GROUP PROJECT 1 ASSIGMENT TEMPLATE

Learning how to create diagrams in a database as a navigation tool.
Creating diagram views as subject areas that isolates various sub-systems for querying information.
Using the subject areas to solve problems for the business and document the necessary information needed to provide the appropriate query resolution. Writing 20 queries by each group member across the five databases identified.

Developing the soft skills needed in the business work environment such as teamwork, documentation and creating workflows.

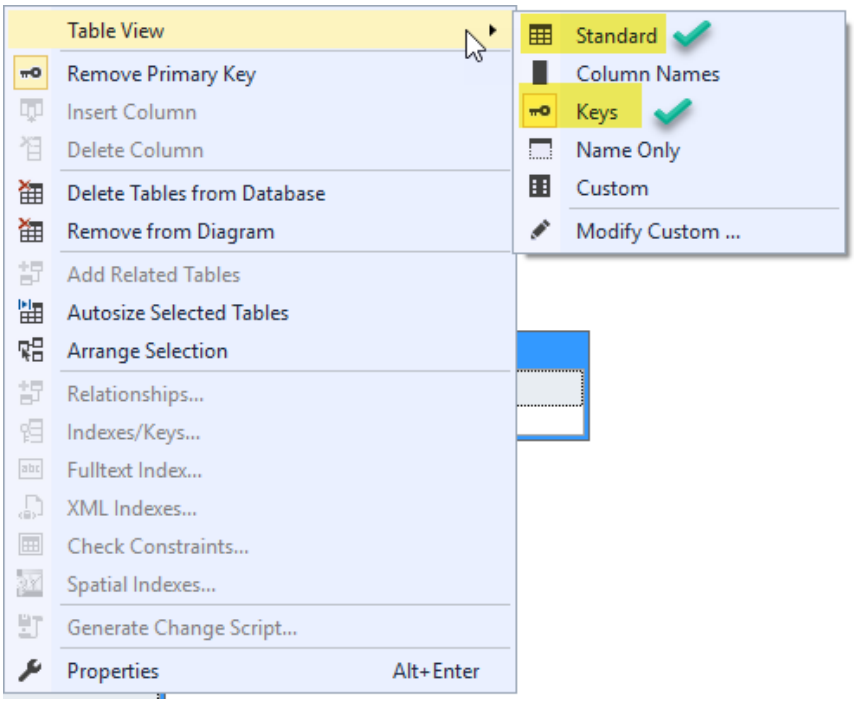
Learning the structure of a newly acquired database systems by your company without any documentation.

Each Problem should follow the format in Problem 01.

Contents

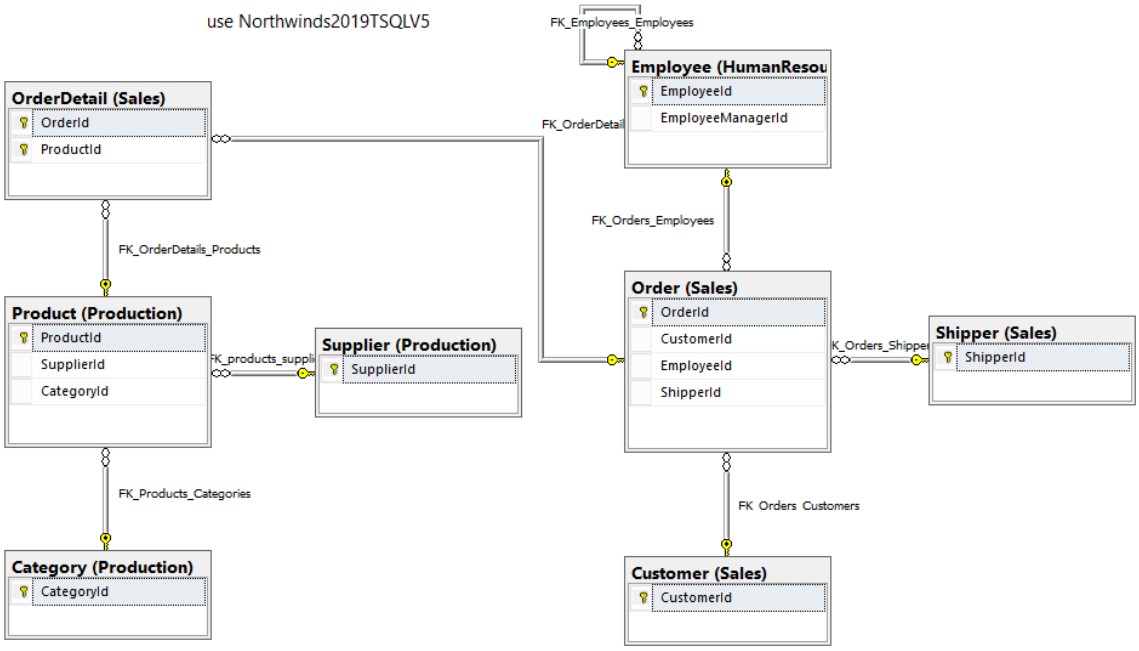
Create a diagram and two subject area diagrams of sub-systems based upon the 3 databases described in Propostion 1

Show the diagrams in standard and key view



How create the different table views in the diagram editor.

Example of the orders sub-system in NORTHWINDS2019TSQLV5



Proposition 01: Find by customer, the total cost and the total cost after discount for each product on the order using NORTHWINDS2019TSQLV5?

Detailed explanation of the problem that will help the developer to write the query to resolve the issue

You should supply your specification of the problem statement.

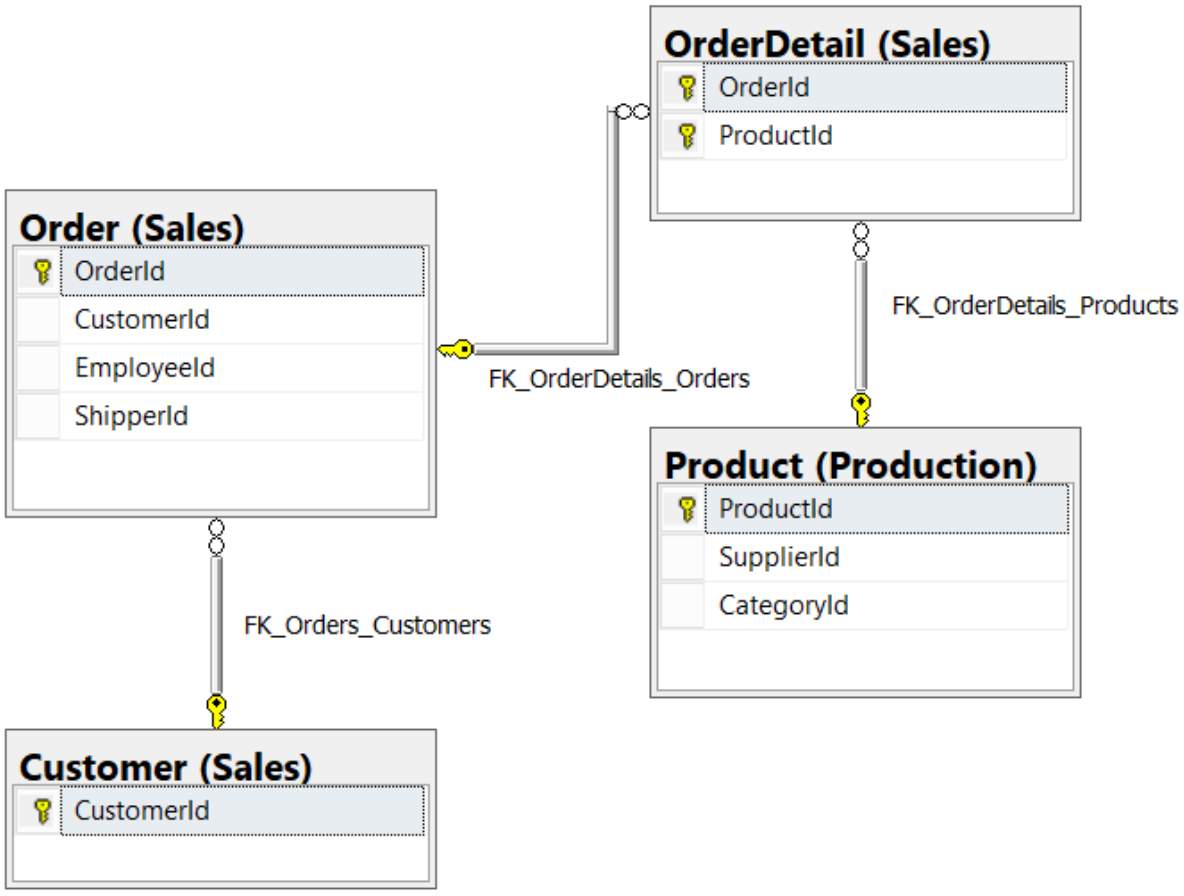
Database

You have 3 different databases to choose from to create the queries:

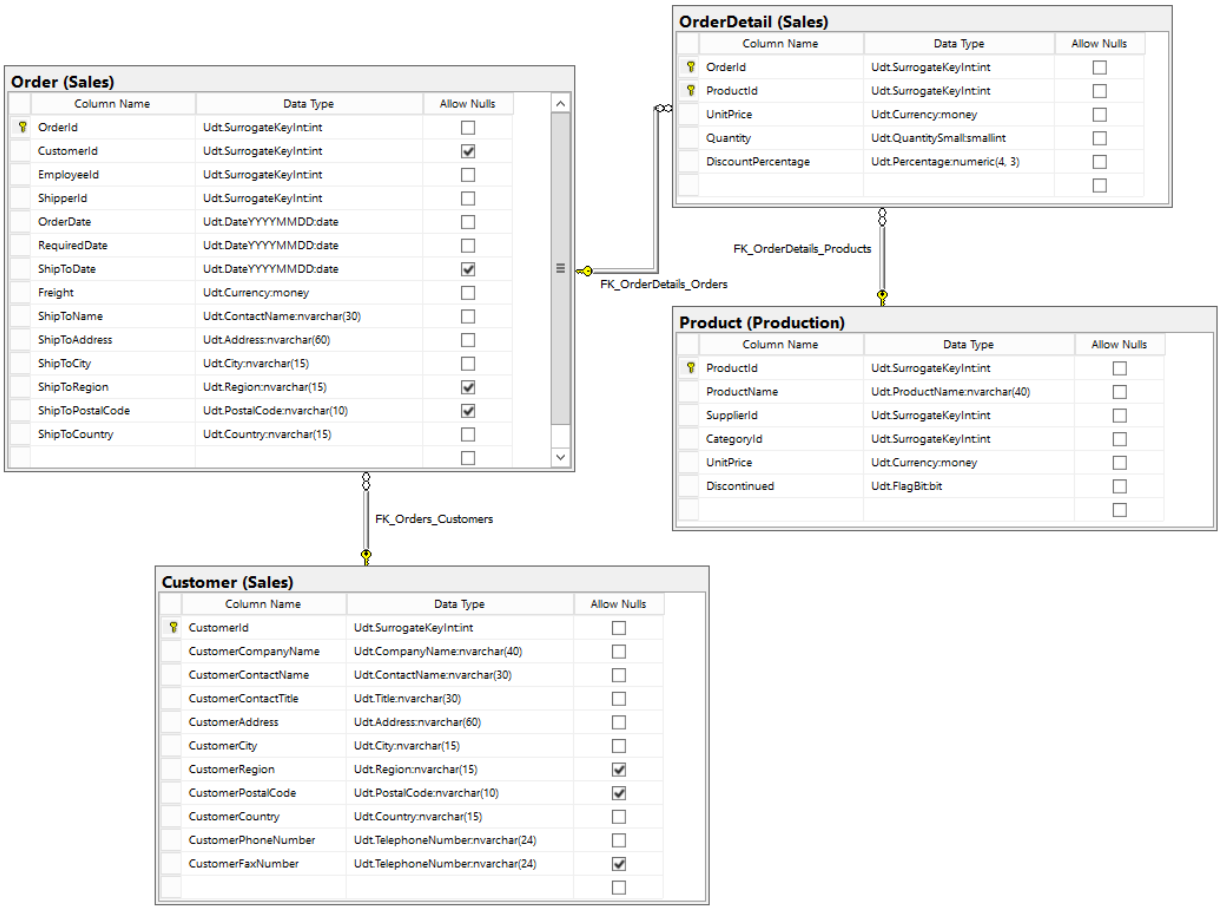
```
1. use AdventureWorks2014;
2. use AdventureWorksDW2016;
3. use NORTHWINDS2019TSQLV5;
```

Diagram(s) of tables

Foreign Key(s) or column(s) used for the join



Columns from Standard view



Project following columns from their respective tables in the select clause

Table Name	Column Name
Customers	CustomerCompanyName
Orders	OrderId OrderDate
Products	ProductName

OrderDetails	OrderId
	`UnitPrice`
	`Quantity`
	`DiscountPercentage`

DerivedColumn	TotalCost TotalDiscountedCost (total cost after `DiscountPercentage`)

Order by

Table Name	Column Name	Sort Order
Customers	CustomerCompanyName	ASC
Orders	OrderDate	ASC

Problem solving Query

All queries must use the ANSI 92 standard for queries with the type safe "on".

```
use NORTHWINDS2019TSQLV5;

go

use Northwinds2019TSQLV5;
go
select c.CustomerCompanyName
     , o.OrderId
     , o.OrderDate
     , p.ProductName
     , od.UnitPrice
     , od.Quantity
     , od.DiscountPercentage
     , TotalCost           = (od.UnitPrice * od.Quantity)
     , TotalDiscountedCost = (od.UnitPrice * od.Quantity) * (1 - od.DiscountPercentage)
from Sales.Customer               as c
    inner join Sales.[Order]      as o
        on o.CustomerId = c.CustomerId
    inner join Sales.OrderDetail  as od
        on od.OrderId = o.OrderId
    inner join Production.Product as p
        on p.ProductId = od.ProductId
order by c.CustomerCompanyName
       , o.OrderDate
```

Sample Relational Output with total number of rows returned (2155)

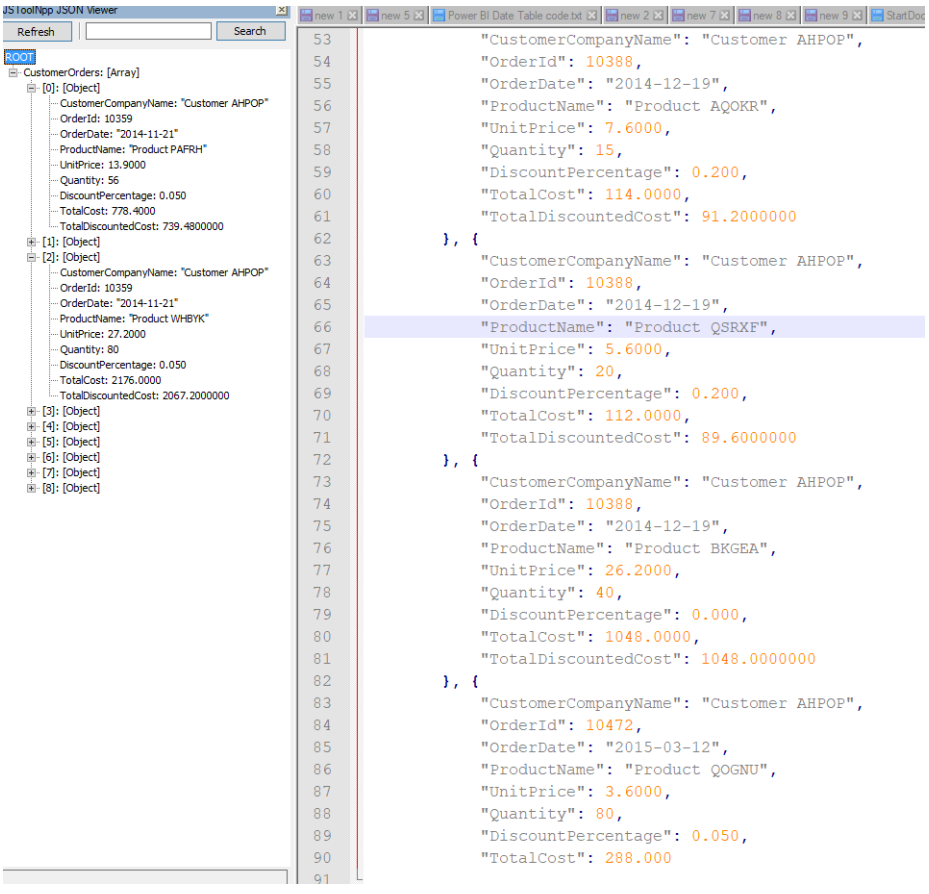
Results | Messages

	CustomerCompanyName	OrderId	OrderDate	ProductName	UnitPrice	Quantity	DiscountPercentage	TotalCost	TotalDiscountedCost
1	Customer AHPOP	10359	2014-11-21	Product PAFRH	13.90	56	0.050	778.40	739.4800000
2	Customer AHPOP	10359	2014-11-21	Product XWOXC	10.00	70	0.050	700.00	665.0000000
3	Customer AHPOP	10359	2014-11-21	Product WHBYK	27.20	80	0.050	2176.00	2067.2000000
4	Customer AHPOP	10377	2014-12-09	Product OFBNT	36.40	20	0.150	728.00	618.8000000
5	Customer AHPOP	10377	2014-12-09	Product LSOFL	14.40	20	0.150	288.00	244.8000000
6	Customer AHPOP	10388	2014-12-19	Product AQOKR	7.60	15	0.200	114.00	91.2000000
7	Customer AHPOP	10388	2014-12-19	Product QSRXF	5.60	20	0.200	112.00	89.6000000
8	Customer AHPOP	10388	2014-12-19	Product BKGEA	26.20	40	0.000	1048.00	1048.0000000
9	Customer AHPOP	10472	2015-03-12	Product QOGNU	3.60	80	0.050	288.00	273.6000000
10	Customer AHPOP	10472	2015-03-12	Product APITJ	42.40	18	0.000	763.20	763.2000000
11	Customer AHPOP	10523	2015-05-01	Product BLCAX	39.00	25	0.100	975.00	877.5000000
12	Customer AHPOP	10523	2015-05-01	Product QHFFP	81.00	15	0.100	1215.00	1093.5000000
13	Customer AHPOP	10523	2015-05-01	Product EVFFA	26.00	18	0.100	468.00	421.2000000
14	Customer AHPOP	10523	2015-05-01	Product TTEEX	9.65	6	0.100	57.90	52.1100000
15	Customer AHPOP	10547	2015-05-23	Product NUNAW	32.00	24	0.150	768.00	652.8000000
16	Customer AHPOP	10547	2015-05-23	Product GMKIJ	19.00	60	0.000	1140.00	1140.0000000
17	Customer AHPOP	10800	2015-12-26	Product QMVUN	21.00	50	0.100	1050.00	945.0000000
18	Customer AHPOP	10800	2015-12-26	Product APITJ	53.00	10	0.100	530.00	477.0000000
19	Customer AHPOP	10800	2015-12-26	Product QAQRL	7.45	7	0.100	52.15	46.9350000

Query executed successfully. Northwinds2019TSQLV5 | 00:00:00 | 2155 rows

Sample JSON Output with total number of rows returned (2155)

```
use Northwinds2019TSQLV5;
go
select c.CustomerCompanyName
     , o.OrderId
     , o.OrderDate
     , p.ProductName
     , od.UnitPrice
     , od.Quantity
     , od.DiscountPercentage
     , TotalCost           = (od.UnitPrice * od.Quantity)
     , TotalDiscountedCost = (od.UnitPrice * od.Quantity) * (1 - od.DiscountPercentage)
from Sales.Customer               as c
    inner join Sales.[Order]      as o
        on o.CustomerId = c.CustomerId
    inner join Sales.OrderDetail  as od
        on od.OrderId = o.OrderId
    inner join Production.Product as p
        on p.ProductId = od.ProductId
order by c.CustomerCompanyName
       , o.OrderDate
for json path, root('CustomerOrders'), include_null_values;
```



Proposition 02: Your question using Database Name?

Proposition 03 to 20: Your question using Database Name?