. Documentation

E-Commerce

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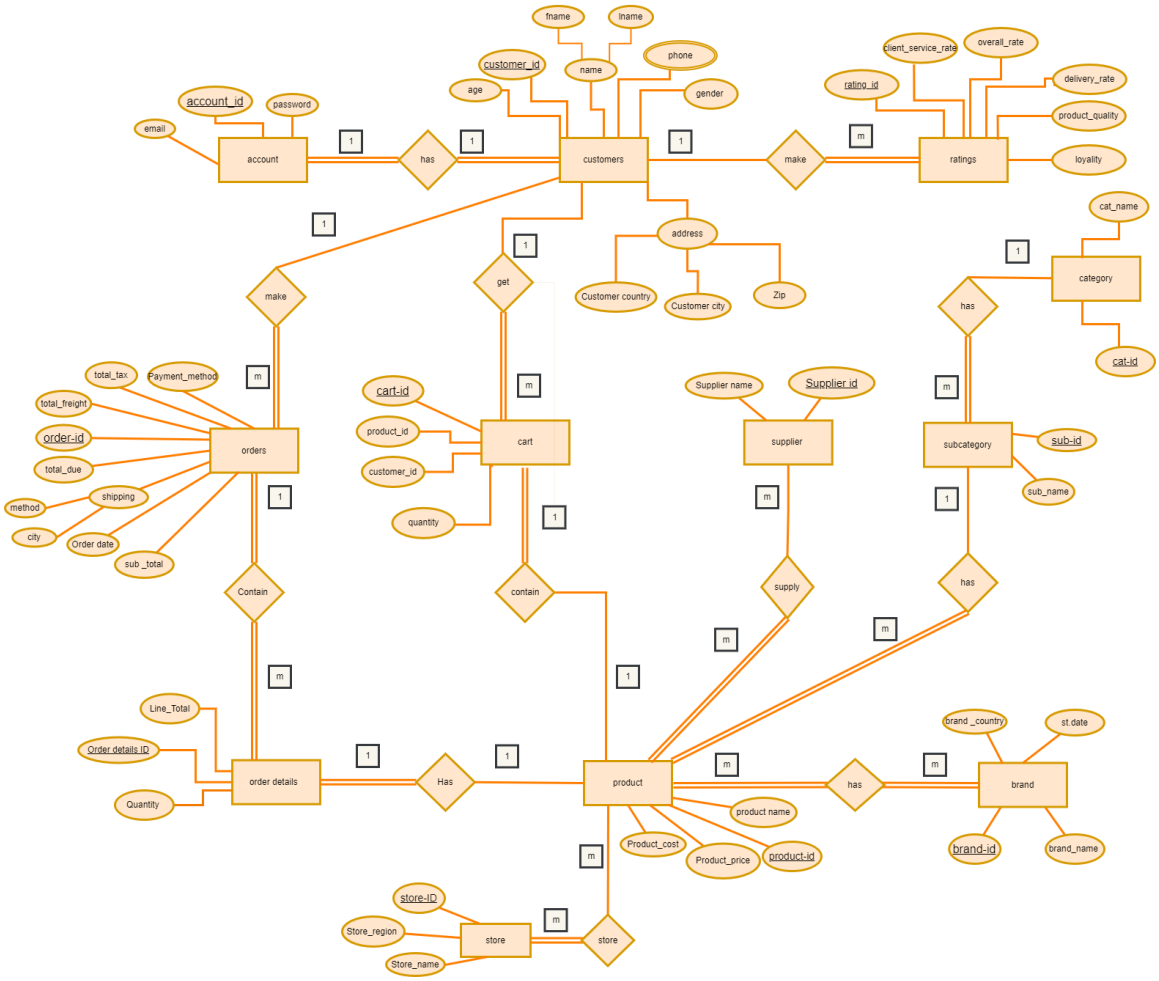
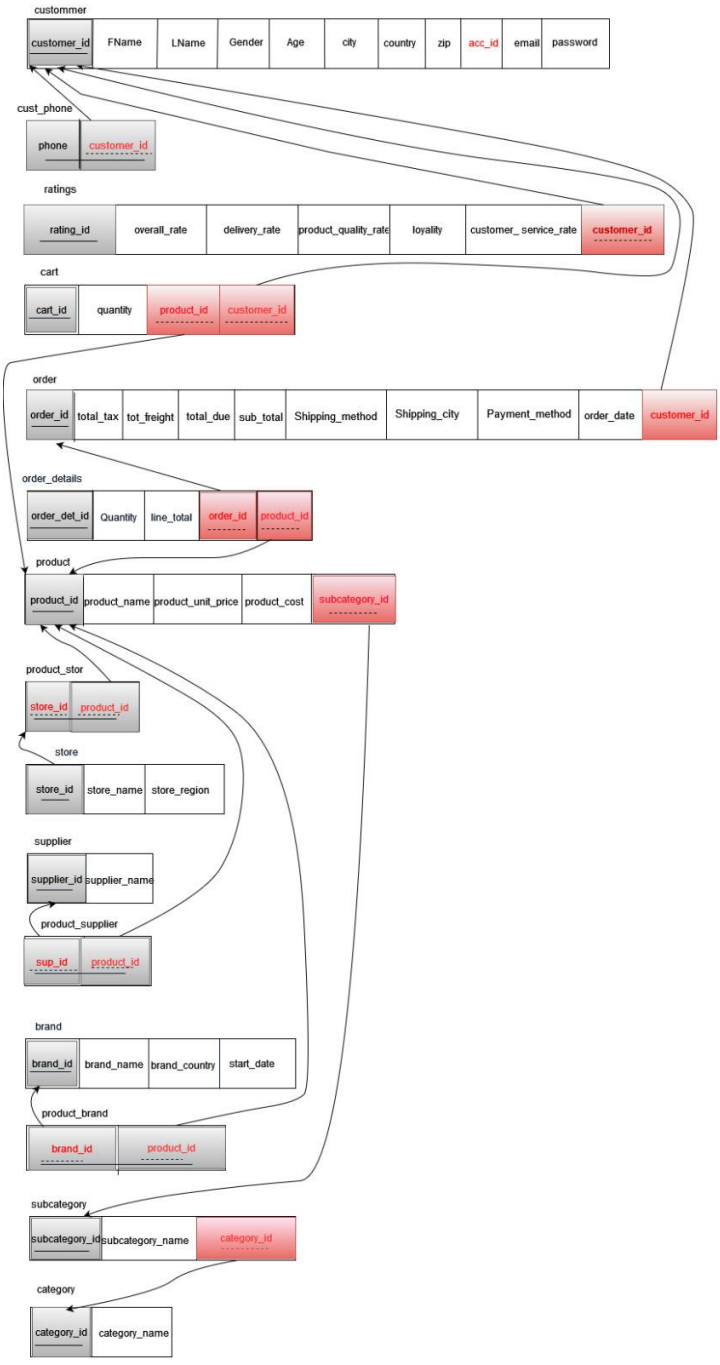
.ERD

E -Commerce ERD



.Mapping


custommer
customer_id
FName
LName
Gender
Age
city
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subcategory
subcategory_id
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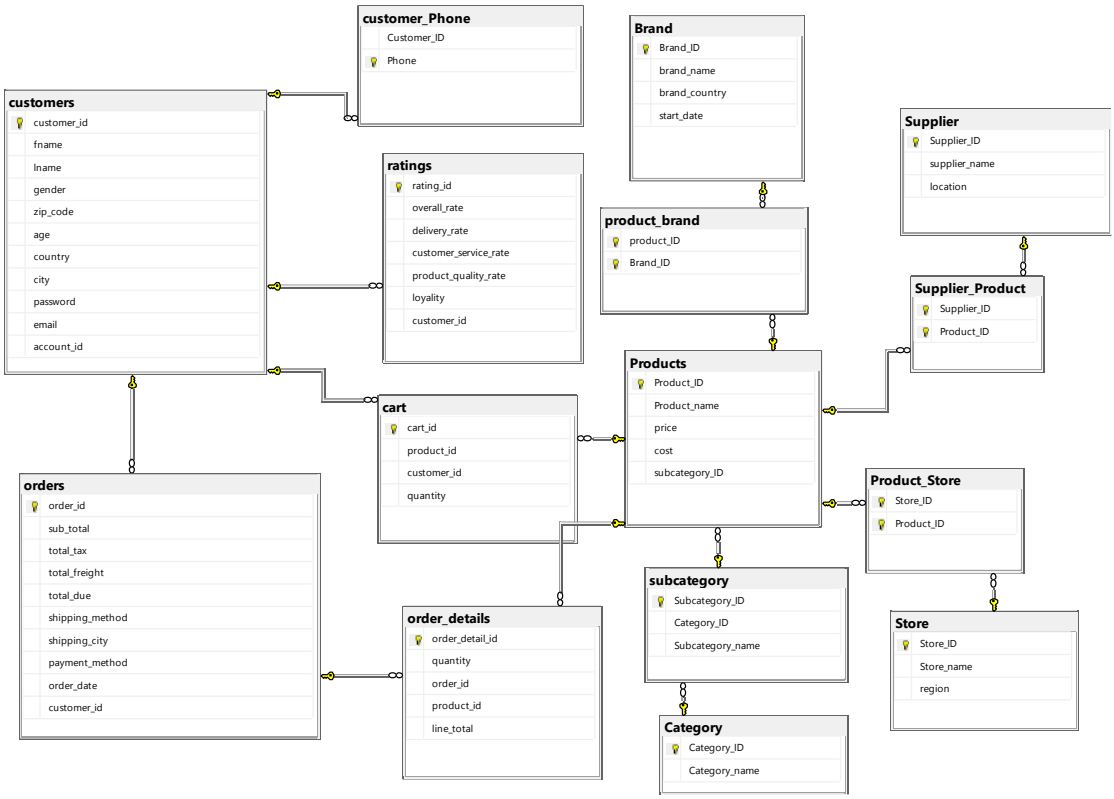
category_id
category
category_id
category_name

User databases

Databases (1)

- E-Commerce

Diagram


customer_Phone
Customer_ID
Phone
Brand
Brand_ID
brand_name
brand_country
start_date
customers
customer_id
fname
lname
gender
zip_code
age
country
city
password
email
account_id
ratings
rating_id
overall_rate
delivery_rate
customer_service_rate
product_quality_rate
loyality
customer_id
Supplier
Supplier_ID
supplier_name
location
product_brand
product_ID
Brand_ID
Supplier_Product
Supplier_ID
Product_ID
Products
Product_ID
Product_name
price
cost
subcategory_ID
cart
cart_id
product_id
customer_id
quantity
Product_Store
Store_ID
Product_ID
orders
order_id
sub_total
total_tax
total_freight
total_due
shipping_method
shipping_city
payment_method
order_date
customer_id
order_details
order_detail_id
quantity
order_id
product_id
line_total
subcategory
Subcategory_ID
Category_ID
Subcategory_name
Store
Store_ID
Store_name
region
Category
Category_ID
Category_name

Tables

Objects

Name
dbo.Brand *Contain Product brand information*
dbo.cart *Cart Shopping*
dbo.Category *Category information*
dbo.customer_Phone *Customer Phone Numbers*
dbo.customers *Customers information*
dbo.order_details *Order details information*
dbo.orders *Orders information*
dbo.product_brand
dbo.Product_Store
dbo.Products *Products information*
dbo.ratings *Customer Rating of our services*
dbo.Store *Store information*
dbo.subcategory *Subcategory information*
dbo.Supplier *Supplier information*
dbo.Supplier_Product

[dbo].[Brand]

MS_Description

Contain Product brand information

Properties

Property	Value
Row Count (~)	10

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Brand_ID *Primary key for Brand records.*	int	4	NOT NULL
	brand_name *Brand Name*	varchar(50)	50	NULL allowed
	brand_country *Country of brand Origin*	varchar(50)	50	NULL allowed
	start_date *The start date of launching the brand on the market*	date	3	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Brand	Brand_ID	True

SQL Script

```
CREATE TABLE [dbo].[Brand]
(
[Brand_ID] [int] NOT NULL,
[brand_name] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[brand_country] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[start_date] [date] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Brand] ADD CONSTRAINT [PK Brand] PRIMARY KEY CLUSTERED ([Brand ID])
ON [PRIMARY]
GO
EXEC sp_addextendedproperty N'MS_Description', N'Contain Product brand information',
'SCHEMA', N'dbo', 'TABLE', N'Brand', NULL, NULL
GO
```

```
EXEC sp addextendedproperty N'MS Description', N'Country of brand Origin', 'SCHEMA',
N'dbo', 'TABLE', N'Brand', 'COLUMN', N'brand_country'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Brand records.',
'SCHEMA', N'dbo', 'TABLE', N'Brand', 'COLUMN', N'Brand_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Brand Name', 'SCHEMA', N'dbo',
'TABLE', N'Brand', 'COLUMN', N'brand_name'
GO
EXEC sp_addextendedproperty N'MS_Description', N'The start date of launching the brand
on the market ', 'SCHEMA', N'dbo', 'TABLE', N'Brand', 'COLUMN', N'start_date'
GO
```

Used By

[dbo].[product_brand]

Linked From

Table	Join	Title / Name / Description
Product_brand	**Brand.Brand_ID**= Product_brand.Brand_ID	FK_Product_brand_Brand_ID Foreign key constraint referencing **Brand.Brand_ID** .

[dbo].[cart]

MS_Description

Cart Shopping

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK C	cart_id *Primary key for Cart records.* *Identity / Auto increment column*	int	4	NOT NULL	1 - 1
FK	product_id *Unique product identification number.* *Foreign key to Products.product_id .*	int	4	NULL allowed	
FK	customer_id *Unique customer identification number.* *Foreign key referring to Customers.customer_id .*	int	4	NULL allowed	
	quantity *Quantity of products in cart*	int	4	NULL allowed	

Indexes

Key	Name	Key Columns	Unique
PK C	PK__cart__2EF52A27CC68CCC3	cart_id	True

Foreign Keys

Name	Columns
FK_cart_customers	customer_id->[dbo].[customers].[customer_id]
FK_cart_Products	product_id->[dbo].[Products].[Product_ID]

SQL Script

```
CREATE TABLE [dbo].[cart]
(
[cart_id] [int] NOT NULL IDENTITY(1, 1),
[product_id] [int] NULL,
[customer_id] [int] NULL,
[quantity] [int] NULL
) ON [PRIMARY]
GO
```

```
ALTER TABLE [dbo].[cart] ADD CONSTRAINT [PK  cart  2EF52A27CC68CCC3] PRIMARY KEY
CLUSTERED ([cart_id]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[cart] ADD CONSTRAINT [FK_cart_customers] FOREIGN KEY ([customer_id])
REFERENCES [dbo].[customers] ([customer_id])
GO
ALTER TABLE [dbo].[cart] ADD CONSTRAINT [FK_cart_Products] FOREIGN KEY ([product_id])
REFERENCES [dbo].[Products] ([Product_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Cart Shopping', 'SCHEMA', N'dbo',
'TABLE', N'cart', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Cart records.
Identity / Auto increment column', 'SCHEMA', N'dbo', 'TABLE', N'cart', 'COLUMN',
N'cart_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique customer identification number.
Foreign key referring to Customers.customer_id .', 'SCHEMA', N'dbo', 'TABLE', N'cart',
'COLUMN', N'customer_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique product identification number.
Foreign key to Products.product_id .', 'SCHEMA', N'dbo', 'TABLE', N'cart', 'COLUMN',
N'product_id'
GO
EXEC sp addextendedproperty N'MS Description', N'Quantity of products in cart ',
'SCHEMA', N'dbo', 'TABLE', N'cart', 'COLUMN', N'quantity'
GO
```

Uses

[dbo].[customers]
[dbo].[Products]

Used By

[dbo].[AddToCart]
[dbo].[change_quantity_of_certain_product]
[dbo].[MakeOrder]

Links To

Table	Join	Title / Name / Description
Products	**Cart.Product_ID**=Product.Product_ID	FK_Cart_Product_ID Foreign key constraint referencing Product.Product_ID
Customers	**Cart.Customer_ID=** Customer.Customer_ID	FK_Cart_Customer_ID Foreign key constraint referencing Customers.Customer_ID

[dbo].[Category]

MS_Description

Category information

Properties

Property	Value
Row Count (~)	11

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Category_ID *Primary key for Category records.*	int	4	NOT NULL
	Category_name *Category Name*	varchar(50)	50	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Category	Category_ID	True

SQL Script

```
CREATE TABLE [dbo].[Category]
(
[Category_ID] [int] NOT NULL,
[Category_name] [varchar] (50) COLLATE Arabic_CI_AS NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Category] ADD CONSTRAINT [PK Category] PRIMARY KEY CLUSTERED
([Category_ID]) ON [PRIMARY]
GO
EXEC sp_addextendedproperty N'MS_Description', N'Category information ', 'SCHEMA',
N'dbo', 'TABLE', N'Category', NULL, NULL
GO
EXEC sp addextendedproperty N'MS Description', N'Primary key for Category records.',
'SCHEMA', N'dbo', 'TABLE', N'Category', 'COLUMN', N'Category_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Category Name', 'SCHEMA', N'dbo',
'TABLE', N'Category', 'COLUMN', N'Category_name'
GO
```

Used By

[dbo].[subcategory]
[dbo].[search_by_product]
[dbo].[view_all_products]

Linked From

Table	Join	Title / Name / Description
Subcategory	**Category_ID**=Subcategory.Category_ID	FK_Subcategory_Category_ID Foreign key constraint referencing Category.Category_ID

[dbo].[customer_Phone]

MS_Description

Customer Phone Numbers

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK C	Customer_ID *Customer identification number.* *Foreign key to Customers.Customer_ID.* *Composite PK with customer_Phone.Phone .*	int	4	NOT NULL
PK C	Phone *Customer Phone numbers .* *Composite PK with customer_Phone.Customer_ID.*	varchar(50)	50	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	PK_customer_Phone	Customer_ID, Phone	True

Foreign Keys

Name	Columns
FK_customer_Phone_customers	Customer_ID->[dbo].[customers].[customer_id]

SQL Script

```
CREATE TABLE [dbo].[customer_Phone]
(
[Customer_ID] [int] NOT NULL,
[Phone] [varchar] (50) COLLATE Arabic_CI_AS NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[customer_Phone] ADD CONSTRAINT [PK_customer_Phone] PRIMARY KEY
CLUSTERED ([Customer_ID], [Phone]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[customer_Phone] ADD CONSTRAINT [FK_customer_Phone_customers] FOREIGN
KEY ([Customer_ID]) REFERENCES [dbo].[customers] ([customer_id])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer Phone Numbers ', 'SCHEMA',
N'dbo', 'TABLE', N'customer_Phone', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer identification number.
```

```
Foreign key to Customers.Customer_ID.
Composite PK with customer Phone.Phone .', 'SCHEMA', N'dbo', 'TABLE', N'customer -
Phone', 'COLUMN', N'Customer_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer Phone numbers .
Composite PK with customer Phone.Customer ID.', 'SCHEMA', N'dbo', 'TABLE', N'customer -
Phone', 'COLUMN', N'Phone'
GO
```

Uses

[dbo].[customers]

Used By

[dbo].[customer_register]

Links To

Table	Join	Title / Name / Description
Customers	**Customer.Customer_ID=** Customer_Phone.Customer_ID	FK_Customer_Phone_Customer_ID Foreign key constraint referencing Customers.Customer_ID

[dbo].[customers]

MS_Description

Customers information

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK C	customer_id *Primary key for Customers records.* *Unique customer identification number.* *Identity / Auto increment column*	int	4	NOT NULL	1 - 1
	fname *Customer first name*	varchar(50)	50	NULL allowed	
	lname *Customer last name*	varchar(50)	50	NULL allowed	
	gender *Customer gender.*	varchar(50)	50	NULL allowed	
	zip_code *Zip code of city*	varchar(50)	50	NULL allowed	
	age *Customer age*	int	4	NULL allowed	
	country *Customer country*	varchar(50)	50	NULL allowed	
	city *Customer city*	varchar(50)	50	NULL allowed	
	password *Customer account password*	varchar(50)	50	NULL allowed	
	email *Customer account email*	varchar(50)	50	NULL allowed	
	account_id *Unique customer identification account number.*	int	4	NULL allowed	

Check Constraints

Name	On Column	Constraint
CK__customers__gende__531856C7 *To check values of gender between only ('m'/'f') where :'m' refer to male and 'f' refer to female*	Gender	([gender]='m' OR [gender]='f')

SQL Script

```
CREATE TABLE [dbo].[customers]
```

```
(
[customer_id] [int] NOT NULL IDENTITY(1, 1),
[fname] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[lname] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[gender] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[zip_code] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[age] [int] NULL,
[country] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[city] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[password] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[email] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[account_id] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[customers] ADD CONSTRAINT [CK__customers__gende__531856C7] CHECK
(([gender]='m' OR [gender]='f'))
GO
ALTER TABLE [dbo].[customers] ADD CONSTRAINT [PK__customer__CD65CB850D9A9941] PRIMARY
KEY CLUSTERED ([customer_id]) ON [PRIMARY]
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customers information', 'SCHEMA',
N'dbo', 'TABLE', N'customers', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique customer identification account
number. ', 'SCHEMA', N'dbo', 'TABLE', N'customers', 'COLUMN', N'account_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer age', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'age'
GO
EXEC sp addextendedproperty N'MS Description', N'Customer city', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'city'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer country', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'country'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Customers records.
Unique customer identification number.
Identity / Auto increment column', 'SCHEMA', N'dbo', 'TABLE', N'customers', 'COLUMN',
N'customer_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer  account email', 'SCHEMA',
N'dbo', 'TABLE', N'customers', 'COLUMN', N'email'
GO
EXEC sp addextendedproperty N'MS Description', N'Customer first name', 'SCHEMA',
N'dbo', 'TABLE', N'customers', 'COLUMN', N'fname'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer gender.', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'gender'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer last name', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'lname'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer  account password ',
'SCHEMA', N'dbo', 'TABLE', N'customers', 'COLUMN', N'password'
GO
```

```
EXEC sp addextendedproperty N'MS Description', N'Zip code of city', 'SCHEMA', N'dbo',
'TABLE', N'customers', 'COLUMN', N'zip_code'
GO
EXEC sp_addextendedproperty N'MS_Description', N'To check values of gender between only
(''m''/''f'') where :''m'' refer to male  and ''f'' refer to female ', 'SCHEMA',
N'dbo', 'TABLE', N'customers', 'CONSTRAINT', N'CK__customers__gende__531856C7'
GO
```

Used By

[dbo].[cart]
[dbo].[customer_Phone]
[dbo].[orders]
[dbo].[ratings]
[dbo].[customer_register]
[dbo].[get_sales_by_age_category]
[dbo].[sales_per_age_category]
[dbo].[sales_per_gender]

Linked From

Table	Join	Title / Name / Description
Orders	**Customers.Customer_ID=**Orders.Customer_ID	FK_Orders_Customer_ID Foreign key constraint referencing **Customers.CustomerID** .
Ratings	**Customers.Customer_ID=**Ratings.Customer_ID	FK_Ratings_Customer_ID Foreign key constraint referencing **Customers.CustomerID** .
Cart	**Customers.Customer_ID=**Cart.Customer_ID	FK_Cart_Customer_ID Foreign key constraint referencing **Customers.CustomerID** .
Customer_Phone	**Customers.Customer_ID=**Customer_Phone.Customer_ID	FK_Customer_Phone_Customer_ID Foreign key constraint referencing **Customers.CustomerID** .

[dbo].[order_details]

MS_Description

Order details information

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK FK C	order_detail_id *Primary key for order_detail records.* *Unique order detail identification number.* *Identity / Auto increment column*	int	4	NOT NULL	1 – 1
	quantity *Quantity of products in the order*	int	4	NULL allowed	
FK	order_id *Unique order identification number.* *Foreign key constraint referencing orders.order_id*	int	4	NULL allowed	
FK	product_id *Unique product identification number.* *Foreign key constraint referencing Products.product_id*	int	4	NULL allowed	
	line_total *Line total of the order*	int	4	NULL allowed	

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
lineTotal *Trigger to calculate line total from: line_total = quantity*price*	True	True	After Insert
tr_Calculate_SubTotal00 *Trigger to calculate sub total from: sub_total = sum of line_total*	True	True	After Insert Update

Foreign Keys

Name	Columns
FK_order_detai_orders	order_id->[dbo].[orders].[order_id]
FK_order_detai_Products	product_id->[dbo].[Products].[Product_ID]

SQL Script

```
CREATE TABLE [dbo].[order_details]
(
[order_detail_id] [int] NOT NULL IDENTITY(1, 1),
[quantity] [int] NULL,
[order_id] [int] NULL,
[product_id] [int] NULL,
[line_total] [int] NULL
) ON [PRIMARY]
GO
create trigger [dbo].[lineTotal]
on [dbo].[order_details]
after insert
as
   update Order_details
   set line_total = quantity*price
   from Products p inner join Order_details od
   on p.Product_ID = od.Product_ID
GO
CREATE TRIGGER [dbo].[tr_Calculate_SubTotal00]
ON [dbo].[order_details]
AFTER INSERT, UPDATE
AS
BEGIN
    SET NOCOUNT ON;
    UPDATE Orders
    SET sub_total = (SELECT SUM(line_total) FROM Order_details WHERE Order_ID =
Orders.Order_ID)
    FROM Orders
    JOIN inserted ON Orders.Order_ID = inserted.Order_ID;
END;
GO
ALTER TABLE [dbo].[order details] ADD CONSTRAINT [PK  order de  3C5A40803C609D65]
PRIMARY KEY CLUSTERED ([order_detail_id]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[order details] ADD CONSTRAINT [FK order detai orders] FOREIGN KEY
([order_id]) REFERENCES [dbo].[orders] ([order_id])
GO
ALTER TABLE [dbo].[order_details] ADD CONSTRAINT [FK_order_detai_Products] FOREIGN KEY
([product_id]) REFERENCES [dbo].[Products] ([Product_ID])
GO
EXEC sp addextendedproperty N'MS Description', N'Order details information ', 'SCHEMA',
N'dbo', 'TABLE', N'order_details', NULL, NULL
GO
EXEC sp addextendedproperty N'MS Description', N'Line total of the order ', 'SCHEMA',
N'dbo', 'TABLE', N'order_details', 'COLUMN', N'line_total'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for order_detail records.
Unique order detail identification number.
Identity / Auto increment column', 'SCHEMA', N'dbo', 'TABLE', N'order_details',
'COLUMN', N'order_detail_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique order identification number.
```

```
Foreign key constraint referencing orders.order id', 'SCHEMA', N'dbo', 'TABLE',
N'order_details', 'COLUMN', N'order_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique product identification number.
Foreign key constraint referencing Products.product id', 'SCHEMA', N'dbo', 'TABLE',
N'order_details', 'COLUMN', N'product_id'
GO
EXEC sp addextendedproperty N'MS Description', N'Quantity of products in the order',
'SCHEMA', N'dbo', 'TABLE', N'order_details', 'COLUMN', N'quantity'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Trigger to calculate line total from:
line_total = quantity*price', 'SCHEMA', N'dbo', 'TABLE', N'order_details', 'TRIGGER',
N'lineTotal'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Trigger to calculate  sub total
from: sub_total =  sum of line_total', 'SCHEMA', N'dbo', 'TABLE', N'order_details',
'TRIGGER', N'tr_Calculate_SubTotal00'
GO
```

Uses

[dbo].[orders]
[dbo].[Products]

Used By

[dbo].[lowest_ten_products]
[dbo].[MakeOrder]
[dbo].[product_history]
[dbo].[products_sales_per_months]
[dbo].[top_ten_products]

Links To

Table	Join	Title / Name / Description
Orders	**Order_details.Order_ID=**Orders.Order_ID	FK_Orders_details_Order_ID Foreign key constraint referencing Orders.Order_ID
Products	**Order_details.Order_ID=**Products.Product_ID	FK_Orders_details_Product_ID Foreign key constraint referencing Products.Product_ID .

[dbo].[orders]

MS_Description

Orders information

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK FK	order_id *Primary key for order records.* *Unique order identification number.* *Identity / Auto increment column*	int	4	NOT NULL	1 – 1
	sub_total *Sub total :Total Due with no tax or freight*	int	4	NULL allowed	
	total_tax *Order tax value*	int	4	NULL allowed	
	total_freight *Order freight value*	int	4	NULL allowed	
	total_due *Order total due value*	int	4	NULL allowed	
	shipping_method *Order shipping method*	varchar(50)	50	NULL allowed	
	shipping_city *Order shipping city*	varchar(50)	50	NULL allowed	
	payment_method *Order payment method*	varchar(50)	50	NULL allowed	
	order_date *Order date*	date	3	NULL allowed	
FK	customer_id *Unique customer identification number.* *Foreign key referring to Customers.customer_id .*	int	4	NULL allowed	

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
order_data *Trigger to calculate : total tax , total freight and total due*	True	True	After Update
OrderDate *Trigger to make order date is today date*	True	True	After Insert
shipping_method_select *Trigger to select shipping method based on shipping city*	True	True	After Insert

Foreign Keys

Name	Columns
FK_orders_customers	customer_id->[dbo].[customers].[customer_id]

SQL Script

```
CREATE TABLE [dbo].[orders]
(
[order_id] [int] NOT NULL IDENTITY(1, 1),
[sub_total] [int] NULL,
[total_tax] [int] NULL,
[total_freight] [int] NULL,
[total_due] [int] NULL,
[shipping_method] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[shipping_city] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[payment_method] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[order_date] [date] NULL,
[customer_id] [int] NULL
) ON [PRIMARY]
GO
create trigger [dbo].[order_data]
on [dbo].[orders]
after update
as
update orders
set total_tax = sub_total*0.14, total_freight = sub_total*0.05, total_due=
sub_total+total_freight+total_tax
GO
create trigger [dbo].[OrderDate]
on [dbo].[orders]
after insert
as

   UPDATE Orders
   set Order date= GETDATE() from orders inner join inserted on
orders.order_id=inserted.order_id



GO
CREATE TRIGGER [dbo].[shipping_method_select]
ON [dbo].[orders]
AFTER INSERT
AS
BEGIN
    DECLARE @shipping_method VARCHAR(50);
    DECLARE @shipping_city VARCHAR(50);

    SELECT @shipping_city = shipping_city FROM inserted;
```

```
    IF @shipping_city in ('cairo' , 'Alexandria','Aswan','Ismailia','Qena')
        SET @shipping_method = 'car';
    ELSE
        SET @shipping_method = 'train';

    UPDATE orders SET shipping method = @shipping method WHERE Order ID = (SELECT
Order_ID FROM inserted);
END;
GO
ALTER TABLE [dbo].[orders] ADD CONSTRAINT [PK__orders02__46596229A551B6A1] PRIMARY KEY
CLUSTERED ([order_id]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[orders] ADD CONSTRAINT [FK_orders_customers] FOREIGN KEY
([customer_id]) REFERENCES [dbo].[customers] ([customer_id])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Orders information ', 'SCHEMA',
N'dbo', 'TABLE', N'orders', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique customer identification number.
Foreign key referring to Customers.customer_id .', 'SCHEMA', N'dbo', 'TABLE',
N'orders', 'COLUMN', N'customer_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Order date', 'SCHEMA', N'dbo',
'TABLE', N'orders', 'COLUMN', N'order_date'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for order records.
Unique order identification number.
Identity / Auto increment column', 'SCHEMA', N'dbo', 'TABLE', N'orders', 'COLUMN',
N'order_id'
GO
EXEC sp addextendedproperty N'MS Description', N'Order payment method', 'SCHEMA',
N'dbo', 'TABLE', N'orders', 'COLUMN', N'payment_method'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Order shipping city', 'SCHEMA',
N'dbo', 'TABLE', N'orders', 'COLUMN', N'shipping_city'
GO
EXEC sp addextendedproperty N'MS Description', N'Order shipping method', 'SCHEMA',
N'dbo', 'TABLE', N'orders', 'COLUMN', N'shipping_method'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Sub total :Total Due with no tax or
freight ', 'SCHEMA', N'dbo', 'TABLE', N'orders', 'COLUMN', N'sub_total'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Order total due value', 'SCHEMA',
N'dbo', 'TABLE', N'orders', 'COLUMN', N'total_due'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Order freight value', 'SCHEMA',
N'dbo', 'TABLE', N'orders', 'COLUMN', N'total_freight'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Order tax value ', 'SCHEMA', N'dbo',
'TABLE', N'orders', 'COLUMN', N'total_tax'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Trigger to calculate : total tax ,
total freight and total due ', 'SCHEMA', N'dbo', 'TABLE', N'orders', 'TRIGGER',
N'order_data'
GO
EXEC sp addextendedproperty N'MS Description', N'Trigger to make order date is today
date ', 'SCHEMA', N'dbo', 'TABLE', N'orders', 'TRIGGER', N'OrderDate'
```

```
GO
EXEC sp addextendedproperty N'MS Description', N'Trigger to select shipping method
based on shipping city', 'SCHEMA', N'dbo', 'TABLE', N'orders', 'TRIGGER',
N'shipping_method_select'
GO
```

Uses

[dbo].[customers]

Used By

[dbo].[order_details]
[dbo].[get_sales_by_age_category]
[dbo].[MakeOrder]
[dbo].[order_history]
[dbo].[overall_total_sales]
[dbo].[product_history]
[dbo].[products_sales_per_months]
[dbo].[qvelall_total_sales]
[dbo].[sales_per_age_category]
[dbo].[sales_per_city]
[dbo].[sales_per_gender]

Linked from

Table	Join	Title / Name / Description
Order_details	**Orders.Order_ID=**Order_details.Order_ID	FK_Orders_details_Order_ID Foreign key constraint referencing Orders.Order_ID

Links To

Table	Join	Title / Name / Description
Customers	**Orders.Order_ID=**Customers.Order_ID	FK_Customers_Order_ID Foreign key constraint referencing Orders.Order_ID

[dbo].[product_brand]

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK C	product_ID *Product identification number.* *Foreign key referring to Products.Product_ID.* *Composite PK with product_brand.Brand_ID.*	int	4	NOT NULL
PK FK C	Brand_ID *Brand identification number.* *Foreign key referring to Brand.Brand_ID.* *Composite PK with product_brand.Product_ID..*	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	PK_product_brand	product_ID, Brand_ID	True

Foreign Keys

Name	Columns
FK_product_brand_Brand	Brand_ID->[dbo].[Brand].[Brand_ID]
FK_product_brand_Products	product_ID->[dbo].[Products].[Product_ID]

SQL Script

```
CREATE TABLE [dbo].[product_brand]
(
[product_ID] [int] NOT NULL,
[Brand_ID] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[product_brand] ADD CONSTRAINT [PK_product_brand] PRIMARY KEY
CLUSTERED ([product_ID], [Brand_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[product brand] ADD CONSTRAINT [FK product brand Brand] FOREIGN KEY
([Brand_ID]) REFERENCES [dbo].[Brand] ([Brand_ID])
GO
ALTER TABLE [dbo].[product_brand] ADD CONSTRAINT [FK_product_brand_Products] FOREIGN
KEY ([product_ID]) REFERENCES [dbo].[Products] ([Product_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Brand identification number.
```

```
Foreign key referring to Brand.Brand_ID.
Composite PK with product brand.Product ID..', 'SCHEMA', N'dbo', 'TABLE',
N'product_brand', 'COLUMN', N'Brand_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Product identification number.
Foreign key referring to Products.Product_ID.
Composite PK with product_brand.Brand_ID.', 'SCHEMA', N'dbo', 'TABLE',
N'product_brand', 'COLUMN', N'product_ID'
GO
```

Uses

[dbo].[Brand]
[dbo].[Products]

Links To

Table	Join	Title / Name / Description
Products	**Product_brand.Product_ID=**Products.Product_ID	FK_Produc_brand_Product_ID Foreign key constraint referencing Products.Product_ID
Brand	**Product_brand.Brand_ID=**Brand.Brand_ID	FK_Produc_brand_Brand_ID Foreign key constraint referencing Brand.Brand_ID

[dbo].[Product_Store]

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK C	Store_ID *Store identification number.* *Foreign key referring to Store.Store_ID* *Composite PK with product_Store.Product_ID.*	int	4	NOT NULL
PK FK C	Product_ID *Product identification number.* *Foreign key referring to Products.Product_ID.* *Composite PK with product_store.Store_ID.*	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Product_Store	Store_ID, Product_ID	True

Foreign Keys

Name	Columns
FK_Product_Store_Products	Product_ID->[dbo].[Products].[Product_ID]
FK_Product_Store_Store	Store_ID->[dbo].[Store].[Store_ID]

SQL Script

```
CREATE TABLE [dbo].[Product_Store]
(
[Store_ID] [int] NOT NULL,
[Product_ID] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Product Store] ADD CONSTRAINT [PK Product Store] PRIMARY KEY
CLUSTERED ([Store_ID], [Product_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Product_Store] ADD CONSTRAINT [FK_Product_Store_Products] FOREIGN
KEY ([Product_ID]) REFERENCES [dbo].[Products] ([Product_ID])
GO
ALTER TABLE [dbo].[Product Store] ADD CONSTRAINT [FK Product Store Store] FOREIGN KEY
([Store_ID]) REFERENCES [dbo].[Store] ([Store_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Product identification number.
Foreign key referring to Products.Product_ID.
```

```
Composite PK with product store.Store ID.', 'SCHEMA', N'dbo', 'TABLE', N'Product - Store', 'COLUMN', N'Product_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Store identification number.
Foreign key referring to Store.Store_ID
Composite PK with product Store.Product ID.', 'SCHEMA', N'dbo', 'TABLE', N'Product - Store', 'COLUMN', N'Store_ID'
GO
```

Uses

[dbo].[Products]
[dbo].[Store]

Links To

Table	Join	Title / Name / Description
Products	**Product_Store.Product_ID=**Products.Product_ID	FK_Product_Store_Product_ID Foreign key constraint referencing Products.Product_ID
Store	**Product_Store.Store_ID=**Store.Store_ID	FK_Product_Store_Store_ID Foreign key constraint referencing Store.Store_ID

[dbo].[Products]

MS_Description

Products information

Properties

Property	Value
Row Count (~)	100

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Product_ID *Primary key for Products records.* *Product identification number.*	int	4	NOT NULL
	Product_name *Product Name*	varchar(50)	50	NULL allowed
	price *Product price in the website*	float	8	NULL allowed
	cost *Product cost from supplier*	float	8	NULL allowed
FK	subcategory_ID *Subcategory identification number.* *Foreign key referring to Subcategory.subcategory_ID.*	int	4	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Products	Product_ID	True

Foreign Keys

Name	Columns
FK_Products_subcategory	subcategory_ID->[dbo].[subcategory].[Subcategory_ID]

SQL Script

```
CREATE TABLE [dbo].[Products]
(
[Product_ID] [int] NOT NULL,
```

```
[Product_name] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[price] [float] NULL,
[cost] [float] NULL,
[subcategory_ID] [int] NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Products] ADD CONSTRAINT [PK_Products] PRIMARY KEY CLUSTERED
([Product_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Products] ADD CONSTRAINT [FK_Products_subcategory] FOREIGN KEY
([subcategory_ID]) REFERENCES [dbo].[subcategory] ([Subcategory_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Products information', 'SCHEMA',
N'dbo', 'TABLE', N'Products', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Product cost from supplier ',
'SCHEMA', N'dbo', 'TABLE', N'Products', 'COLUMN', N'cost'
GO
EXEC sp addextendedproperty N'MS Description', N'Product price in the website',
'SCHEMA', N'dbo', 'TABLE', N'Products', 'COLUMN', N'price'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Products records.
Product identification number. ', 'SCHEMA', N'dbo', 'TABLE', N'Products', 'COLUMN',
N'Product_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Product Name', 'SCHEMA', N'dbo',
'TABLE', N'Products', 'COLUMN', N'Product_name'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Subcategory identification number.
 Foreign key referring to Subcategory.subcategory ID.', 'SCHEMA', N'dbo', 'TABLE',
N'Products', 'COLUMN', N'subcategory_ID'
GO
```

Uses

[dbo].[subcategory]

Used By

[dbo].[cart]
[dbo].[order_details]
[dbo].[product_brand]
[dbo].[Product_Store]
[dbo].[Supplier_Product]
[dbo].[lowest_ten_products]
[dbo].[product_history]
[dbo].[products_sales_per_months]
[dbo].[search_by_product]
[dbo].[search_products]
[dbo].[top_ten_products]
[dbo].[view_all_products]

Linked From

Table	Join	Title / Name / Description
Order_details	**Products.Product_ID=** Order_details.Product_ID	FK_Order_details _Product_ID Foreign key constraint referencing Products.Product_ID
Cart	**Products.Product_ID=** Cart.Product_ID	FK_Cart _Product_ID Foreign key constraint referencing Products.Product_ID
Product_brand	**Products.Product_ID=** Product_brand .Product_ID	FK_ Product_brand _Product_ID Foreign key constraint referencing Products.Product_ID
Supplier_Product	**Products.Product_ID=** Supplier_Product.Product_ID	FK_ Supplier_Product _Product_ID Foreign key constraint referencing Products.Product_ID
Product_Store	**Products.Product_ID=** Product_Store .Product_ID	FK_ Product_Store _Product_ID Foreign key constraint referencing Products.Product_ID

Links To

Table	Join	Title / Name / Description
Subcategory	**Products.SubcategoryID=**Subcategory.Subcategory_ID	FK_Products_Subcategory _ID Foreign key constraint referencing Subcategory.Subcategory_ID

[dbo].[ratings]

MS_Description

Customer Rating of our services

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity
PK C	rating_id *Primary key for Ratings records.* *Rating identification number.* *Identity / Auto increment column*	int	4	NOT NULL	1 - 1

	overall_rate *Overall rate of service (rate from 5)*	int	4	NULL allowed	
	delivery_rate *Rate of delivery service (rate from 5)*	int	4	NULL allowed	
	customer_service_rate *Rate of customer service (rate from 5)*	int	4	NULL allowed	
	product_quality_rate *Rate of product quality (rate from 5)*	int	4	NULL allowed	
	loyality *Rate of loyalty (If customer will make order again or not rate from [yes-No])*	varchar(50)	50	NULL allowed	
FK	customer_id *Unique customer identification number.* *Foreign key referring to Customers.customer_id .*	int	4	NULL allowed	

Check Constraints

Name	On Column	Constraint
CK__ratings__custome__6FB49575 *To check values between 1:5 only*	customer_service_rate	([customer_service_rate]<=(5))
CK__ratings__deliver__6EC0713C *To check values between 1:5 only*	delivery_rate	([delivery_rate]<=(5))
CK__ratings__loyalit__719CDDE7 *To check answers between "Yes"/"No" only*	loyality	([loyality]='no' OR [loyality]='yes')
CK__ratings__overall__6DCC4D03 *To check values between 1:5 only*	overall_rate	([overall_rate]<=(5))
CK__ratings__product__70A8B9AE *To check values between 1:5 only*	product_quality_rate	([product_quality_rate]<=(5))

Foreign Keys

Name	Columns
FK_ratings_customers	customer_id->[dbo].[customers].[customer_id]

SQL Script

```
CREATE TABLE [dbo].[ratings]
(
[rating_id] [int] NOT NULL IDENTITY(1, 1),
[overall_rate] [int] NULL,
[delivery_rate] [int] NULL,
[customer_service_rate] [int] NULL,
[product_quality_rate] [int] NULL,
[loyality] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[customer_id] [int] NULL
) ON [PRIMARY]
GO
```

```
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [CK  ratings  custome  6FB49575] CHECK
(([customer_service_rate]<=(5)))
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [CK__ratings__deliver__6EC0713C] CHECK
(([delivery_rate]<=(5)))
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [CK__ratings__loyalit__719CDDE7] CHECK
(([loyality]='no' OR [loyality]='yes'))
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [CK__ratings__overall__6DCC4D03] CHECK
(([overall_rate]<=(5)))
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [CK__ratings__product__70A8B9AE] CHECK
(([product_quality_rate]<=(5)))
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [PK__ratings__D35B278B87CF6DB9] PRIMARY KEY
CLUSTERED ([rating_id]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[ratings] ADD CONSTRAINT [FK ratings customers] FOREIGN KEY
([customer_id]) REFERENCES [dbo].[customers] ([customer_id])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Customer Rating of our services ',
'SCHEMA', N'dbo', 'TABLE', N'ratings', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Unique customer identification number.
Foreign key referring to Customers.customer_id .', 'SCHEMA', N'dbo', 'TABLE',
N'ratings', 'COLUMN', N'customer_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Rate of customer service (rate from
5)', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'COLUMN', N'customer_service_rate'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Rate of delivery service (rate from
5)', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'COLUMN', N'delivery_rate'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Rate of loyalty (If customer will make
order again or not rate from [yes-No])', 'SCHEMA', N'dbo', 'TABLE', N'ratings',
'COLUMN', N'loyality'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Overall rate of service (rate from
5) ', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'COLUMN', N'overall_rate'
GO
EXEC sp addextendedproperty N'MS Description', N'Rate of product quality ( rate from
5)', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'COLUMN', N'product_quality_rate'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Ratings records.
Rating identification number.
Identity / Auto increment column', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'COLUMN',
N'rating_id'
GO
EXEC sp_addextendedproperty N'MS_Description', N'To check values between 1:5 only',
'SCHEMA', N'dbo', 'TABLE', N'ratings', 'CONSTRAINT', N'CK__ratings__custome__6FB49575'
GO
EXEC sp_addextendedproperty N'MS_Description', N'To check values between 1:5 only',
'SCHEMA', N'dbo', 'TABLE', N'ratings', 'CONSTRAINT', N'CK__ratings__deliver__6EC0713C'
GO
EXEC sp addextendedproperty N'MS Description', N'To check answers  between "Yes"/"No"
only', 'SCHEMA', N'dbo', 'TABLE', N'ratings', 'CONSTRAINT',
N'CK__ratings__loyalit__719CDDE7'
```

```
GO
EXEC sp addextendedproperty N'MS Description', N'To check values between 1:5 only',
'SCHEMA', N'dbo', 'TABLE', N'ratings', 'CONSTRAINT', N'CK__ratings__overall__6DCC4D03'
GO
EXEC sp addextendedproperty N'MS Description', N'To check values between 1:5 only',
'SCHEMA', N'dbo', 'TABLE', N'ratings', 'CONSTRAINT', N'CK__ratings__product__70A8B9AE'
GO
```

Uses

[dbo].[customers]

Used By

[dbo].[customer_rates]
[dbo].[customer_rates_based_on_loyality]
[dbo].[Rating_survey]

Links To

Table	Join	Title / Name / Description
Customers	**Raitings.Customer_ID**=Customers.Customer_ID	FK_Ratings_Customer_ID Foreign key constraint referencing Customers.Customer._ID

[dbo].[Store]

MS_Description

Store information

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK	Store_ID *Primary key for Store records.* *Store unique identification number.*	int	4	NOT NULL
	Store_name *Store name*	varchar(50)	50	NULL allowed
	region *Store region*	varchar(50)	50	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK	PK_Store	Store_ID	True

SQL Script

```
CREATE TABLE [dbo].[Store]
(
[Store_ID] [int] NOT NULL,
[Store_name] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[region] [varchar] (50) COLLATE Arabic_CI_AS NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Store] ADD CONSTRAINT [PK Store] PRIMARY KEY CLUSTERED ([Store ID])
ON [PRIMARY]
GO
EXEC sp_addextendedproperty N'MS_Description', N'Store information', 'SCHEMA', N'dbo',
'TABLE', N'Store', NULL, NULL
GO
EXEC sp addextendedproperty N'MS Description', N'Store region', 'SCHEMA', N'dbo',
'TABLE', N'Store', 'COLUMN', N'region'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Store records.
Store unique identification number. ', 'SCHEMA', N'dbo', 'TABLE', N'Store', 'COLUMN',
N'Store_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Store name', 'SCHEMA', N'dbo',
'TABLE', N'Store', 'COLUMN', N'Store_name'
GO
```

Used By

[dbo].[Product_Store]

Linked From

Table	Join	Title / Name / Description
Product_Store	**Store.Store_ID=** Product_Store.Store_ID	FK_ Product_Store.Store_ID Foreign key constraint referencing Store.Store_ID

[dbo].[subcategory]

MS_Description

Subcategory information

Properties

Property	Value
Row Count (~)	32

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Subcategory_ID *Primary key for subcategory records.* *Subcategory unique identification number.*	int	4	NOT NULL
FK	Category_ID *Primary key for Category records.* *Foreign key referring to Category.Category.ID*	int	4	NULL allowed
	Subcategory_name *Subcategory name*	varchar(50)	50	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK_subcategory	Subcategory_ID	True

Foreign Keys

Name	Columns
FK_subcategory_Category	Category_ID->[dbo].[Category].[Category_ID]

SQL Script

```
CREATE TABLE [dbo].[subcategory]
(
[Subcategory_ID] [int] NOT NULL,
[Category_ID] [int] NULL,
[Subcategory_name] [varchar] (50) COLLATE Arabic_CI_AS NULL
) ON [PRIMARY]
GO
```

```
ALTER TABLE [dbo].[subcategory] ADD CONSTRAINT [PK subcategory] PRIMARY KEY CLUSTERED
([Subcategory_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[subcategory] ADD CONSTRAINT [FK_subcategory_Category] FOREIGN KEY
([Category_ID]) REFERENCES [dbo].[Category] ([Category_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Subcategory information', 'SCHEMA',
N'dbo', 'TABLE', N'subcategory', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Category records.
Foreign key referring to Category.Category.ID', 'SCHEMA', N'dbo', 'TABLE',
N'subcategory', 'COLUMN', N'Category_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for subcategory records.
Subcategory unique identification number. ', 'SCHEMA', N'dbo', 'TABLE', N'subcategory',
'COLUMN', N'Subcategory_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Subcategory name', 'SCHEMA', N'dbo',
'TABLE', N'subcategory', 'COLUMN', N'Subcategory_name'
GO
```

Uses

[dbo].[Category]

Used By

[dbo].[Products]
[dbo].[search_by_product]
[dbo].[view_all_products]

Linked From

Table	Join	Title / Name / Description
Products	**Subcategory.Subcategory_ID=** Products.Subcategory_ID	FK_ Products_.Subcategory_ID Foreign key constraint referencing Subcategory.Subcategory_ID

Links To

Table	Join	Title / Name / Description
Category	**Subcategory.Category_ID=** Category.Category_ID	FK_ Subcategory_Category_ID Foreign key constraint referencing Category.Category_ID

[dbo].[Supplier]

MS_Description

Supplier information

Properties

Property	Value
Row Count (~)	5

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK C	Supplier_ID *Primary key for Supplier records.* *Supplier unique identification number.*	int	4	NOT NULL
	supplier_name *Supplier name*	varchar(50)	50	NULL allowed
	location *Supplier location*	varchar(50)	50	NULL allowed

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Supplier	Supplier_ID	True

SQL Script

```
CREATE TABLE [dbo].[Supplier]
(
[Supplier_ID] [int] NOT NULL,
[supplier_name] [varchar] (50) COLLATE Arabic_CI_AS NULL,
[location] [varchar] (50) COLLATE Arabic_CI_AS NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Supplier] ADD CONSTRAINT [PK_Supplier] PRIMARY KEY CLUSTERED
([Supplier_ID]) ON [PRIMARY]
GO
EXEC sp_addextendedproperty N'MS_Description', N'Supplier information', 'SCHEMA',
N'dbo', 'TABLE', N'Supplier', NULL, NULL
GO
EXEC sp_addextendedproperty N'MS_Description', N'Supplier location', 'SCHEMA', N'dbo',
'TABLE', N'Supplier', 'COLUMN', N'location'
GO
```

```
EXEC sp_addextendedproperty N'MS_Description', N'Primary key for Supplier records.
Supplier unique identification number. ', 'SCHEMA', N'dbo', 'TABLE', N'Supplier',
'COLUMN', N'Supplier_ID'
GO
EXEC sp addextendedproperty N'MS Description', N'Supplier name', 'SCHEMA', N'dbo',
'TABLE', N'Supplier', 'COLUMN', N'supplier_name'
GO
```

Used By

[dbo].[Supplier_Product]

Linked From

Table	Join	Title / Name / Description
Supplier_Product	**Supplier.Supplier_ID=** Supplier_Product.Supplier_ID	FK _Supplier_Product_Supplier_ID Foreign key constraint referencing Supplier.Supplier_ID

[dbo].[Supplier_Product]

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability
PK FK C	Supplier_ID *Supplier identification number.* *Foreign key referring to Supplier.Supplier_ID* *Composite PK with Supplier_product.Product_ID.*	int	4	NOT NULL
PK FK C	Product_ID *Product identification number.* *Foreign key referring to Products.Product_ID.* *Composite PK with Supplier_product.Supplier_ID.*	int	4	NOT NULL

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Supplier_Product	Supplier_ID, Product_ID	True

Foreign Keys

Name	Columns
FK_Supplier_Product_Products	Product_ID->[dbo].[Products].[Product_ID]
FK_Supplier_Product_Supplier	Supplier_ID->[dbo].[Supplier].[Supplier_ID]

SQL Script

```
CREATE TABLE [dbo].[Supplier_Product]
(
[Supplier_ID] [int] NOT NULL,
[Product_ID] [int] NOT NULL
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Supplier Product] ADD CONSTRAINT [PK Supplier Product] PRIMARY KEY
CLUSTERED ([Supplier_ID], [Product_ID]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Supplier_Product] ADD CONSTRAINT [FK_Supplier_Product_Products]
FOREIGN KEY ([Product_ID]) REFERENCES [dbo].[Products] ([Product_ID])
GO
ALTER TABLE [dbo].[Supplier Product] ADD CONSTRAINT [FK Supplier Product Supplier]
FOREIGN KEY ([Supplier_ID]) REFERENCES [dbo].[Supplier] ([Supplier_ID])
GO
EXEC sp_addextendedproperty N'MS_Description', N'Product identification number.
Foreign key referring to Products.Product_ID.
```

```
Composite PK with Supplier product.Supplier ID.', 'SCHEMA', N'dbo', 'TABLE',
N'Supplier_Product', 'COLUMN', N'Product_ID'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Supplier identification number.
Foreign key referring to Supplier.Supplier_ID
Composite PK with Supplier product.Product ID.', 'SCHEMA', N'dbo', 'TABLE',
N'Supplier_Product', 'COLUMN', N'Supplier_ID'
GO
```

Uses

[dbo].[Products]
[dbo].[Supplier]

Links To

Table	Join	Title / Name / Description
Products	**Supplier_Product.Product_ID=**Products.Product_ID	FK _Supplier_Product_Product_ID Foreign key constraint referencing Products.Product_ID
Supplier	**Supplier_Product.Supplier_ID=**Supplier.Supplier_ID	FK _Supplier_Product_Supplier_ID Foreign key constraint referencing Supplier.Supplier_ID

Stored Procedures

Objects

Name
dbo.AddToCart *Use product_id ,customer_id ,quantity to fill cart*
dbo.change_quantity_of_certain_product *Use product_id ,customer_id ,quantity to modify the quantity on the cart*
dbo.customer_rates
dbo.customer_rates_based_on_loyality
dbo.customer_register *Register to the website by using name, password, Email, gender, age , city ,phone and zip cod of city*
dbo.get_sales_by_age_category *Get sales by category*
dbo.lowest_ten_products *Show lowest 10 products*
dbo.loyal_customer_rates
dbo.MakeOrder *Use Customers.customer_id ,Orders.payment_method,Orders.shipping_city to make order*
dbo.nonloyal_customers_rates *Show the non-loyal customer rate*
dbo.order_history *Use Customers.customer_id to show the previous order of him/her*
dbo.overall_total_sales *Show total sales by sum orders.total_due*
dbo.product_history *Use customers.customer_id to show the product history of him/her*
dbo.products_sales_per_months *Use Orders.order_date to show product sales per month*
dbo.qvelall_total_sales
dbo.Rating_survey *Use Customers.Customer_ID , Ratings.Overall_rate, Ratings.delivery_rate , Ratings.customer_service_rate,Ratings.Product_quality_rate and Ratings.Loyality*
dbo.sales_per_age_category
dbo.sales_per_city *Sales per city*
dbo.sales_per_gender *Sales per gender*
dbo.search_by_product *Use keyword var to search the product name in the website by any letters of its name*

dbo.search_products
dbo.top_ten_products
dbo.view_all_products *Show all products*

[dbo].[AddToCart]

MS_Description

Use product_id ,customer_id ,quantity to fill cart

Parameters

Name	Data Type	Max Length (Bytes)
@product_id	varchar(50)	50
@customer_id	varchar(50)	50
@quantity	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[AddToCart]
@product_id varchar(50),
@customer_id varchar(50),
@quantity varchar(50)
AS
declare @i int = 1
while @i <= count(@product_id)
begin
  insert into cart(product_id, customer_id, quantity)
  values(@product_id,@customer_id,@quantity)
  set @i = @i + 1
end
GO
EXEC sp_addextendedproperty N'MS_Description', N'
 Use product_id ,customer_id ,quantity to fill cart', 'SCHEMA', N'dbo', 'PROCEDURE',
N'AddToCart', NULL, NULL
GO
```

Uses

[dbo].[cart]

[dbo].[change_quantity_of_certain_product]

MS_Description

Use product_id ,customer_id ,quantity to modify the quantity on the cart

Parameters

Name	Data Type	Max Length (Bytes)
@customer_id	int	4
@product_id	int	4
@new_quantity	int	4

SQL Script

```
create proc [dbo].[change_quantity_of_certain_product]
@customer_id int,
@product_id int,
@new_quantity int
as
update cart
set quantity = @new_quantity
where customer_id = @customer_id and product_id = @product_id
GO
EXEC sp addextendedproperty N'MS Description', N' Use product id ,customer id ,quantity
to modify the quantity on the cart ', 'SCHEMA', N'dbo', 'PROCEDURE',
N'change_quantity_of_certain_product', NULL, NULL
GO
```

Uses

[dbo].[cart]

[dbo].[customer_rates]

SQL Script

```
CREATE proc [dbo].[customer_rates]
as
select avg(overall_rate) as over_all_rate, avg(delivery_rate) as deliver_rate
, avg(product_quality_rate) as product_quality_rate,
avg(customer_service_rate) as customer_service_rate
from ratings
GO
```

Uses

[dbo].[ratings]

[dbo].[customer_rates_based_on_loyality]

SQL Script

```
CREATE proc [dbo].[customer_rates_based_on_loyality]
as
select loyality, avg(overall_rate) as over_all_rate, avg(delivery_rate) as deliver_rate
, avg(product_quality_rate) as product_quality_rate,
avg(customer_service_rate) as customer_service_rate
from ratings
group by loyality
GO
```

Uses

[dbo].[ratings]

[dbo].[customer_register]

MS_Description

Register to the website by using name, password, Email, gender, age , city ,phone and zip cod of city

Parameters

Name	Data Type	Max Length (Bytes)
@fname	varchar(50)	50
@lname	varchar(50)	50
@gender	varchar(50)	50
@zip	varchar(50)	50
@Age	int	4
@country	varchar(50)	50
@city	varchar(50)	50
@password	varchar(50)	50
@email	varchar(50)	50
@phone	varchar(11)	11

SQL Script

```
CREATE proc [dbo].[customer_register]
@fname varchar(50),
@lname varchar(50),
@gender varchar(50),
@zip varchar(50),
@Age int,
@country varchar(50),
@city varchar(50),
@password varchar(50),
@email varchar(50),
@phone varchar(11)
AS
declare @lastcustomerid int
if (exists (select * from customers where email = @email))
begin
select 'this email is already used' as error_massege
end
else
begin
insert into customers(fname, lname, gender, zip code,age, country,city, password,
email)
values(@fname,@lname,@gender, @zip,@age, @country,@city, @password, @email)
set @lastcustomerid = scope_identity()
```

```
insert into customer_phone values (@lastcustomerid, @phone)
end
GO
EXEC sp_addextendedproperty N'MS_Description', N'Register to the website by using name,
password, Email, gender, age , city ,phone and zip cod of city', 'SCHEMA', N'dbo',
'PROCEDURE', N'customer_register', NULL, NULL
GO
```

Uses

[dbo].[customer_Phone]
[dbo].[customers]

[dbo].[get_sales_by_age_category]

MS_Description

Get sales by category

SQL Script

```
CREATE PROCEDURE [dbo].[get_sales_by_age_category]
AS
declare @categories table (age_category varchar(50), total_sales int)
insert into @categories (age_category, total_sales)
SELECT
        CASE
            WHEN age <= 20 THEN 'Under 20'
            WHEN age BETWEEN 21 AND 30 THEN '21-30'
            WHEN age BETWEEN 31 AND 40 THEN '31-40'
            WHEN age BETWEEN 41 AND 50 THEN '41-50'
            WHEN age > 50 THEN 'Over 50'
        END,
        sum(total_due)
    FROM orders JOIN customers
    ON orders.customer_id = customers.customer_id
    GROUP BY age;
select sum(total_sales), age_category
from @categories group by age_category

GO
EXEC sp_addextendedproperty N'MS_Description', N'Get sales by category', 'SCHEMA',
N'dbo', 'PROCEDURE', N'get_sales_by_age_category', NULL, NULL
GO
```

Uses

[dbo].[customers]
[dbo].[orders]

[dbo].[lowest_ten_products]

MS_Description

Show lowest 10 products

SQL Script

```
create proc [dbo].[lowest_ten_products]
as
select top 10 sum(line_total), product_name from order_details od inner join Products p
on od.product_id = p.Product_ID
group by Product_name
order by sum(line_total) asc
GO
EXEC sp_addextendedproperty N'MS_Description', N'Show lowest 10 products', 'SCHEMA',
N'dbo', 'PROCEDURE', N'lowest_ten_products', NULL, NULL
GO
```

Uses

[dbo].[order_details]
[dbo].[Products]

[dbo].[loyal_customer_rates]

SQL Script

```
create proc [dbo].[loyal_customer_rates]
as
select avg(overall_rate) as over_all_rate, avg(delivery_rate) as deliver_rate
, avg(product_quality_rate) as product_quality_rate,
avg(customer_service_rate) as customer_service_rate
from survey_question
where loyality = 'yes'
GO
```

[dbo].[MakeOrder]

MS_Description

Use Customers.customer_id ,Orders.payment_method,Orders.shipping_city to make order

Parameters

Name	Data Type	Max Length (Bytes)
@customer_id	int	4
@payment_method	varchar(50)	50
@shipping_city	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[MakeOrder]
@customer_id int,
@payment_method varchar(50),
@shipping_city varchar(50)
AS
declare @order_id int
insert into orders(shipping_city,payment_method,customer_id, order_date)
values(@shipping_city,@payment_method,@customer_id, GETDATE())

set @order_id = SCOPE_IDENTITY()

declare @product_id int, @quantity int

insert into Order_details(quantity,Product_ID,Order_ID)
select quantity,product_id,@order_id from cart where customer_id = @customer_id

delete from cart where customer_id = @customer_id
GO
EXEC sp addextendedproperty N'MS Description', N'Use Customers.customer id
,Orders.payment_method,Orders.shipping_city to make order', 'SCHEMA', N'dbo',
'PROCEDURE', N'MakeOrder', NULL, NULL
GO
```

Uses

[dbo].[cart]
[dbo].[order_details]
[dbo].[orders]

[dbo].[nonloyal_customers_rates]

MS_Description

Show the non-loyal customer rate

SQL Script

```
create proc [dbo].[nonloyal_customers_rates]
as
select avg(overall_rate) as over_all_rate, avg(delivery_rate) as deliver_rate
, avg(product_quality_rate) as product_quality_rate,
avg(customer_service_rate) as customer_service_rate
from survey_question
where loyality = 'no'
GO
EXEC sp addextendedproperty N'MS Description', N'Show the non-loyal customer rate',
'SCHEMA', N'dbo', 'PROCEDURE', N'nonloyal_customers_rates', NULL, NULL
GO
```

[dbo].[order_history]

MS_Description

Use Customers.customer_id to show the previous order of him/her

Parameters

Name	Data Type	Max Length (Bytes)
@customer_id	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[order_history]
@customer_id varchar(50)
as
select * from orders where customer_id = @customer_id
GO
EXEC sp_addextendedproperty N'MS_Description', N'Use Customers.customer_id to show the previous order of him/her', 'SCHEMA', N'dbo', 'PROCEDURE', N'order_history', NULL, NULL
GO
```

Uses

[dbo].[orders]

[dbo].[overall_total_sales]

MS_Description

Show total sales by sum orders.total_due

SQL Script

```
create proc [dbo].[overall_total_sales]
as
select total_sales = sum(total_due),total_taxes = sum(total_tax),
total_freight = sum(total_freight) , total_subtotal = sum(sub_total)
from orders
GO
EXEC sp addextendedproperty N'MS Description', N'Show total sales by sum
orders.total_due', 'SCHEMA', N'dbo', 'PROCEDURE', N'overall_total_sales', NULL, NULL
GO
```

Uses

[dbo].[orders]

[dbo].[product_history]

MS_Description

Use customers.customer_id to show the product history of him/her

Parameters

Name	Data Type	Max Length (Bytes)
@customer_id	int	4

SQL Script

```
create proc [dbo].[product_history]
@customer_id int
as
select product_name, price, quantity, order_date from
products p inner join order_details od on p.Product_ID = od.product_id
inner join orders o on od.order_id = o.order_id
where o.customer_id = @customer_id
GO
EXEC sp_addextendedproperty N'MS_Description', N'Use customers.customer_id to show the
product history of him/her', 'SCHEMA', N'dbo', 'PROCEDURE', N'product history', NULL,
NULL
GO
```

Uses

[dbo].[order_details]
[dbo].[orders]
[dbo].[Products]

[dbo].[products_sales_per_months]

MS_Description

Use Orders.order_date to show product sales per month

Parameters

Name	Data Type	Max Length (Bytes)
@year	int	4

SQL Script

```
CREATE proc [dbo].[products_sales_per_months]
@year int
as
select ProductName,
       ISNULL([1],0) as Jan ,
       ISNULL([2],0) as Feb,
       ISNULL([3],0) as Mar,
       ISNULL([4],0) as Apr ,
       ISNULL([5],0) as May,
       ISNULL([6],0) as Jun,
       ISNULL([7],0) as Jul,
       ISNULL([8],0) as Aug,
       ISNULL([9],0) as Sep,
       ISNULL([10],0) as Oct,
       ISNULL([11],0) +
       ISNULL([12],0)+
        ISNULL([1],0) +
       ISNULL([2],0)+
       ISNULL([3],0) +
       ISNULL([4],0) +
       ISNULL([5],0) +
       ISNULL([6],0) +
       ISNULL([7],0)+
       ISNULL([8],0) +
       ISNULL([9],0) +
       ISNULL([10],0) +
       ISNULL([11],0) +
       ISNULL([12],0) as [Total sales]

 from  ( SELECT MONTH(o.order_date) AS orderDate, p.product_name AS ProductName,
    SUM(isnull(od.line_total,0)) AS LineTotal
    FROM orders o
    INNER JOIN order_details od ON o.order_id = od.order_id
    INNER JOIN products p ON od.product_id = p.Product_ID
```

```
    WHERE YEAR(o.order_date) = @year
    GROUP BY MONTH(o.order_date), p.product_name
) as total_product_sales

PIVOT (
SUM (LineTotal)
FOR orderDate IN ([1],[2],[3],[4],[5],[6],[7],[8],[9],[10],[11],[12]))
AS pivot_productSales
GO
EXEC sp addextendedproperty N'MS Description', N'Use Orders.order date to show product
sales per month ', 'SCHEMA', N'dbo', 'PROCEDURE', N'products_sales_per_months', NULL,
NULL
GO
```

Uses

[dbo].[order_details]
[dbo].[orders]
[dbo].[Products]

[dbo].[qvelall_total_sales]

SQL Script

```
create proc [dbo].[qvelall_total_sales]
as
select total_sales = sum(total_due),total_taxes = sum(total_tax),
total_freight = sum(total_freight) , total_subtotal = sum(sub_total)
from orders
GO
```

Uses

[dbo].[orders]

[dbo].[Rating_survey]

MS_Description

Use Customers.Customer_ID , Ratings.Overall_rate, Ratings.delivery_rate ,
Ratings.customer_service_rate,Ratings.Product_quality_rate and Ratings.Loyality

Parameters

Name	Data Type	Max Length (Bytes)
@customer_id	int	4
@overall_rate	int	4
@delivery_rate	int	4
@customer_service_rate	int	4
@loyality	varchar(50)	50
@product_quality_rate	int	4

SQL Script

```
CREATE proc [dbo].[Rating_survey]
@customer_id int,
@overall_rate int,
@delivery_rate int,
@customer_service_rate int,
@loyality varchar(50),
@product_quality_rate int
as
insert into ratings (overall_rate, delivery_rate, customer_service_rate,
product_quality_rate,loyality, customer_id)
values (@overall_rate, @delivery_rate, @customer_service_rate,@product_quality_rate,
@loyality, @customer_id)
GO
EXEC sp_addextendedproperty N'MS_Description', N'Use Customers.Customer_ID ,
Ratings.Overall_rate, Ratings.delivery_rate ,
Ratings.customer service rate,Ratings.Product quality rate and Ratings.Loyality ',
'SCHEMA', N'dbo', 'PROCEDURE', N'Rating_survey', NULL, NULL
GO
```

Uses

[dbo].[ratings]

[dbo].[sales_per_age_category]

SQL Script

```
create proc [dbo].[sales_per_age_category]
as
select
case
        when age <= 20 then 'Under 20'
        when age between 21 and 30 then '21 to 30'
        when age between 31 and 40 then '31 to 40'
        when age between 41 and 50 then '41 to 50'
        when age >50 then 'over 50'
        end,
sum(total_due)
from orders o inner join customers c on c.customer_id = o.customer_id
group by c.age
GO
```

Uses

[dbo].[customers]
[dbo].[orders]

[dbo].[sales_per_city]

MS_Description

Sales per city

Parameters

Name	Data Type	Max Length (Bytes)
@city	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[sales_per_city]
@city varchar(50)
as
select shipping_city, sum(total_due) as total_sales
from orders
group by shipping_city having shipping_city like '%'+@city+'%'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Sales per city', 'SCHEMA', N'dbo',
'PROCEDURE', N'sales_per_city', NULL, NULL
GO
```

Uses

[dbo].[orders]

[dbo].[sales_per_gender]

MS_Description

Sales per gender

SQL Script

```
create proc [dbo].[sales_per_gender]
as
select gender , sum(total_due)
from orders o inner join customers c on o.customer_id=c.customer_id
group by gender
GO
EXEC sp addextendedproperty N'MS Description', N'Sales per gender', 'SCHEMA', N'dbo',
'PROCEDURE', N'sales_per_gender', NULL, NULL
GO
```

Uses

[dbo].[customers]
[dbo].[orders]

[dbo].[search_by_product]

MS_Description

Use keyword var to search the product name in the website by any letters of its name

Parameters

Name	Data Type	Max Length (Bytes)
@product_letters	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[search_by_product]
@product_letters varchar(50)
as
select product_id, Product_name, price, category_name, subcategory_name
from Products p inner join subcategory s on p.subcategory_ID = s.Subcategory_ID
inner join Category c on s.Category_ID =c.Category_ID
where product_name like '%'+ @product_letters +'%'
GO
EXEC sp_addextendedproperty N'MS_Description', N'Use keyword var to search the product
name in the website by any letters of its name', 'SCHEMA', N'dbo', 'PROCEDURE',
N'search_by_product', NULL, NULL
GO
```

Uses

[dbo].[Category]
[dbo].[Products]
[dbo].[subcategory]

[dbo].[search_products]

Parameters

Name	Data Type	Max Length (Bytes)
@keyword	varchar(50)	50

SQL Script

```
CREATE proc [dbo].[search_products]
@keyword varchar(50)
as
select product_name, price from products where product_name like '%'+@keyword+'%'
GO
```

Uses

[dbo].[Products]

[dbo].[top_ten_products]

SQL Script

```
create proc [dbo].[top_ten_products]
as
select top 10 sum(line_total), product_name from order_details od inner join Products p
on od.product_id = p.Product_ID
group by Product_name
order by sum(line_total) desc
GO
```

Uses

[dbo].[order_details]
[dbo].[Products]

[dbo].[view_all_products]

MS_Description

Show all products

SQL Script

```
CREATE proc [dbo].[view_all_products]
AS
select product_id, Product_name, price, category_name, subcategory_name, category_name
from Products p inner join subcategory s on p.subcategory_ID = s.Subcategory_ID
inner join Category c on s.Category_ID =c.Category_ID
GO
EXEC sp addextendedproperty N'MS Description', N'Show all products ', 'SCHEMA', N'dbo',
'PROCEDURE', N'view_all_products', NULL, NULL
GO
```

Uses

[dbo].[Category]
[dbo].[Products]
[dbo].[subcategory]