```sql
--cau1
select OrderId, Quantity, 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
```

110 %

Results | Messages

	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
19	7	21	55	57	36.84
20	7	21	74	57	36.84
21	8	20	2	110	18.18
22	8	35	16	110	31.82
23	8	25	36	110	22.73
24	8	30	59	110	27.27
25	9	15	53	27	55.56
26	9	12	77	27	44.44
27	10	25	27	46	54.35
28	10	6	39	46	13.04
29	10	15	77	46	32.61
30	11	50	2	121	41.32
31	11	65	5	121	53.72
32	11	6	32	121	4.96
33	12	10	21	11	90.91
34	12	1	37	11	9.09
35	13	16	41	102	15.69

```sql
7
8    -- cau2
9  □SELECT DATENAME(dw, OrderDate) AS [Day Name],*
10   FROM [Order]
11   WHERE DATENAME (dw, OrderDate)='Monday' or
12         DATENAME (dw, OrderDate)='Tuesday' or
13         DATENAME (dw, OrderDate)='Wednesday' or
14         DATENAME (dw, OrderDate)='Thursday' or
15         DATENAME (dw, OrderDate)='Friday' or
16         DATENAME (dw, OrderDate)='Saturday' or
17         DATENAME (dw, OrderDate)='Sunday'
```

110 % ▼

Results | Messages

	Day Name	Id	OrderDate	OrderNumber	CustomerId	TotalAmount
1	Wednesday	1	2012-07-04 00:00:00.000	542378	85	440.00
2	Thursday	2	2012-07-05 00:00:00.000	542379	79	1863.40
3	Sunday	3	2012-07-08 00:00:00.000	542380	34	1813.00
4	Sunday	4	2012-07-08 00:00:00.000	542381	84	670.80
5	Monday	5	2012-07-09 00:00:00.000	542382	76	3730.00
6	Tuesday	6	2012-07-10 00:00:00.000	542383	34	1444.80
7	Wednesday	7	2012-07-11 00:00:00.000	542384	14	625.20
8	Thursday	8	2012-07-12 00:00:00.000	542385	68	2490.50
9	Sunday	9	2012-07-15 00:00:00.000	542386	88	517.80
10	Monday	10	2012-07-16 00:00:00.000	542387	35	1119.90
11	Tuesday	11	2012-07-17 00:00:00.000	542388	20	2018.60
12	Wednesday	12	2012-07-18 00:00:00.000	542389	13	100.80
13	Thursday	13	2012-07-19 00:00:00.000	542390	56	1746.20
14	Thursday	14	2012-07-19 00:00:00.000	542391	61	448.00
15	Sunday	15	2012-07-22 00:00:00.000	542392	65	624.80
16	Monday	16	2012-07-23 00:00:00.000	542393	20	2464.80
17	Tuesday	17	2012-07-24 00:00:00.000	542394	24	724.50
18	Wednesday	18	2012-07-25 00:00:00.000	542395	7	1176.00
19	Thursday	19	2012-07-26 00:00:00.000	542396	87	364.80
20	Sunday	20	2012-07-29 00:00:00.000	542397	25	4031.00
21	Monday	21	2012-07-30 00:00:00.000	542398	33	1101.20
22	Tuesday	22	2012-07-31 00:00:00.000	542399	89	676.00
23	Wednesday	23	2012-08-01 00:00:00.000	542400	87	1376.00
24	Wednesday	24	2012-08-01 00:00:00.000	542401	75	48.00
25	Thursday	25	2012-08-02 00:00:00.000	542402	65	1456.00
26	Sunday	26	2012-08-05 00:00:00.000	542403	63	2142.40
27	Monday	27	2012-08-06 00:00:00.000	542404	85	538.60
28	Tuesday	28	2012-08-07 00:00:00.000	542405	49	307.20
29	Wednesday	29	2012-08-08 00:00:00.000	542406	80	420.00
30	Thursday	30	2012-08-09 00:00:00.000	542407	52	1200.80
31	Sunday	31	2012-08-12 00:00:00.000	542408	5	1488.80

```sql
18
19    -- cau3
20  ⊟SELECT  OI.OrderID, OI.ProductId, P.ProductName, P.UnitPrice, OI.Quantity,
21            coalesce(Fax,Phone) as ContactInfo,
22            case coalesce(Fax,Phone) when Fax then 'Fax' else 'Phone' end as ContactType
23    FROM OrderItem OI inner join Product P on OI.ProductId = P.Id,Supplier S
24    where P.SupplierId = S.Id
```

110 % ▾

Results | **Messages**

	OrderID	ProductId	ProductName	UnitPrice	Quantity	ContactInfo	ContactType
1	1	11	Queso Cabrales	21.00	12	(98) 598 76 54	Phone
2	1	42	Singaporean Hokkien Fried Mee	14.00	10	555-8787	Phone
3	1	72	Mozzarella di Giovanni	34.80	5	(0544) 60603	Fax
4	2	14	Tofu	23.25	9	(06) 431-7877	Phone
5	2	51	Manjimup Dried Apples	53.00	40	(02) 555-4873	Fax
6	3	41	Jack's New England Clam Chowder	9.65	10	(617) 555-3389	Fax
7	3	51	Manjimup Dried Apples	53.00	35	(02) 555-4873	Fax
8	3	65	Louisiana Fiery Hot Pepper Sauce	21.05	15	(100) 555-4822	Phone
9	4	22	Gustaf's Knäckebröd	21.00	6	031-987 65 91	Fax
10	4	57	Ravioli Angelo	19.50	15	(089) 6547667	Fax
11	4	65	Louisiana Fiery Hot Pepper Sauce	21.05	20	(100) 555-4822	Phone
12	5	20	Sir Rodney's Marmalade	81.00	40	(161) 555-4448	Phone
13	5	33	Geitost	2.50	25	(0)2-953010	Phone
14	5	60	Camembert Pierrot	34.00	40	38.76.98.58	Fax
15	6	31	Gorgonzola Telino	12.50	20	(0544) 60603	Fax
16	6	39	Chartreuse verte	18.00	42	(1) 03.83.00.62	Fax
17	6	49	Maxilaku	20.00	40	(953) 10956	Phone
18	7	24	Guaraná Fantástica	4.50	15	(11) 555 4640	Phone
19	7	55	Pâté chinois	24.00	21	(514) 555-9022	Phone
20	7	74	Longlife Tofu	10.00	21	(03) 3555-5011	Phone
21	8	2	Chang	19.00	20	(171) 555-2222	Phone
22	8	16	Pavlova	17.45	35	(03) 444-6588	Fax
23	8	36	Inlagd Sill	19.00	25	08-123 45 67	Phone
24	8	59	Raclette Courdavault	55.00	30	38.76.98.58	Fax
25	9	53	Perth Pasties	32.80	15	(02) 555-4873	Fax
26	9	77	Original Frankfurter grüne Soße	13.00	12	(069) 992755	Phone
27	10	27	Schoggi Schokolade	43.90	25	(010) 9984510	Phone
28	10	39	Chartreuse verte	18.00	6	(1) 03.83.00.62	Fax
29	10	77	Original Frankfurter grüne Soße	13.00	15	(069) 992755	Phone
30	11	2	Chang	19.00	50	(171) 555-2222	Phone
31	11	5	Chef Anton's Gumbo Mix	21.35	65	(100) 555-4822	Phone
32	11	32	Mascarpone Fabioli	32.00	6	(0544) 60603	Fax
33	12	21	Sir Rodney's Scones	10.00	10	(161) 555-4448	Phone
34	12	37	Gravad lax	26.00	1	08-123 45 67	Phone
35	12	41	Jack's New England Clam Chowder	9.65	16	(617) 555-3389	F

```sql
26     -- cau4
27     DECLARE @sys_usr CHAR(30),@user_name CHAR(30),
28     SET @sys_usr = SYSTEM_USER;
29     set @user_name = USER_NAME();
30   ⊟SELECT DB_ID('Northwind') AS [Database ID],
31            object_id('Supplier') as [Table ID],
32            USER_ID(@user_name) as [User ID],
33            @sys_usr as [User_Name],
34            user_name(1) as [Else UserName]
```

110 % ▼

Results | Messages

	Database ID	Table ID	User ID	User_Name	Else UserName
1	8	469576711	1	Karama\thyqu	dbo

```sql
36     --cau5
37   ⊟select [TableName]=OBJECT_NAME(object_id),
38            user_updates, user_seeks, user_scans, user_lookups
39     from sys.dm_db_index_usage_stats as SIUS
40     where database_id=DB_ID('Northwind') and OBJECT_NAME(object_id)='Order'
```

110 % ▼

Results | Messages

	TableName	user_updates	user_seeks	user_scans	user_lookups
1	Order	830	1	0	0
2	Order	830	2155	2	1
3	Order	830	0	0	0

```sql
43 ⊟with OrderCategory(Country, City, OrderNumber, alevel)
44   as
45   (
46       select distinct Country,
47                 City = cast('' as nvarchar(255)),
48                 OrderNumber = cast('' as nvarchar(255)),
49                 alevel = 0
50       from Supplier,[Order]
51
52       union all
53
54       select C.Country,
55             City = cast(C.City as nvarchar(255)),
56             OrderNumber = cast('' as nvarchar(255)),
57             alevel = OC.alevel + 1
58       from OrderCategory OC inner join Customer C on OC.Country = C.Country
59       where OC.alevel = 0
60
61       union all
62
63       select C.Country,
64             City = cast(C.City as nvarchar(255)),
65             OrderNumber = cast(O.OrderNumber as nvarchar(255)),
66             alevel = OC.alevel + 1
67       from OrderCategory OC inner join Customer C on OC.Country = C.Country and OC.City = C.City inner join [Order] as O on C.Id= O.CustomerId
68
69       where OC.alevel = 1
70   )
71   select [Quoc gia] = case when alevel = 0 then Country else '--' end,
72         [Thanh pho] = case when alevel = 1 then City else '----' end,
73        [Hoa don] = OrderNumber,
74        Cap = alevel
75   from OrderCategory
76   order by Country, City, OrderNumber, alevel
```

	Quoc gia	Thanh pho	Hoa don	Cap
1	Australia	----		0
2	Brazil	----		0
3	--	Campinas		1
4	--	----	542553	2
5	--	----	542782	2
6	--	----	542815	2
7	--	----	542839	2
8	--	----	542864	2
9	--	----	542907	2
10	--	----	542920	2
11	--	----	543089	2
12	--	----	543179	2
13	--	Resende		1
14	--	----	542386	2
15	--	----	542550	2
16	--	----	542715	2
17	--	----	542774	2
18	--	----	542933	2
19	--	----	542939	2
20	--	----	543030	2
21	--	----	543035	2
22	--	----	543065	2
23	--	Rio de J...		1
24	--	Rio de J...		1
25	--	Rio de J...		1
26	--	----	542380	2
27	--	----	542380	2
28	--	----	542380	2
29	--	----	542383	2
30	--	----	542383	2
31	--	----	542383	2

```sql
-- cau7
with SumQuantityByOrder as
(
    select OI.OrderId, SumQuantity=SUM(Quantity)
    from OrderItem as OI
    group by OrderId
),
CustomerByOrder as
(
    select O.*, SQBO.SumQuantity
    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
```

110 %

Results | Messages

	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