

1.

USE AdventureWorks2019

GO

SELECT * FROM HumanResources.Employee

ORDER BY JobTitle ASC

Output:

	BusinessEntityID	NationalIDNumber	LoginID	OrganizationNode	OrganizationLevel	JobTitle	BirthDate	MaritalStatus	Gender	HireDate	SalariedFlag	VacationHours	SickLeaveHours
1	245	36391111	adventure-works\barbara1	0x85B080	3	Accountant	1976-01-06	M	F	2009-02-18	1	58	49
2	248	480951955	adventure-works\mike0	0x85B380	3	Accountant	1979-07-01	S	M	2009-03-08	1	59	49
3	241	30845	adventure-works\david6	0x85A0	2	Accounts Manager	1983-07-08	M	M	2009-01-30	1	57	48
4	246	663843431	adventure-works\dragan0	0x85B180	3	Accounts Payable Specialist	1977-02-14	M	M	2009-02-11	0	63	51
5	247	519756660	adventure-works\janet0	0x85B280	3	Accounts Payable Specialist	1979-03-09	M	F	2009-03-01	0	64	52
6	242	363923697	adventure-works\deborah0	0x85AB	3	Accounts Receivable Specialist	1976-03-06	M	F	2008-12-18	0	60	50
7	243	60517918	adventure-works\candy0	0x85AD	3	Accounts Receivable Specialist	1976-02-23	S	F	2009-01-06	0	61	50
8	244	931190412	adventure-works\bryan1	0x85AF	3	Accounts Receivable Specialist	1984-09-20	S	M	2009-01-24	0	62	51
9	267	58317344	adventure-works\karen1	0x85A0	2	Application Specialist	1978-05-19	S	F	2009-02-16	1	74	57
10	268	31474799	adventure-works\ramesh0	0x8DE0	2	Application Specialist	1988-03-13	S	M	2009-02-03	1	73	56
11	269	671089628	adventure-works\dan0	0x8E10	2	Application Specialist	1987-05-26	M	M	2009-01-11	1	72	56
12	272	525932996	adventure-works\janaina0	0x8E70	2	Application Specialist	1985-01-30	M	F	2008-12-23	1	71	55
13	262	231203233	adventure-works\david5	0x8610	2	Assistant to the Chief Financial Officer	1964-06-21	S	M	2009-01-12	0	56	48
14	239	619308550	adventure-works\mindy0	0x857080	3	Benefits Specialist	1984-11-20	M	F	2008-12-25	0	51	45
15	251	603686790	adventure-works\mikael0	0x85EB88	4	Buyer	1984-08-17	S	M	2009-02-10	0	59	49
16	252	792847334	adventure-works\lind0	0x85EB88	4	Buyer	1974-08-21	M	M	2009-02-28	0	60	50
17	253	407505660	adventure-works\linda2	0x85EB78	4	Buyer	1970-11-30	M	F	2009-12-17	0	56	48
18	254	482810518	adventure-works\lukko0	0x85EB84	4	Buyer	1970-11-24	M	M	2010-01-04	0	57	48
19	255	466142721	adventure-works\gordon0	0x85EBBC	4	Buyer	1966-11-29	M	M	2010-01-11	0	52	46
20	256	367453993	adventure-works\frank2	0x85EB94	4	Buyer	1952-05-12	M	M	2010-01-23	0	58	49
21	257	3811073001	adventure-works\eric2	0x85EB9C	4	Buyer	1972-09-17	S	M	2010-01-27	0	54	47
22	258	785853949	adventure-works\erin0	0x85EB82	4	Buyer	1971-01-04	S	F	2010-01-31	0	53	46
23	259	20269531	adventure-works\ben0	0x85EB86	4	Buyer	1973-06-03	M	M	2010-03-09	0	55	47
24	1	295847284	adventure-works\ken0	NULL	NULL	Chief Executive Officer	1969-01-29	S	M	2009-01-14	1	99	69
25	234	184188301	adventure-works\aura1	0x84	1	Chief Financial Officer	1976-01-06	M	F	2009-01-31	1	0	20
26	221	260805477	adventure-works\chriss1	0x7B5B08	4	Control Specialist	1987-05-26	M	M	2009-03-06	0	75	57
27	218	540688287	adventure-works\engizi2	0x7B5B00	4	Control Specialist	1990-04-28	S	M	2008-12-16	0	76	58
28	270	643805155	adventure-works\francois0	0x8E30	2	Database Administrator	1975-05-17	S	M	2009-01-17	1	67	53
29	271	929666391	adventure-works\dan1	0x8E50	2	Database Administrator	1976-01-06	M	M	2009-01-22	1	66	53
30	5	695256908	adventure-works\gail0	0x8ADA	3	Design Engineer	1952-09-27	M	F	2008-01-06	1	5	22
31	8	688271802	adventure-works\linda1	0x8A8F	2	Design Engineer	1962-11-21	M	M	2008-11-24	1	6	24

Query executed successfully.

LAPTOP-938SNHB2\MSQLSERVER... LAPTOP-938SNHB2\Ongez... AdventureWorks2019 00:00:00 290 rows

2.

USE AdventureWorks2019

GO

SELECT p.* FROM Person.Person as p

ORDER BY p.LastName

Output:

	BusinessEntityID	PersonType	NameStyle	Title	FirstName	MiddleName	LastName	Suffix	EmailPromotion	AdditionalContactInfo	Demographics	rowguid
1	285	SP	0	Mr.	Syed	E	Abbas	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	FF284881-01C2-4C1
2	293	SC	0	Ms.	Catherine	R.	Abel	NULL	1	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	D54E0552-C226-4C	
3	295	SC	0	Ms.	Kim	NULL	Abercrombie	NULL	0	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	F7CB0B48-0B44-47	
4	2170	GC	0	NULL	Kim	NULL	Abercrombie	NULL	2	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	24F01B54-7A67-4B
5	38	EM	0	NULL	Kim	B	Abercrombie	NULL	2	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	9A2163B3-2F4D-4F
6	211	EM	0	NULL	Hazem	E	Abdulros	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	C2637051-25A5-44E
7	2357	GC	0	NULL	Sam	NULL	Abdulros	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	788BF41E-ED14-4E
8	297	SC	0	Sr.	Humberto	NULL	Acevedo	NULL	2	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	5A41D336-8AC1-44	
9	291	SC	0	Mr.	Gustavo	NULL	Achong	NULL	2	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	D4C132D3-FCB5-42	
10	299	SC	0	Sra.	Pilar	NULL	Ackerman	NULL	0	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	DF1FB8AB-2323-43	
11	121	EM	0	NULL	Pilar	G	Ackerman	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	81F50324-D0B5-4E
12	16867	IN	0	NULL	Aaron	B	Adams	NULL	2	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	B46210F5-AC3C-46E
13	16901	IN	0	NULL	Adam	NULL	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	16C926AD-B2AE-4C
14	16724	IN	0	NULL	Alex	C	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	AF998B4C-00EF-42
15	10263	IN	0	NULL	Alexandra	J	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	90A13D3C-DC8C-44
16	10312	IN	0	NULL	Allison	L	Adams	NULL	2	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	3E1A7BC5-E85A-4B
17	10274	IN	0	NULL	Amanda	P	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	9650B992-E01E-42
18	10292	IN	0	NULL	Amber	NULL	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	0850CD17-E142-4F
19	10314	IN	0	NULL	Andrea	M	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	A6BF9164-29F5-41A
20	16699	IN	0	NULL	Angel	NULL	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	E88F898D-0493-4D
21	10299	IN	0	NULL	Bailey	NULL	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	B3252441-E5B0-44F
22	1770	IN	0	Mr.	Ben	NULL	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	AD322F5C-D052-4D
23	4194	IN	0	NULL	Blake	L	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	7944C305-C520-411
24	305	SC	0	Ms.	Carla	J.	Adams	NULL	0	<AdditionalContactInfo xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	5F183B92-1648-494	
25	16691	IN	0	NULL	Carlos	NULL	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	481FEF73-5084-4F
26	4891	IN	0	NULL	Charles	R	Adams	NULL	2	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	FAA29129-5894-4F8
27	10251	IN	0	NULL	Chloe	A	Adams	NULL	1	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	5C76DEF0-C793-E48
28	16872	IN	0	NULL	Connor	NULL	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	A3FAE63D-B957-4A
29	10293	IN	0	NULL	Courtney	C	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	205564F6-8F29-4D
30	4503	IN	0	NULL	Dalton	NULL	Adams	NULL	0	NULL	<IndividualSurvey xmlns="http://schemas.microsoft.com/office/2006/08/schemas/contacts">	3346FAF4-0865-4B4

Query executed successfully.

LAPTOP-938SNHB2\MSQLSERVER... | LAPTOP-938SNHB2\Ongez... | AdventureWorks2019 | 00:00:02 | 19 972 rows

3.

USE AdventureWorks2019

GO

```
SELECT FirstName, LastName, BusinessEntityID AS Employee_id FROM Person.Person
ORDER BY LastName ASC
```

Output:

Results Messages

	FirstName	LastName	Employee_id
1	Syed	Abbas	285
2	Catherine	Abel	293
3	Kim	Abercrombie	295
4	Kim	Abercrombie	2170
5	Kim	Abercrombie	38
6	Hazem	Abolrous	211
7	Sam	Abolrous	2357
8	Humberto	Acevedo	297
9	Gustavo	Achong	291
10	Pilar	Ackerman	299
11	Pilar	Ackerman	121
12	Aaron	Adams	16867
13	Adam	Adams	16901
14	Alex	Adams	16724
15	Alexandra	Adams	10263
16	Allison	Adams	10312
17	Amanda	Adams	10274
18	Amber	Adams	10292
19	Andrea	Adams	10314
20	Angel	Adams	16699
21	Bailey	Adams	10299
22	Ben	Adams	1770
23	Blake	Adams	4194
24	Carla	Adams	305
25	Carlos	Adams	16691
26	Charles	Adams	4891
27	Chloe	Adams	10251
28	Connor	Adams	16872
29	Courtney	Adams	10293
30	Dalton	Adams	4503

✓ Query executed successfully.

4.

USE AdventureWorks2019

GO

```
SELECT ProductID, ProductNumber, Name FROM Production.Product
WHERE SellStartDate IS NOT NULL AND ProductLine = 'T'
ORDER BY Name ASC
```

Output:

Results Messages

	ProductID	ProductNumber	Name
1	890	FR-T98U-46	HL Touring Frame - Blue, 46
2	891	FR-T98U-50	HL Touring Frame - Blue, 50
3	892	FR-T98U-54	HL Touring Frame - Blue, 54
4	893	FR-T98U-60	HL Touring Frame - Blue, 60
5	887	FR-T98Y-46	HL Touring Frame - Yellow, 46
6	888	FR-T98Y-50	HL Touring Frame - Yellow, 50
7	889	FR-T98Y-54	HL Touring Frame - Yellow, 54
8	885	FR-T98Y-60	HL Touring Frame - Yellow, 60
9	947	HB-T928	HL Touring Handlebars
10	916	SE-T924	HL Touring Seat/Saddle
11	903	FR-T67U-44	LL Touring Frame - Blue, 44
12	895	FR-T67U-50	LL Touring Frame - Blue, 50
13	896	FR-T67U-54	LL Touring Frame - Blue, 54
14	897	FR-T67U-58	LL Touring Frame - Blue, 58
15	898	FR-T67U-62	LL Touring Frame - Blue, 62
16	899	FR-T67Y-44	LL Touring Frame - Yellow, 44
17	900	FR-T67Y-50	LL Touring Frame - Yellow, 50
18	901	FR-T67Y-54	LL Touring Frame - Yellow, 54
19	902	FR-T67Y-58	LL Touring Frame - Yellow, 58
20	886	FR-T67Y-62	LL Touring Frame - Yellow, 62
21	946	HB-T721	LL Touring Handlebars
22	914	SE-T312	LL Touring Seat/Saddle
23	912	SE-R908	ML Road Seat/Saddle
24	915	SE-T762	ML Touring Seat/Saddle
25	821	FW-T905	Touring Front Wheel

5.

USE AdventureWorks2019

GO

```
SELECT SalesOrderID, CustomerID, OrderDate, SubTotal, (TaxAmt/SubTotal)*100 AS
tax_percent FROM Sales.SalesOrderHeader
```

```
ORDER BY SubTotal ASC
```

Output:

Results Messages

	SalesOrderID	CustomerID	OrderDate	SubTotal	tax_percent
1	51782	30078	2013-06-30 00:00:00.000	1,374	7,99
2	51885	15640	2013-06-30 00:00:00.000	2,29	8,00
3	51886	18293	2013-06-30 00:00:00.000	2,29	8,00
4	52031	19088	2013-07-03 00:00:00.000	2,29	8,00
5	52371	11527	2013-07-10 00:00:00.000	2,29	8,00
6	52532	12370	2013-07-13 00:00:00.000	2,29	8,00
7	52682	11142	2013-07-16 00:00:00.000	2,29	8,00
8	52786	11637	2013-07-18 00:00:00.000	2,29	8,00
9	53015	19090	2013-07-23 00:00:00.000	2,29	8,00
10	53084	28094	2013-07-24 00:00:00.000	2,29	8,00
11	53088	11226	2013-07-24 00:00:00.000	2,29	8,00
12	53198	11321	2013-07-26 00:00:00.000	2,29	8,00
13	53248	19086	2013-07-27 00:00:00.000	2,29	8,00
14	53629	11218	2013-07-31 00:00:00.000	2,29	8,00
15	53674	18733	2013-08-01 00:00:00.000	2,29	8,00
16	53786	11196	2013-08-03 00:00:00.000	2,29	8,00
17	53787	11279	2013-08-03 00:00:00.000	2,29	8,00
18	53884	11521	2013-08-05 00:00:00.000	2,29	8,00
19	53886	11288	2013-08-05 00:00:00.000	2,29	8,00
20	54206	11632	2013-08-11 00:00:00.000	2,29	8,00
21	54596	12036	2013-08-18 00:00:00.000	2,29	8,00
22	54939	18932	2013-08-24 00:00:00.000	2,29	8,00
23	54987	11209	2013-08-25 00:00:00.000	2,29	8,00

✓ Query executed successfully.

6.

USE AdventureWorks2019

GO

SELECT DISTINCT JobTitle FROM HumanResources.Employee

ORDER BY JobTitle ASC

Output:

	JobTitle
1	Accountant
2	Accounts Manager
3	Accounts Payable Specialist
4	Accounts Receivable Specialist
5	Application Specialist
6	Assistant to the Chief Financial Officer
7	Benefits Specialist
8	Buyer
9	Chief Executive Officer
10	Chief Financial Officer
11	Control Specialist
12	Database Administrator
13	Design Engineer
14	Document Control Assistant
15	Document Control Manager
16	Engineering Manager
17	European Sales Manager
18	Facilities Administrative Assistant
19	Facilities Manager
20	Finance Manager
21	Human Resources Administrative Assistant
22	Human Resources Manager
23	Information Services Manager

✓ Query executed successfully.

7.

USE AdventureWorks2019

GO

```
SELECT CustomerID, SUM(Freight) AS total_freight FROM Sales.SalesOrderHeader
GROUP BY CustomerID
ORDER BY CustomerID ASC
```

Output:

Results Messages

	CustomerID	total_freight
1	11000	206,2249
2	11001	159,5971
3	11002	202,8511
4	11003	203,4823
5	11004	204,9003
6	11005	203,0334
7	11006	202,9759
8	11007	205,2751
9	11008	202,6578
10	11009	202,2833
11	11010	202,2011
12	11011	203,3261
13	11012	2,0315
14	11013	2,849
15	11014	3,4613
16	11015	62,5243
17	11016	58,307
18	11017	160,8579
19	11018	163,3321
20	11019	22,068
21	11020	57,9243
22	11021	59,299
23	11022	58,057

Query executed successfully.

8.

USE AdventureWorks2019

GO

```
SELECT CustomerID,SalesPersonID, AVG(SubTotal) AS avg_subtotal, SUM(SubTotal) AS sum_subtotal FROM Sales.SalesOrderHeader
```

```
GROUP BY CustomerID, SalesPersonID
```

```
ORDER BY CustomerID DESC
```

Output:

Results Messages

	CustomerID	SalesPersonID	avg_subtotal	sum_subtotal
1	30118	275	34638,1521	207828,9131
2	30118	277	35369,8284	70739,6569
3	30117	275	77171,7928	463030,757
4	30117	277	58954,1365	353724,8193
5	30116	276	46778,5502	187114,2011
6	30115	289	1114,6949	8917,5594
7	30114	290	1456,6238	11652,9911
8	30113	282	34148,2363	273185,8908
9	30112	280	93591,6217	93591,6217
10	30112	284	54909,3785	384365,6498
11	30111	277	69131,6007	276526,4031
12	30110	276	406,3188	1625,2755
13	30109	275	59857,2605	119714,521
14	30109	277	36114,5232	216687,1397
15	30108	289	36150,6454	144602,5816
16	30107	276	48090,7976	577089,5723
17	30106	275	6172,4534	12344,9068
18	30106	277	14809,7794	88858,6768
19	30105	280	26523,0027	26523,0027
20	30105	284	20957,8988	146705,2917
21	30104	282	1549,0503	4647,151
22	30104	287	968,4284	968,4284
23	30103	290	80468,2369	643745,8958

✔ Query executed successfully.

9.

USE AdventureWorks2019

GO

```
SELECT ProductID, SUM(Quantity) AS total_quantity FROM
Production.ProductInventory WHERE Shelf IN ('A','C','H')
GROUP BY ProductID HAVING SUM(Quantity) >500
ORDER BY ProductID ASC
```

Output:

	ProductID	total_quantity
1	1	761
2	2	791
3	3	909
4	4	900
5	316	532
6	317	593
7	319	797
8	320	1136
9	321	1750
10	322	1684
11	323	1684
12	324	1629
13	325	1210
14	326	1097
15	328	1044
16	329	1025
17	330	1005
18	331	831
19	350	719
20	355	546
21	356	518
22	367	643
23	371	585

✓ Query executed successfully.

10.

USE AdventureWorks2019

GO

```
SELECT SUM(Quantity) *10 AS total_quantity FROM Production.ProductInventory  
GROUP BY LocationID
```

Output:

Results Messages

	total_quantity
1	1860
2	831730
3	173190
4	728990
5	954770
6	9580
7	135840
8	1100
9	202950
10	3320
11	55490
12	204190
13	5080
14	51650

Query executed successfully.

11.

USE AdventureWorks2019

GO

```
SELECT p.BusinessEntityID, p.FirstName, p.LastName, ph.PhoneNumber AS
person_phone FROM Person.Person AS p
LEFT JOIN Person.PersonPhone AS ph ON p.BusinessEntityID = ph.BusinessEntityID
WHERE p.LastName LIKE 'L%'
ORDER BY p.LastName ASC, p.FirstName ASC
```

Output:

Results Messages

	BusinessEntityID	FirstName	LastName	person_phone
1	5527	Aaron	Lal	605-555-0159
2	5268	Adam	Lal	513-555-0110
3	12539	Alejandro	Lal	1 (11) 500 555-0117
4	19786	Alicia	Lal	1 (11) 500 555-0161
5	12004	Alisha	Lal	1 (11) 500 555-0119
6	16649	Alison	Lal	1 (11) 500 555-0177
7	5005	Alvin	Lal	1 (11) 500 555-0168
8	5070	Andres	Lal	1 (11) 500 555-0127
9	10416	Arturo	Lal	638-555-0164
10	8951	Ashlee	Lal	1 (11) 500 555-0148
11	6283	Austin	Lal	541-555-0141
12	11600	Barbara	Lal	1 (11) 500 555-0176
13	6744	Benjamin	Lal	1 (11) 500 555-0148
14	17275	Bethany	Lal	1 (11) 500 555-0196
15	3694	Bonnie	Lal	1 (11) 500 555-0191
16	9390	Brad	Lal	463-555-0111
17	20292	Bradley	Lal	1 (11) 500 555-0124
18	6943	Brandon	Lal	445-555-0135
19	9340	Brendan	Lal	660-555-0111
20	5581	Caleb	Lal	392-555-0153
21	6334	Cameron	Lal	906-555-0115
22	16953	Carl	Lal	1 (11) 500 555-0125
23	4496	Carly	Lal	1 (11) 500 555-0150
24	16290	Casey	Lal	1 (11) 500 555-0190
25	8890	Cassie	Lal	1 (11) 500 555-0148
26	20334	Chad	Lal	1 (11) 500 555-0147
27	6232	Christian	Lal	423-555-0171

12.

USE AdventureWorks2019

GO

SELECT SalesPersonID, CustomerID, SUM(SubTotal) AS sum_subtotal FROM Sales.SalesOrderHeader

WHERE SalesPersonID IS NOT NULL

GROUP BY ROLLUP (SalesPersonID, CustomerID)

ORDER BY SalesPersonID, CustomerID

Output:

Results Messages

	SalesPersonID	CustomerID	sum_subtotal
1	NULL	NULL	80487704,1832
2	274	NULL	1092123,8561
3	274	29491	33406,7043
4	274	29493	2146,962
5	274	29514	3405,1668
6	274	29523	34349,2656
7	274	29576	53,994
8	274	29579	35331,66
9	274	29604	647,994
10	274	29605	29482,0603
11	274	29616	138046,3212
12	274	29617	198993,3507
13	274	29623	1946,022
14	274	29650	83,988
15	274	29666	15842,6141
16	274	29669	3962,2441
17	274	29671	11802,564
18	274	29675	4254,45
19	274	29680	2709,6518
20	274	29691	209,256
21	274	29707	79994,1743
22	274	29716	61206,4782
23	274	29719	971,982
24	274	29722	125422,2078
25	274	29755	12206,364

✔ Query executed successfully.

13.

USE AdventureWorks2019

GO

SELECT LocationID, Shelf, SUM(Quantity) AS TotalQuantity FROM
Production.ProductInventory

GROUP BY ROLLUP (LocationID, Shelf)

ORDER BY LocationID, Shelf

Output:

Results Messages

	LocationID	Shelf	TotalQuantity
1	NULL	NULL	335974
2	1	NULL	72899
3	1	A	2727
4	1	C	13777
5	1	D	6551
6	1	E	8032
7	1	F	7614
8	1	G	3954
9	1	H	10905
10	1	J	5051
11	1	K	6751
12	1	L	7537
13	2	NULL	5549
14	2	B	900
15	2	C	1557
16	2	D	3092
17	3	NULL	186
18	3	A	186
19	4	NULL	110
20	4	A	110
21	5	NULL	20295
22	5	A	6572
23	5	B	1281
24	5	D	1215
25	5	E	1279

Query executed successfully.

14.

USE AdventureWorks2019

GO

```
SELECT LocationID, Shelf, SUM(Quantity) AS TotalQuantity FROM
Production.ProductInventory
```

```
GROUP BY ROLLUP (LocationID, Shelf)
```

```
ORDER BY LocationID, Shelf
```

Output:

Results | Messages

	LocationID	Shelf	TotalQuantity
1	NULL	NULL	335974
2	1	NULL	72899
3	1	A	2727
4	1	C	13777
5	1	D	6551
6	1	E	8032
7	1	F	7614
8	1	G	3954
9	1	H	10905
10	1	J	5051
11	1	K	6751
12	1	L	7537
13	2	NULL	5549
14	2	B	900
15	2	C	1557
16	2	D	3092
17	3	NULL	186
18	3	A	186
19	4	NULL	110
20	4	A	110

15.

USE AdventureWorks2019

GO

```
SELECT LocationID, SUM(Quantity) AS TotalQuantity FROM  
Production.ProductInventory
```

```
GROUP BY ROLLUP (LocationID)
```

```
ORDER BY LocationID
```

Output:

Results Messages

	LocationID	TotalQuantity
1	NULL	335974
2	1	72899
3	2	5549
4	3	186
5	4	110
6	5	20295
7	6	83173
8	7	17319
9	10	13584
10	20	5165
11	30	958
12	40	508
13	45	332
14	50	95477
15	60	20419

Query executed successfully.

16.

USE AdventureWorks2019

GO

SELECT CITY, COUNT(*) AS noofemployees FROM Person.Address

GROUP BY City

ORDER BY City ASC

Output:

Results Messages

	CITY	noofemployees
1	Abingdon	1
2	Albany	4
3	Alexandria	2
4	Alhambra	1
5	Alpine	1
6	Altadena	2
7	Altamonte Springs	1
8	Anacortes	3
9	Arlington	1
10	Ascheim	1
11	Atlanta	2
12	Auburn	1
13	Augsburg	2
14	Augusta	1
15	Aujan Mournede	1
16	Aurora	1
17	Austell	1
18	Austin	2
19	Bad Soden	1
20	Baldwin Park	1
21	Ballard	69
22	Baltimore	1
23	Barrie	1
24	Barstow	2
25	Basingstoke Hants	3

Query executed successfully.

17.

USE AdventureWorks2019

GO

```
SELECT YEAR(OrderDate) AS YearOfOrderDate, SUM(TotalDue) AS TotalDueOrder FROM
Sales.SalesOrderHeader
```

```
GROUP BY YEAR(OrderDate)
```

```
ORDER BY YEAR(OrderDate) ASC
```

Output:

Results Messages

	YearOfOrderDate	TotalDueOrder
1	2011	14155699,525
2	2012	37675700,312
3	2013	48965887,9632
4	2014	22419498,3157

18.

USE AdventureWorks2019

GO

```
SELECT YEAR(OrderDate) AS YearOfOrderDate, SUM(TotalDue) AS TotalDueOrder FROM
Sales.SalesOrderHeader

WHERE YEAR(OrderDate) <= 2016

GROUP BY YEAR(OrderDate)

ORDER BY YEAR(OrderDate) ASC
```

Output:

Results Messages

	YearOfOrderDate	TotalDueOrder
1	2011	14155699,525
2	2012	37675700,312
3	2013	48965887,9632
4	2014	22419498,3157

19.

USE AdventureWorks2019

GO

```
SELECT ContactTypeID, Name FROM Person.ContactType

WHERE Name LIKE '%Manager%'

ORDER BY ContactTypeID DESC
```

Output:

The screenshot shows a SQL query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is selected and displays a table with two columns: 'ContactTypeID' and 'Name'. The data is as follows:

	ContactTypeID	Name
1	19	Sales Manager
2	15	Purchasing Manager
3	13	Product Manager
4	8	Marketing Manager
5	6	International Marketing Manager
6	1	Accounting Manager

20.

USE AdventureWorks2019

GO

```
SELECT p.BusinessEntityID, p.LastName, p.FirstName FROM Person.Person AS p
JOIN Person.BusinessEntityContact AS bec ON p.BusinessEntityID = bec.PersonID
JOIN Person.ContactType AS ct ON bec.ContactTypeID = ct.ContactTypeID
WHERE ct.Name = 'Purchasing Manager'
ORDER BY p.LastName ASC, p.FirstName ASC
```

Output:

Results Messages

	BusinessEntityID	LastName	FirstName
1	1149	Alexander	Mary
2	363	Arakawa	Hannah
3	365	Arbelaez	Kyley
4	377	Ault	John
5	379	Avalos	Robert
6	389	Bailey	James
7	391	Baldwin	Douglas
8	399	Banks	Darrell
9	401	Barbariol	Angela
10	403	Barber	David
11	409	Barlow	Brenda
12	411	Barnhill	Josh
13	413	Barr	Adam
14	423	Bauer	Ciro
15	425	Beanston	Glenna
16	427	Beasley	Shaun
17	447	Ben-Sachar	Ido
18	449	Benson	Edna
19	453	Benson	Max
20	451	Benson	Payton
21	455	Bent	Scot
22	457	Bentley	Richard
23	465	Berger	John
24	467	Bergin	Kris
25	469	Berqlund	Andreas

Query executed successfully.

21.

USE AdventureWorks2019

GO

```
SELECT ROW_NUMBER() OVER (PARTITION BY a.PostalCode ORDER BY sp.SalesYTD
DESC) AS RowNum, p.LastName, sp.SalesYTD, a.PostalCode FROM Sales.SalesPerson
sp
```

```
INNER JOIN Person.Person p ON sp.BusinessEntityID = p.BusinessEntityID
```

```
INNER JOIN Person.Address a ON p.BusinessEntityID = a.AddressID
```

```
INNER JOIN Sales.SalesTerritory st ON sp.TerritoryID = st.TerritoryID
```

```
WHERE sp.SalesYTD <> 0 AND a.PostalCode IS NOT NULL
```

```
ORDER BY a.PostalCode ASC, sp.SalesYTD DESC
```

Output:

	RowNum	LastName	SalesYTD	PostalCode
1	1	Mitchell	4251368,5497	98027
2	2	Blythe	3763178,1787	98027
3	3	Carson	3189418,3662	98027
4	4	Reiter	2315185,611	98027
5	5	Vargas	1453719,4653	98027
6	6	Ansman-Wolfe	1352577,1325	98027
7	1	Pak	4116871,2277	98055
8	2	Varkey Chudukatil	3121616,3202	98055
9	3	Saraiva	2604540,7172	98055
10	4	Ito	2458535,6169	98055
11	5	Valdez	1827066,7118	98055
12	6	Mensa-Annan	1576562,1966	98055
13	7	Campbell	1573012,9383	98055
14	8	Tsoflias	1421810,9242	98055

22.

USE AdventureWorks2019

GO

```
SELECT ct.ContactTypeID, ct.Name AS ContactTypeName, COUNT(*) AS NoContacts
FROM Person.ContactType AS ct
JOIN Person.BusinessEntityContact AS bec ON ct.ContactTypeID = bec.ContactTypeID
GROUP BY ct.ContactTypeID, ct.Name HAVING COUNT(*) >= 100
ORDER BY NoContacts DESC
```

Output:

	ContactTypeID	ContactTypeName	NoContacts
1	11	Owner	266
2	15	Purchasing Manager	245
3	14	Purchasing Agent	242

23.

USE AdventureWorks2019

GO

```
SELECT CONVERT(date, eph.RateChangeDate) AS fromdate, p.LastName + ', ' +  
p.FirstName + COALESCE(' ' + LEFT(p.MiddleName, 1), '') AS nameinfull,
```

```
CAST(eph.Rate * 40 AS decimal(18,4)) AS salaryinaweek FROM  
HumanResources.EmployeePayHistory AS eph
```

```
INNER JOIN HumanResources.Employee AS e ON e.BusinessEntityID =  
eph.BusinessEntityID
```

```
INNER JOIN Person.Person AS p ON p.BusinessEntityID = e.BusinessEntityID
```

```
ORDER BY nameinfull ASC
```

Output:

Results Messages

	fromdate	nameinfull	salaryinaweek
1	2013-03-14	Abbas, Syed E	1924.0400
2	2010-01-16	Abercrombie, Kim B	498.0000
3	2009-02-28	Abolrous, Hazem E	1153.8480
4	2009-01-02	Ackerman, Pilar G	769.2320
5	2009-03-05	Adams, Jay G	498.0000
6	2009-01-17	Ajenstat, François P	1538.4600
7	2012-04-16	Alberts, Amy E	1924.0400
8	2008-12-02	Alderson, Greg F	400.0000
9	2008-12-28	Alexander, Sean P	423.0760
10	2009-12-02	Altman, Gary E	961.5400
11	2009-01-02	Anderson, Nancy A	498.0000
12	2011-05-31	Ansman-Wolfe, Pamela O	923.0760
13	2009-01-04	Arifin, Zainal T	711.5400
14	2009-01-11	Bacon, Dan K	1096.1520
15	2009-01-21	Baker, Bryan	498.0000
16	2009-12-25	Baker, Mary R	538.0000
17	2009-01-20	Barbariol, Angela W	440.0000
18	2009-01-12	Barber, David M	538.4600
19	2008-12-06	Barreto de Mattos, Paula M	1085.5760
20	2011-01-07	Benshoof, Wanida M	538.4600
21	2009-02-16	Berg, Karen A	1096.1520
22	2009-02-09	Berge, Karen R	410.0000
23	2009-02-02	Berglund, Andreas T	423.0760
24	2009-01-20	Berndt, Matthias T	380.0000
25	2010-03-07	Berry, Jo L	370.0000

Query executed successfully.

24.

USE AdventureWorks2019

GO

```
SELECT CONVERT(date, eph.RateChangeDate) AS fromdate, p.LastName + ' ' +
p.FirstName + COALESCE(' ' + LEFT(p.MiddleName, 1), '') AS nameinfull,
CAST(eph.Rate * 40 AS decimal(18,4)) AS salaryinaweek FROM
HumanResources.EmployeePayHistory AS eph
INNER JOIN HumanResources.Employee AS e ON e.BusinessEntityID =
eph.BusinessEntityID
INNER JOIN Person.Person AS p ON p.BusinessEntityID = e.BusinessEntityID
```

```

INNER JOIN (SELECT BusinessEntityID, MAX(RateChangeDate) AS LatestChange FROM
HumanResources.EmployeePayHistory

GROUP BY BusinessEntityID

) AS latest ON latest.BusinessEntityID = eph.BusinessEntityID AND latest.LatestChange
= eph.RateChangeDate

ORDER BY nameinfull ASC

```

Output:

	fromdate	nameinfull	salaryinaweek
1	2013-03-14	Abbas, Syed E	1924.0400
2	2010-01-16	Abercrombie, Kim B	498.0000
3	2009-02-28	Abolrous, Hazem E	1153.8480
4	2009-01-02	Ackerman, Pilar G	769.2320
5	2009-03-05	Adams, Jay G	498.0000
6	2009-01-17	Ajenstat, François P	1538.4600
7	2012-04-16	Alberts, Amy E	1924.0400
8	2008-12-02	Alderson, Greg F	400.0000
9	2008-12-28	Alexander, Sean P	423.0760
10	2009-12-02	Altman, Gary E	961.5400
11	2009-01-02	Anderson, Nancy A	498.0000
12	2011-05-31	Ansman-Wolfe, Pamela O	923.0760
13	2009-01-04	Arifin, Zainal T	711.5400
14	2009-01-11	Bacon, Dan K	1096.1520
15	2009-01-21	Baker, Bryan	498.0000
16	2009-12-25	Baker, Mary R	538.0000
17	2009-01-20	Barbariol, Angela W	440.0000
18	2009-01-12	Barber, David M	538.4600
19	2008-12-06	Barreto de Mattos, Paula M	1085.5760
20	2011-01-07	Benshoof, Wanida M	538.4600
21	2009-02-16	Berg, Karen A	1096.1520
22	2009-02-09	Berge, Karen R	410.0000
23	2009-02-02	Berglund, Andreas T	423.0760
24	2009-01-20	Berndt, Matthias T	380.0000
25	2010-03-07	Berry, Jo L	370.0000

Query executed successfully.

25.

USE AdventureWorks2019

GO

```

SELECT d.SalesOrderID, d.ProductID, d.OrderQty, agg.TotalQty AS [Total Quantity],
agg.AvgQty AS [Avg Quantity], agg.OrderCount AS [No of Orders],
agg.MinQty AS [Min Quantity], agg.MaxQty AS [Max Quantity] FROM
Sales.SalesOrderDetail AS d

CROSS JOIN (SELECT SUM(d2.OrderQty) AS TotalQty, AVG(CAST(d2.OrderQty AS
decimal(18,6))) AS AvgQty, COUNT(*) AS OrderCount, MIN(d2.OrderQty) AS MinQty,
MAX(d2.OrderQty) AS MaxQty FROM Sales.SalesOrderDetail AS d2

WHERE d2.SalesOrderID IN (43659, 43664)) AS agg

WHERE d.SalesOrderID IN (43659, 43664)

ORDER BY d.SalesOrderID, d.ProductID

```

Output:

	SalesOrderID	ProductID	OrderQty	Total Quantity	Avg Quantity	No of Orders	Min Quantity	Max Quantity
1	43659	709	6	40	2.000000	20	1	6
2	43659	711	4	40	2.000000	20	1	6
3	43659	712	2	40	2.000000	20	1	6
4	43659	714	3	40	2.000000	20	1	6
5	43659	716	1	40	2.000000	20	1	6
6	43659	771	1	40	2.000000	20	1	6
7	43659	772	1	40	2.000000	20	1	6
8	43659	773	2	40	2.000000	20	1	6
9	43659	774	1	40	2.000000	20	1	6
10	43659	776	1	40	2.000000	20	1	6
11	43659	777	3	40	2.000000	20	1	6
12	43659	778	1	40	2.000000	20	1	6
13	43664	714	1	40	2.000000	20	1	6
14	43664	716	1	40	2.000000	20	1	6
15	43664	771	3	40	2.000000	20	1	6
16	43664	772	1	40	2.000000	20	1	6
17	43664	773	1	40	2.000000	20	1	6
18	43664	775	4	40	2.000000	20	1	6
19	43664	777	2	40	2.000000	20	1	6
20	43664	778	1	40	2.000000	20	1	6

Query executed successfully.

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