

1.

```
select OI.OrderId, OI.Quantity, OI.ProductId,
       SUM(Quantity) over (partition by OrderId) as TotalQuantity,
       CAST(((1.0* Quantity)/(SUM(Quantity) over (partition by OrderId))*100)
            as decimal(6,2)) as PercentOfQuantity
from OrderItem as OI
```

	OrderId	Quantity	ProductId	TotalQuantity	percentOfQuantity
1	1	12	11	27	44.44
2	1	10	42	27	37.04
3	1	5	72	27	18.52
4	2	9	14	49	18.37
5	2	40	51	49	81.63
6	3	10	41	60	16.67
7	3	35	51	60	58.33
8	3	15	65	60	25.00
9	4	6	22	41	14.63
10	4	15	57	41	36.59
11	4	20	65	41	48.78
12	5	40	20	105	38.10
13	5	25	33	105	23.81
14	5	40	60	105	38.10
15	6	20	31	102	19.61
16	6	42	39	102	41.18
17	6	40	49	102	39.22
18	7	15	24	57	26.32

Query executed successfully. MSI\SQL EXPRESS (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 2,155 rows

2.

```
select O.Id, O.OrderNumber, O.CustomerId, O.OrderDate , DATENAME(dw,OrderDate) as [DayName]
from [Order] as O
```

	Id	OrderNumber	CustomerId	OrderDate	DayName
1	1	542378	85	2012-07-04 00:00:00.000	Wednesday
2	2	542379	79	2012-07-05 00:00:00.000	Thursday
3	3	542380	34	2012-07-08 00:00:00.000	Sunday
4	4	542381	84	2012-07-08 00:00:00.000	Sunday
5	5	542382	76	2012-07-09 00:00:00.000	Monday
6	6	542383	34	2012-07-10 00:00:00.000	Tuesday
7	7	542384	14	2012-07-11 00:00:00.000	Wednesday
8	8	542385	68	2012-07-12 00:00:00.000	Thursday
9	9	542386	88	2012-07-15 00:00:00.000	Sunday
10	10	542387	35	2012-07-16 00:00:00.000	Monday
11	11	542388	20	2012-07-17 00:00:00.000	Tuesday
12	12	542389	13	2012-07-18 00:00:00.000	Wednesday
13	13	542390	56	2012-07-19 00:00:00.000	Thursday
14	14	542391	61	2012-07-19 00:00:00.000	Thursday
15	15	542392	65	2012-07-22 00:00:00.000	Sunday
16	16	542393	20	2012-07-23 00:00:00.000	Monday
17	17	542394	24	2012-07-24 00:00:00.000	Tuesday
18	18	542395	7	2012-07-25 00:00:00.000	Wednesday

Query executed successfully. MSI\SQL EXPRESS (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 830 rows

3.

```

select OI.ProductId, OI.OrderId, OI.UnitPrice, OI.Quantity,
       P.ProductName,
       COALESCE(Fax,Phone) as ContactInfo,
       case coalesce(Fax, Phone) when Fax then 'Fax' else 'Phone' end as ContactType
from OrderItem as OI inner join Product as p on OI.ProductId=p.Id
inner join Supplier as S on p.SupplierId=S.Id

```

	ProductId	OrderId	UnitPrice	Quantity	ProductName	ContactInfo	ContactType
1	11	1	14.00	12	Queso Cabrales	(98) 598 76 54	Phone
2	42	1	9.80	10	Singaporean Hokkien Fried Mee	555-8787	Phone
3	72	1	34.80	5	Mozzarella di Giovanni	(0544) 60603	Fax
4	14	2	18.60	9	Tofu	(06) 431-7877	Phone
5	51	2	42.40	40	Manjimup Dried Apples	(02) 555-4873	Fax
6	41	3	7.70	10	Jack's New England Clam Chowder	(617) 555-3389	Fax
7	51	3	42.40	35	Manjimup Dried Apples	(02) 555-4873	Fax
8	65	3	16.80	15	Louisiana Fiery Hot Pepper Sauce	(100) 555-4822	Phone
9	22	4	16.80	6	Gustaf's Knäckebröd	031-987 65 91	Fax
10	57	4	15.60	15	Ravioli Angelo	(089) 6547667	Fax
11	65	4	16.80	20	Louisiana Fiery Hot Pepper Sauce	(100) 555-4822	Phone
12	20	5	64.80	40	Sir Rodney's Marmalade	(161) 555-4448	Phone
13	33	5	2.00	25	Geitost	(0)2-953010	Phone
14	60	5	27.20	40	Camembert Pierrot	38.76.98.58	Fax
15	31	6	10.00	20	Gorgonzola Telino	(0544) 60603	Fax
16	39	6	14.40	42	Chartreuse verte	(1) 03.83.00.62	Fax
17	49	6	16.00	40	Maxilaku	(953) 10956	Phone
18	24	7	3.60	15	Guaraná Fantástica	(11) 555 4640	Phone

Query executed successfully.

MSI\SQLSERVER (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 2,155 rows

4.

```

select DB_ID('Northwind') as [Northwind], OBJECT_ID('Supplier') as [Supplier],
       USER_ID() as [UserID], USER_NAME(1) as [UserName]

```

	Northwind	Supplier	UserID	UserName
1	13	805577908	1	dbo

Query executed successfully.

MSI\SQLSERVER (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 1 rows

5.

```

select [TableName] = OBJECT_NAME( object_id),
       user_updates, user_seeks, user_scans, user_lookups
from sys.dm_db_index_usage_stats as SIUS
where database_id = DB_ID('Northwind')
and OBJECT_NAME( object_id)='Order'

```

	TableName	user_updates	user_seeks	user_scans	user_lookups
1	Order	0	0	1	0

Query executed successfully.

MSI\SQLSERVER (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 1 rows

6.

```

with OrderCategory( Country, City, OrderNumber, alever)
as
(
    select Distinct Country,
    city= CAST('' as nvarchar(255)),
    orderNumber= CAST('' as nvarchar(255)),
    alever=0
    from Customer

    union all

    select C.Country,
    city= CAST(C.City as nvarchar(255)),
    orderNumber= CAST('' as nvarchar(255)),
    alever= OC.alever+1
    from OrderCategory as OC inner join Customer as C on OC.Country=C.Country
    where OC.alever=0

    union all

    select C.Country,
    city= CAST(C.City as nvarchar(255)),
    orderNumber= CAST(O.OrderNumber as nvarchar(255)),
    alever= OC.alever+1
    from OrderCategory as OC inner join Customer as C on OC.Country=C.Country and OC.City=C.City
    inner join [Order] as O on C.Id= O.CustomerId
    where OC.alever=1
)
select [Quoc Gia]= case when alever=0 then Country else '--' end,
       [Thanh Pho]= case when alever=1 then City else '----' end,
       [Hoa Don]= OrderNumber,
       Cap = alever
from OrderCategory
order by Country, City, OrderNumber, alever

```

	Quoc Gia	Thanh Pho	Hoa Don	Cap
1	Argentina	----		0
2	--	Buenos Aires		1
3	--	Buenos Aires		1
4	--	Buenos Aires		1
5	--	----	542539	2
6	--	----	542539	2
7	--	----	542539	2
8	--	----	542578	2
9	--	----	542578	2
10	--	----	542578	2
11	--	----	542651	2
12	--	----	542651	2
13	--	----	542651	2
14	--	----	542661	2
15	--	----	542661	2
16	--	----	542661	2
17	--	----	542846	2
18	--	----	542846	2

Query executed successfully.

MSI\SQL EXPRESS (15.0 RTM) MSI\GP65 (131) Northwind 00:00:00 1,529 rows



7.

```

with SumQuantityByOrder as
(
    select OI.OrderId, SumQuantity = SUM(Quantity)
    from OrderItem as OI
    group by OrderId
),
CustomerByOrder as
(
    select O.*, SQBO.SumQuantity -- Xuất hóa đơn
    from Customer as C inner join [Order] as O on C.Id=O.CustomerId
    inner join SumQuantityByOrder as SQBO on O.Id=SQBO.OrderId
    where C.Country='France'
)
select*
from CustomerByOrder
where SumQuantity>50

```

	Id	OrderDate	OrderNumber	CustomerId	TotalAmount	SumQuantity
1	50	2012-09-04 00:00:00.000	542427	7	1420.00	80
2	93	2012-10-29 00:00:00.000	542470	9	2564.40	72
3	113	2012-11-22 00:00:00.000	542490	7	7390.20	138
4	115	2012-11-25 00:00:00.000	542492	9	1549.60	94
5	161	2013-01-08 00:00:00.000	542538	23	1622.40	51
6	166	2013-01-14 00:00:00.000	542543	41	2123.20	78
7	189	2013-02-05 00:00:00.000	542566	7	2210.80	99
8	202	2013-02-18 00:00:00.000	542579	7	1838.20	69
9	212	2013-02-27 00:00:00.000	542589	84	1688.00	76
10	223	2013-03-11 00:00:00.000	542600	9	1820.80	53
11	264	2013-04-18 00:00:00.000	542641	9	3000.00	110
12	299	2013-05-23 00:00:00.000	542676	84	2812.00	80
13	319	2013-06-12 00:00:00.000	542696	7	2040.00	63
14	387	2013-08-15 00:00:00.000	542764	23	4985.50	102
15	416	2013-09-10 00:00:00.000	542793	9	2032.00	80
16	468	2013-10-23 00:00:00.000	542845	9	1296.00	51
17	508	2013-11-26 00:00:00.000	542885	9	2598.00	99
18	516	2013-12-03 00:00:00.000	542893	23	616.00	66
19	542	2013-12-22 00:00:00.000	542919	23	3687.00	93
20	567	2014-01-05 00:00:00.000	542944	84	2070.00	78
21	603	2014-01-23 00:00:00.000	542980	84	740.00	54
22	624	2014-02-05 00:00:00.000	543001	9	2083.40	78
23	685	2014-03-06 00:00:00.000	543062	9	1925.50	80