object Explorer on the left shows the database structure, with 'Person.CountryRegion' expanded. The 'Columns' folder shows 'CountryRegionCode (PK)', 'Name (Name(nvarchar(50)))', and 'ModifiedDate (datetime)'. The 'Keys' folder shows a primary key constraint on 'CountryRegionCode'.

The query editor displays the following SQL script:

```
-- Q16.Update new country region. Display new region that has been updated.  
  
update Person.CountryRegion set Name = 'Andaman' where Name = 'Andaman and Nicobar Islands'  
  
select * from Person.CountryRegion where CountryRegionCode = 'AND'
```

The Results pane at the bottom shows the output of the query, displaying a single row with the following data:

	CountryRegionCode	Name	ModifiedDate
1	AND	Andaman	2023-06-14 19:17:02.517

Q17.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'AdventureWorks2019'. The Object Explorer on the left shows the database structure, with 'Person.CountryRegion' expanded to show its columns: 'CountryRegionCode (PK)', 'Name (Name(nvarchar(5))', and 'ModifiedDate (datetime)'. The main query window contains the following SQL code:

```
-- Q17. Delete new country region. Display results of query that shows
--that new region does not exist anymore.

DELETE FROM Person.CountryRegion where CountryRegionCode = 'AND'

select * from Person.CountryRegion where CountryRegionCode = 'AND'
```

Below the query window, the 'Results' tab is active, showing a table with the following columns: 'CountryRegionCode', 'Name', and 'ModifiedDate'. The table is currently empty.

Q18.

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio'. The menu bar includes File, Edit, View, Query, Project, Tools, Window, and Help. The toolbar contains icons for New Query, Open, Save, Execute, and other standard database operations. The Object Explorer on the left shows the 'AdventureWorks2019' database structure, including tables like HumanResources.Department, Person.Address, and Person.ContactType. The main query editor window shows a SQL query: `--Q18. Display the current date and time as "Current date and time".` followed by `SELECT GETDATE() AS "Current Date and Time"`. The Results pane at the bottom shows a single row with the value '2023-06-14 19:42:15.287' under the column 'Current Date and Time'.

SQLLab4.sql - LAPTOP-21U2VOMQ\AdventureWorks2019 (LAPTOP-21U2VOMQ\Geedhu (72))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

AdventureWorks2019 Execute

Object Explorer

Connect

- HumanResources.Department
- HumanResources.Employee
- HumanResources.Employeef
- HumanResources.Employeeef
- HumanResources.JobCandid
- HumanResources.Shift
- Person.Address
- Person.AddressType
- Person.BusinessEntity
- Person.BusinessEntityAddress
- Person.BusinessEntityContac
- Person.ContactType
- Person.CountryRegion
- Columns
 - CountryRegionCode (PK)
 - Name (Name(nvarchar(5
 - ModifiedDate (datetime
- Keys
- Constraints
- Triggers
- Indexes
- Statistics
- Person.EmailAddress
- Person.Password
- Person.Person
- Columns
 - BusinessEntityID (PK, FK

SQLQuery1.sql - L...VOMQ\Geedhu (65))* SQLLab4.sql - LAP...VOMQ\Geedhu (72))*

--Q18. Display the current date and time as "Current date and time".

SELECT GETDATE() AS "Current Date and Time"

150 %

Results Messages

	Current Date and Time
1	2023-06-14 19:42:15.287

Q19.

The screenshot displays the Microsoft SQL Server Management Studio interface. The title bar indicates the connection to 'AdventureWorks2019'. The 'Object Explorer' on the left shows the database structure, including tables like 'Sales.SalesPersonQuotaHistc', 'Sales.SalesReason', 'Sales.SalesTaxRate', and 'Sales.SalesTerritory'. The 'Query Editor' window shows a SQL query for Q19. The query is as follows:

```
--Q19. Display the current month only as "Current month"  
  
SELECT MONTH(GETDATE()) AS "Current Month"
```

The query has been executed, and the results are shown in the 'Results' pane at the bottom. The results table has one column, 'Current Month', and one row with the value 6.

Current Month
6

Q20.

The screenshot shows the Microsoft SQL Server Management Studio interface. The title bar indicates the connection is to 'AdventureWorks2019'. The Object Explorer on the left displays the database schema, including tables like HumanResources.Department, HumanResources.Employee, and Person.Address. The main query window shows the following SQL code:

```
-- Q20. Display today's date one year from now.  
  
SELECT DATEADD(YEAR,+1,GETDATE()) AS "Today's date one year from now"
```

The query has been executed, and the Results pane at the bottom shows a single row of data:

	Today's date one year from now
1	2024-06-14 19:48:23.987