

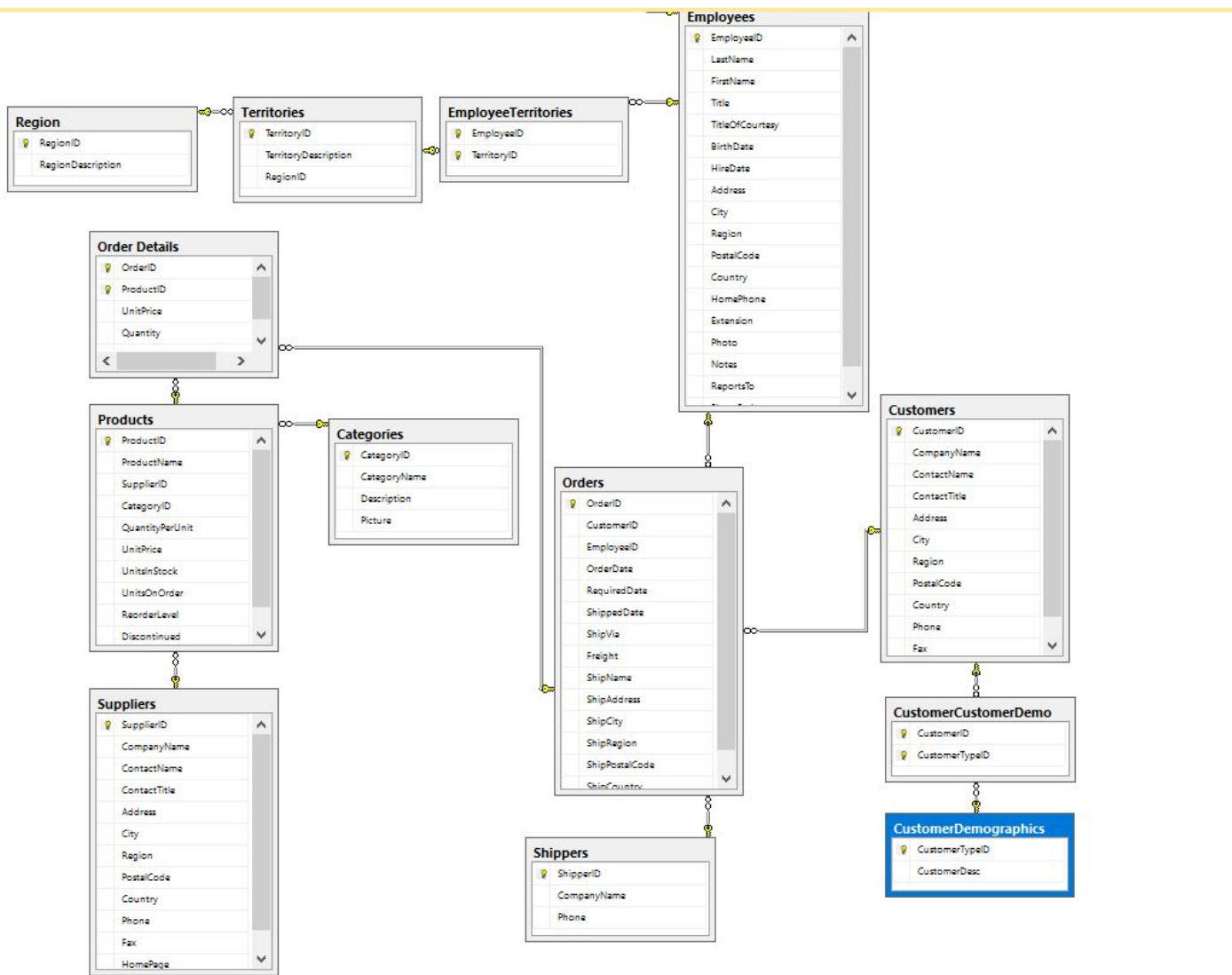
# Sample Database

Source: <https://northwinddatabase.codeplex.com/>

Name: Tudorica Andrei

Northwind DB

This database contains information about products, orders, as well as information about the employees and the suppliers who deal with these products..



# Primary keys:

- ProductID in Products table
- CategoryID in Categories table
- OrderID in Orders table
- RegionID in Regions table
- EmployeeID in Employees table
- CustomerID in Customers table
- ShipperID in Shippers table
- SupplierID in Suppliers table

# Foreign keys:

- CustomerID in Customers table
- SupplierID in Products table
- RegionID in Territories table
- CategoryID in Products table

# Relationships

## One-to-many:

- One Supplier can be associated with more Products
- One Region can be associated with more Territories
- One Customer can be associated with more Orders
- One Employee can be associated with more Orders

## Many-to-Many

- CustomerDemographics - Customers

## One-to\_One

- no relationship of this kind

# Data examples:

Table Products

	ProductID	ProductName	SupplierID	CategoryID	QuantityPerUnit	UnitPrice	UnitsInStock	UnitsOnOrder	ReorderLevel	Discontinued
	1	Chai	1	1	10 boxes x 20 b...	18.0000	39	0	10	False
	2	Chang	1	1	24 - 12 oz bottles	19.0000	17	40	25	False
	3	Aniseed Syrup	1	2	12 - 550 ml bott...	10.0000	13	70	25	False
	4	Chef Anton's C...	2	2	48 - 6 oz jars	22.0000	53	0	0	False
	5	Chef Anton's G...	2	2	36 boxes	21.3500	0	0	0	True
	6	Grandma's Boy...	3	2	12 - 8 oz jars	25.0000	120	0	25	False
	7	Uncle Bob's Or...	3	7	12 - 1 lb pkgs.	30.0000	15	0	10	False
	8	Northwoods Cr...	3	2	12 - 12 oz jars	40.0000	6	0	0	False
	9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.0000	29	0	0	True
	10	Ikura	4	8	12 - 200 ml jars	31.0000	31	0	0	False
	11	Queso Cabrales	5	4	1 kg pkg.	21.0000	22	30	30	False
	12	Queso Manche...	5	4	10 - 500 g pkgs.	38.0000	86	0	0	False
	13	Konbu	6	8	2 kg box	6.0000	24	0	5	False
	14	Tofu	6	7	40 - 100 g pkgs.	23.2500	35	0	0	False
	15	Genen Shouyu	6	2	24 - 250 ml bott...	15.5000	39	0	5	False
	16	Pavlova	7	3	32 - 500 g boxes	17.4500	29	0	10	False
	17	Alice Mutton	7	6	20 - 1 kg tins	39.0000	0	0	0	True
	18	Carnarvon Tigers	7	8	16 kg pkg.	62.5000	42	0	0	False
	19	Teatime Chocol...	8	3	10 boxes x 12 pi...	9.2000	25	0	5	False
	20	Sir Rodney's M...	8	3	30 gift boxes	81.0000	40	0	0	False
	21	Sir Rodney's Sc...	8	3	24 pkgs. x 4 pie...	10.0000	3	40	5	False
	22	Gustaf's Knäcke...	9	5	24 - 500 g pkgs.	21.0000	104	0	25	False
	23	Tunnbröd	9	5	12 - 250 g pkgs.	9.0000	61	0	25	False
	24	Guaraná Fantás...	10	1	12 - 355 ml cans	4.5000	20	0	0	True
	25	NuNuCa Nuß-	11	3	20 - 450 g glasses	14.0000	76	0	30	False
	26	Gumbär Gumm...	11	3	100 - 250 g bags	31.2300	15	0	0	False
	27	Schoggi Schok...	11	3	100 - 100 g piec...	43.9000	49	0	30	False
	28	Rössle Sauerkraut	12	7	25 - 825 g cans	45.6000	26	0	0	True
	29	Thüringer Rost...	12	6	50 bags x 30 sa...	123.7900	0	0	0	True
	30	Nord-Ost Matje...	13	8	10 - 200 g glasses	25.8900	10	0	15	False
	31	Gorgonzola Teli...	14	4	12 - 100 g pkgs	12.5000	0	70	20	False
	32	Mascarpone Fa...	14	4	24 - 200 g pkgs.	32.0000	9	40	25	False
	33	Geitost	15	4	500 g	2.5000	112	0	20	False
	34	Sasquatch Ale	16	1	24 - 12 oz bottles	14.0000	111	0	15	False
	35	Steeleye Stout	16	1	24 - 12 oz bottles	18.0000	20	0	15	False

Contains information about the the product which had been sold. The fields it contains are Product ID, name, supplier ID, category ID and others.

Table Suppliers

	SupplierID	CompanyName	ContactName	ContactTitle	Address	City	Region	PostalCode	Country	Phone	Fax	HomePage
	1	Exotic Liquids	Charlotte Cooper	Purchasing Ma...	49 Gilbert St.	London	NULL	EC1 4SD	UK	(171) 555-2222	NULL	NULL
	2	New Orleans C...	Shelley Burke	Order Administr...	P.O. Box 78934	New Orleans	LA	70117	USA	(100) 555-4822	NULL	#CAJUN.HTM#
	3	Grandma Kelly'...	Regina Murphy	Sales Represent...	707 Oxford Rd.	Ann Arbor	MI	48104	USA	(313) 555-5735	(313) 555-3349	NULL
	4	Tokyo Traders	Yoshi Nagase	Marketing Man...	9-8 Sekimai Mu...	Tokyo	NULL	100	Japan	(03) 3555-5011	NULL	NULL
	5	Cooperativa de ...	Antonio del Vall...	Export Adminis...	Calle del Rosal 4	Oviedo	Asturias	33007	Spain	(98) 598 76 54	NULL	NULL
	6	Mayumi's	Mayumi Ohno	Marketing Repr...	92 Setsuko Chu...	Osaka	NULL	545	Japan	(06) 431-7877	NULL	Mayumi's (on t...
	7	Pavlova, Ltd.	Ian Devling	Marketing Man...	74 Rose St. Mo...	Melbourne	Victoria	3058	Australia	(03) 444-2343	(03) 444-6588	NULL
	8	Specialty Biscui...	Peter Wilson	Sales Represent...	29 King's Way	Manchester	NULL	M14 6SD	UK	(161) 555-4448	NULL	NULL
	9	PB Knäckebröd ...	Lars Peterson	Sales Agent	Kaloadagatan 13	Göteborg	NULL	S-345 67	Sweden	031-987 65 43	031-987 65 91	NULL
	10	Refrescos Amer...	Carlos Diaz	Marketing Man...	Av. das Americ...	Sao Paulo	NULL	5442	Brazil	(11) 555 4640	NULL	NULL
	11	Heli Süßwaren ...	Petra Winkler	Sales Manager	Tiergartenstraß...	Berlin	NULL	10785	Germany	(010) 9984510	NULL	NULL
	12	Plutzer Lebens...	Martin Bein	International M...	Bogenallee 51	Frankfurt	NULL	60439	Germany	(069) 992755	NULL	Plutzer (on the ...
	13	Nord-Ost-Fisch...	Sven Petersen	Coordinator Fo...	Frahmredder 11...	Cuxhaven	NULL	27478	Germany	(04721) 8713	(04721) 8714	NULL
	14	Formaggi Forti...	Elio Rossi	Sales Represent...	Viale Dante, 75	Ravenna	NULL	48100	Italy	(0544) 60323	(0544) 60603	#FORMAGGI.H...
	15	Norske Meierier	Beate Vileid	Marketing Man...	Hatlevegen 5	Sandvika	NULL	1320	Norway	(0)2-953010	NULL	NULL
	16	Bigfoot Breweries	Cheryl Saylor	Regional Accou...	3400 - 8th Aven...	Bend	OR	97101	USA	(503) 555-9931	NULL	NULL
	17	Svensk Sjöföda ...	Michael Björn	Sales Represent...	Brovallavägen 2...	Stockholm	NULL	S-123 45	Sweden	08-123 45 67	NULL	NULL
	18	Aux joyeux eccl...	Guylène Nodier	Sales Manager	203, Rue des Fr...	Paris	NULL	75004	France	(1) 03.83.00.68	(1) 03.83.00.62	NULL
	19	New England S...	Robb Merchant	Wholesale Acc...	Order Processin...	Boston	MA	02134	USA	(617) 555-3267	(617) 555-3389	NULL
	20	Leka Trading	Chandra Leka	Owner	471 Serangoon ...	Singapore	NULL	0512	Singapore	555-8787	NULL	NULL
	21	Lyngbysild	Niels Petersen	Sales Manager	Lyngbysild Fisk...	Lyngby	NULL	2800	Denmark	43844108	43844115	NULL
	22	Zaanse Snoepfa...	Dirk Luchte	Accounting Ma...	Verkoop Rijnwe...	Zaandam	NULL	9999 ZZ	Netherlands	(12345) 1212	(12345) 1210	NULL
	23	Karkki Oy	Anne Heikkonen	Product Manager	Valtakatu 12	Lappeenranta	NULL	53120	Finland	(953) 10956	NULL	NULL
	24	G'day, Mate	Wendy Macken...	Sales Represent...	170 Prince Edw...	Sydney	NSW	2042	Australia	(02) 555-5914	(02) 555-4873	G'day Mate (on...
	25	Ma Maison	Jean-Guy Lauzon	Marketing Man...	2960 Rue St. La...	Montréal	Québec	H1J 1C3	Canada	(514) 555-9022	NULL	NULL
	26	Pasta Buttini s.r.l.	Giovanni Giudici	Order Administ...	Via dei Gelsom...	Salerno	NULL	84100	Italy	(089) 6547665	(089) 6547667	NULL
	27	Escargots Nouv...	Marie Delamare	Sales Manager	22, rue H. Voiron	Montceau	NULL	71300	France	85.57.00.07	NULL	NULL
	28	Gai pâturage	Eliane Noz	Sales Represent...	Bat. B 3, rue des...	Annecy	NULL	74000	France	38.76.98.06	38.76.98.58	NULL
	29	Forêts d'érables	Chantal Goulet	Accounting Ma...	148 rue Chasseur	Ste-Hyacinthe	Québec	J2S 7S8	Canada	(514) 555-2955	(514) 555-2921	NULL

Contains information about the supplier's, like company name or contact details.

# External Views

	Column	Alias	Table	Outp...	Sort Type	Sort Order	Filter	Or...	Or...
SELECT	dbo.Orders.OrderID, dbo.Customers.CustomerID, dbo.Customers.CompanyName, dbo.Products.ProductName, dbo.Shippers.ShipperID								
FROM	dbo.Customers INNER JOIN dbo.Orders ON dbo.Customers.CustomerID = dbo.Orders.CustomerID INNER JOIN dbo.Shippers ON dbo.Orders.ShipVia = dbo.Shippers.ShipperID CROSS JOIN dbo.Products								
	OrderID	CustomerID	CompanyName	ProductName	ShipperID				
▶	10248	VINET	Vins et alcools ...	Chai	3				
	10248	VINET	Vins et alcools ...	Chang	3				
	10248	VINET	Vins et alcools ...	Aniseed Syrup	3				
	10248	VINET	Vins et alcools ...	Chef Anton's C...	3				
	10248	VINET	Vins et alcools ...	Chef Anton's G...	3				
	10248	VINET	Vins et alcools ...	Grandma's Boy...	3				
	10248	VINET	Vins et alcools ...	Uncle Bob's Or...	3				
	10248	VINET	Vins et alcools ...	Northwoods Cr...	3				
	10248	VINET	Vins et alcools ...	Mishi Kobe Niku	3				
	10248	VINET	Vins et alcools ...	Ikura	3				
	10248	VINET	Vins et alcools ...	Queso Cabrales	3				
	10248	VINET	Vins et alcools ...	Queso Manche...	3				
	10248	VINET	Vins et alcools ...	Konbu	3				
	10248	VINET	Vins et alcools ...	Tofu	3				
	10248	VINET	Vins et alcools ...	Genen Shouyu	3				
	10248	VINET	Vins et alcools ...	Pavlova	3				
	10248	VINET	Vins et alcools ...	Alice Mutton	3				
	10248	VINET	Vins et alcools ...	Carnarvon Tigers	3				

	Column	Alias	Table	Outp...	Sort Type	Sort Order	Filter	Or...	Or...	Or...		
SELECT	dbo.Products.ProductID, dbo.Products.ProductName, dbo.Products.SupplierID, dbo.Products.CategoryID, dbo.Products.QuantityPerUnit, dbo.Products.UnitPrice, dbo.Products.UnitsInStock,											
FROM	dbo.Products.UnitsOnOrder, dbo.Products.ReorderLevel, dbo.Products.Discontinued, dbo.Categories.CategoryName, dbo.Suppliers.CompanyName											
	dbo.Categories INNER JOIN											
	dbo.Products ON dbo.Categories.CategoryID = dbo.Products.CategoryID INNER JOIN											
	dbo.Suppliers ON dbo.Products.SupplierID = dbo.Suppliers.SupplierID											
	ProductID	ProductName	SupplierID	CategoryID	QuantityPerUnit	UnitPrice	UnitsInStock	UnitsOnOrder	ReorderLevel	Discontinued	CategoryName	CompanyName
▶	1	Chai	1	1	10 boxes x 20 b...	18.0000	39	0	10	False	Beverages	Exotic Liquids
	2	Chang	1	1	24 - 12 oz bottles	19.0000	17	40	25	False	Beverages	Exotic Liquids
	3	Aniseed Syrup	1	2	12 - 550 ml bott...	10.0000	13	70	25	False	Condiments	Exotic Liquids
	4	Chef Anton's C...	2	2	48 - 6 oz jars	22.0000	53	0	0	False	Condiments	New Orleans C...
	5	Chef Anton's G...	2	2	36 boxes	21.3500	0	0	0	True	Condiments	New Orleans C...
	6	Grandma's Boy...	3	2	12 - 8 oz jars	25.0000	120	0	25	False	Condiments	Grandma Kelly'...
	7	Uncle Bob's Or...	3	7	12 - 1 lb pkgs.	30.0000	15	0	10	False	Produce	Grandma Kelly'...
	8	Northwoods Cr...	3	2	12 - 12 oz jars	40.0000	6	0	0	False	Condiments	Grandma Kelly'...
	9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.0000	29	0	0	True	Meat/Poultry	Tokyo Traders
	10	Ikura	4	8	12 - 200 ml jars	31.0000	31	0	0	False	Seafood	Tokyo Traders
	11	Queso Cabrales	5	4	1 kg pkg.	21.0000	22	30	30	False	Dairy Products	Cooperativa de ...
	12	Queso Manche...	5	4	10 - 500 g pkgs.	38.0000	86	0	0	False	Dairy Products	Cooperativa de ...
	13	Konbu	6	8	2 kg box	6.0000	24	0	5	False	Seafood	Mayumi's
	14	Tofu	6	7	40 - 100 g pkgs.	23.2500	35	0	0	False	Produce	Mayumi's
	15	Genen Shouyu	6	2	24 - 250 ml bott...	15.5000	39	0	5	False	Condiments	Mayumi's
	16	Pavlova	7	3	32 - 500 g boxes	17.4500	29	0	10	False	Confections	Pavlova, Ltd.
	17	Alice Mutton	7	6	20 - 1 kg tins	39.0000	0	0	0	True	Meat/Poultry	Pavlova, Ltd.



```

SELECT  dbo.Shippers.CompanyName, dbo.Products.ProductName, dbo.[Order Details].UnitPrice, dbo.[Order Details].Discount
FROM    dbo.[Order Details] INNER JOIN
        dbo.Orders ON dbo.[Order Details].OrderID = dbo.Orders.OrderID INNER JOIN
        dbo.Products ON dbo.[Order Details].ProductID = dbo.Products.ProductID INNER JOIN
        dbo.Shippers ON dbo.Orders.ShipVia = dbo.Shippers.ShipperID

```

	CompanyName	ProductName	UnitPrice	Discount
▶	Federal Shipping	Queso Cabrales	14.0000	0
	Federal Shipping	Singaporean H...	9.8000	0
	Federal Shipping	Mozzarella di Gi...	34.8000	0
	Speedy Express	Tofu	18.6000	0
	Speedy Express	Manjimup Drie...	42.4000	0
	United Package	Jack's New Engl...	7.7000	0
	United Package	Manjimup Drie...	42.4000	0.15
	United Package	Louisiana Fiery ...	16.8000	0.15
	Speedy Express	Gustaf's Knäcke...	16.8000	0.05
	Speedy Express	Ravioli Angelo	15.6000	0.05
	Speedy Express	Louisiana Fiery ...	16.8000	0
	United Package	Sir Rodney's M...	64.8000	0.05
	United Package	Geitost	2.0000	0.05
	United Package	Camembert Pie...	27.2000	0
	United Package	Gorgonzola Teli...	10.0000	0
	United Package	Chartreuse verte	14.4000	0

```

Column      Alias      Table      Outp...  Sort Type  Sort Order  Filter  Or...
SELECT  dbo.Employees.LastName, dbo.Employees.FirstName, dbo.Customers.CompanyName
FROM    dbo.Employees INNER JOIN
        dbo.EmployeeTerritories ON dbo.Employees.EmployeeID = dbo.EmployeeTerritories.EmployeeID INNER JOIN
        dbo.Orders ON dbo.Employees.EmployeeID = dbo.Orders.EmployeeID INNER JOIN
        dbo.Territories ON dbo.EmployeeTerritories.TerritoryID = dbo.Territories.TerritoryID INNER JOIN
        dbo.Customers ON dbo.Orders.CustomerID = dbo.Customers.CustomerID
WHERE   (dbo.Customers.CompanyName = 'Ernst Handel')

```

	LastName	FirstName	CompanyName
▶	Davolio	Nancy	Ernst Handel
	Davolio	Nancy	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Dodsworth	Anne	Ernst Handel
	Davolio	Nancy	Ernst Handel
	Davolio	Nancy	Ernst Handel
	Fuller	Andrew	Ernst Handel
	Fuller	Andrew	Ernst Handel
	Fuller	Andrew	Ernst Handel
	Fuller	Andrew	Ernst Handel
	Fuller	Andrew	Ernst Handel