

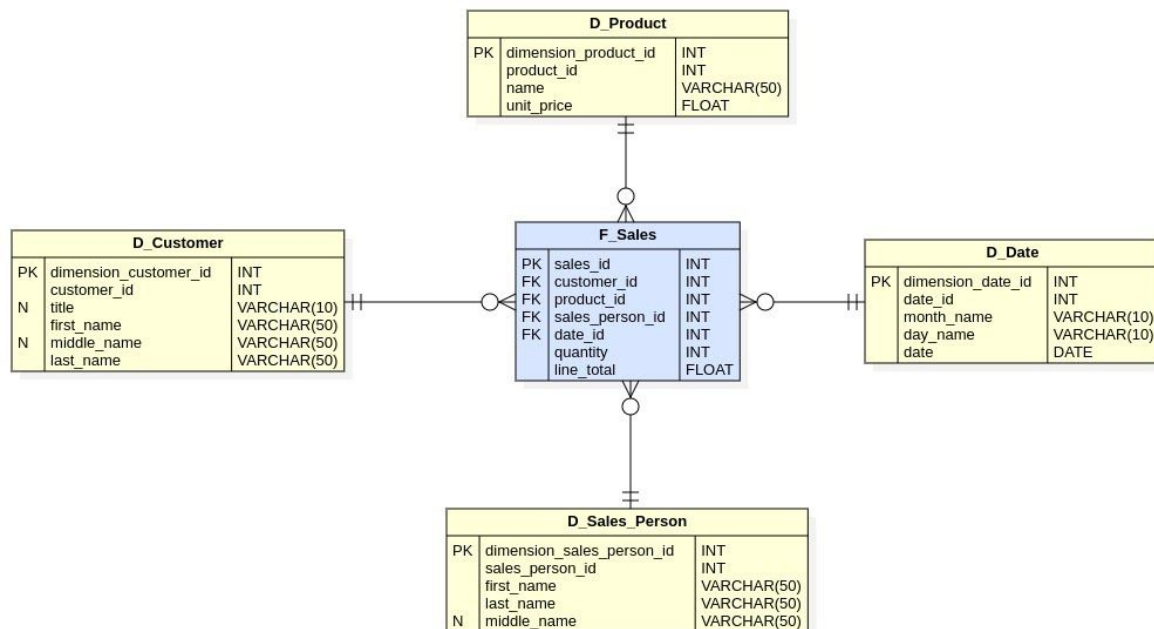
Dimensions were chosen based on customer business requirements. Senior management was interested in sales by **customer**, **employee**, and **product**. In order to know which products are top sellers, which customers are top buyers, and which employee places the most orders, three-dimension were chosen. **D_Product**, **D_Customer**, and **D_Sales_Person**. Whatsmore, management was interested also in the top 3 selling products per month, thus another dimension was included - **D_Date**.

In Product, it was necessary to specify dimension product ID, product ID, name and unit price to determine which product is the top seller.

In Customer were chosen attributes dimension customer id, customer id, title, first name, last name, middle name. It was decided that these fields are most relevant to identify a customer.

In Sales Person attributes are dimension sales person id, sales person id, first name, last name, middle name to identify the employee.

Date has attributes such as month name to group sales by specific month, day name and others.



CODE

```
CREATE TABLE star_schema.f_sales (  
  sales_id INT NOT NULL,  
  customer_id INT NOT NULL,  
  product_id INT NOT NULL,  
  sales_person_id INT NOT NULL,  
  date_id INT NOT NULL,  
  quantity INT NOT NULL,  
  line_total real NOT NULL,  
  PRIMARY KEY (sales_id)  
);
```

```
CREATE TABLE star_schema.d_customer (  
  dimension_customer_id INT NOT NULL,  
  customer_id INT NOT NULL,  
  title varchar(10),  
  first_name varchar(50) NOT NULL,  
  middle_name varchar(50),  
  last_name varchar(50) NOT NULL,  
  PRIMARY KEY (dimension_customer_id)  
);
```

```
CREATE TABLE star_schema.d_product (  
  dimension_product_id INT NOT NULL,  
  product_id INT NOT NULL,  
  name varchar(50) NOT NULL,  
  unit_price real NOT NULL,  
  PRIMARY KEY (dimension_product_id)  
);
```

```
CREATE TABLE star_schema.d_date (  
  dimension_date_id INT NOT NULL,  
  date_id INT NOT NULL,  
  month_name varchar(10) NOT NULL,  
  day_name varchar(10) NOT NULL,  
  date date NOT NULL,  
  PRIMARY KEY (dimension_date_id)  
);
```

```
CREATE TABLE star_schema.d_sales_person (  
  dimension_sales_person_id INT NOT NULL,  
  sales_person_id INT NOT NULL,  
  first_name varchar(50) NOT NULL,  
  last_name varchar(50) NOT NULL,  
  middle_name varchar(50),  
  PRIMARY KEY (dimension_sales_person_id)  
);
```

```
ALTER TABLE star_schema.f_sales ADD CONSTRAINT FK_f_sales_customer_id FOREIGN KEY  
(customer_id) REFERENCES star_schema.d_customer(dimension_customer_id);  
ALTER TABLE star_schema.f_sales ADD CONSTRAINT FK_f_sales_product_id FOREIGN KEY (product_id)  
REFERENCES star_schema.d_product(dimension_product_id);
```

```
ALTER TABLE star_schema.f_sales ADD CONSTRAINT FK_f_sales_sales_person_id FOREIGN KEY  
(sales_person_id) REFERENCES star_schema.d_sales_person(dimension_sales_person_id);  
ALTER TABLE star_schema.f_sales ADD CONSTRAINT FK_f_sales_date_id FOREIGN KEY (date_id)  
REFERENCES star_schema.d_date(dimension_date_id);
```

Table Name

Table Type

Display Name

Database Schema

Table Description

Comment

Biz Filter Logic

Size

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Sales Person

Dimension

D_Sales_Person

Column Name	Display Name	Description	Unknown Member
dim_sales_person_id	dimension_sales_person_id	Dimension id of the sales person	
salesperson_id	salesperson_id	id of the salesperson	
first_name	first_name	first name of the salesperson	
last_name	last_name	last name of the salesperson	
middle_name	middle_name	middle name of the salesperson	Not available

Example Values	SCD Type	Display Folder	ETL Rules	Comments	Datatype	Size	Precision
1, 2, 3...	key				int		
1, 2, 3...					int		
Bob					varchar	50	
Frankenstein					varchar	50	
Steward					varchar	50	

Target				Source		
Key?	FK To	NULL?	Default Value	Source System	Source Schema	Source Table
PK ID		N		Derived		
		N		AdventureWork S	AdventureWorks2017	Person
		N		AdventureWork S	AdventureWorks2017	Person
		N		AdventureWork S	AdventureWorks2017	Person
		N		AdventureWork S	AdventureWorks2017	Person

Source Field Name	Source Datatype
	int
BusinessEntityId	int
FirstName	nvarchar
MiddleName	nvarchar
LastName	nvarchar

Table Name

Table Type

Display Name

Database Schema

Table Description

Comment

Biz Filter Logic

Size

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Date

Dimension

D_Date

Column Name	Display Name	Description	Unknown Member
dimension_date_id	Dimension date id	id of the dimension date	
date_id	date_id	id of the date	
date	date	date itself	
month_name	month_name	name of the month	
day_name	day_name	day of the month	

Example Values	SCD Type	Display Folder	ETL Rules	Comments	Datatype	Size	Precision
1, 2, 3...	key				int		
1, 2, 3...					int		
3/2/2020					datetime		
January					varchar	10	
Monday					varchar	10	

Target				Source			
Key?	FK To	NULL?	Default Value	Source System	Source Schema	Source Table	Source Field Name
PK ID		N		Derived			
		N		Derived			
		N		Derived			
		N		Derived			
		N		Derived			

Source
Datatype

Table Name	Product
Table Type	Dimension
Display Name	D_Product
Database Schema	
Table Description	
Comment	
Biz Filter Logic	
Size	
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Column Name	Display Name	Description	Unknown Member
dimension_product_id	dimension product id	id of the dimension product	
product_id	product_id	id of the product	
name	name	name of the product	
unit_price	unit_price	price of the product	

Example Values	SCD Type	Display Folder	ETL Rules	Comments	Datatype	Size	Precision
1, 2, 3...	key				int		
1, 2, 3...					int		
Milk					varchar	50	
20					float		

Target				Source			
Key?	FK To	NULL?	Default Value	Source System	Source Schema	Source Table	Source Field Name
PK ID		N		Derived			
		N		AdventureWorks	AdventureWorks2017	Product	ProductID
		N		AdventureWorks	AdventureWorks2017	Product	Name
		N		AdventureWorks	AdventureWorks2017	Product	ListPrice

Source Datatype
int
nvarchar
money

Table Name	Customer
Table Type	Dimension
Display Name	D_Customer
Database Schema	
Table Description	
Comment	
Biz Filter Logic	
Size	
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Column Name	Display Name	Description	Unknown Member
dimension_customer_id	dimension_customer_id	id of the customer	
customer_id	customer_id	id of the customer from source	
title	title	title of the customer	N/A
first_name	first_name	first name of the customer	
middle_name	middle_name	middle name of the customer	N/A
last_name	last_name	last name of the customer	

Example Values	SCD Type	Display Folder	ETL Rules	Comments	Datatype	Size	Precision
1, 2, 3...	key				int		
1, 2, 3...					int		
Ms.					varchar	10	
Bob					varchar	50	
Dylan					varchar	50	
Lachester					varchar	50	

Target				Source			
Key?	FK To	NULL?	Default Value	Source System	Source Schema	Source Table	Source Field Name
PK ID		N		Derived			
		N		AdventureWorks	AdventureWorks2017	Customer	CustomerId
		Y		AdventureWorks	AdventureWorks2017	Person	Title
		N		AdventureWorks	AdventureWorks2017	Person	FirstName
		Y		AdventureWorks	AdventureWorks2017	Person	MiddleName
		N		AdventureWorks	AdventureWorks2017	Person	LastName

Source Datatype
int
nvarchar
nvarchar
nvarchar
nvarchar

Table Name	Sales
Table Type	Fact
Display Name	F_Sales
Database Schema	
Table Description	
Comment	
Biz Filter Logic	
Size	
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Column Name	Display Name	Description	Unknown Member	Example Values	SCD Type
customerd_id	customer_id	Key to customer dimension		1, 2, 3	
product_id	product_id	Key to product dimension		1, 2, 3	
sales_person_id	sales_person_id	Key to sales_person dimension		1, 2, 3	
date	date	Key to date dimension		3/2/2020	
quantity	quantity	Displays the quantity of a specific product on an order		1, 2, 3	
line_total	line_total	Displays the total price of the sale		200.00	

			Table				
Display Folder	ETL Rules	Comments	Datatype	Size	Precision	Key?	
key			int			FK	
key			int			FK	
key			int			FK	
key			date			FK	
Counts & rates			int				
Counts & rates			float				

Target	FK To	NULL?	Default Value	Source		
				Source System	Source Schema	Source Table
D_customer.customer_id		N	ETL Process			
D_product.product_id		N	ETL Process			
D_sales_person.sales_person_id		N	ETL Process			
D_date.date		N	ETL Process			
		N				
		N				

Source Field Name	Source Datatype