127.0.0.1,13001

MidtermDataModelingCSCl381NaderNehal

Server 127.0.0.1,13001

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Databases (1)

MidtermDataModelingCSCl381NaderNehal

Server Properties

Property	Value
Product	Microsoft SQL Server
Version	15.0.4236.7
Language	English
Platform	NT x64
Edition	Developer Edition (64-bit)
Engine Edition	3 (Enterprise)
Processors	4
OS Version	6.2 (9200)
Physical Memory	10225
Is Clustered	False
Root Directory	C:\
Collation	SQL_Latin1_General_CP1_CI_AS

Server Settings

Property	Value
Default data file path	/var/opt/mssql/data/
Default backup file path	/var/opt/mssql/backup/
Default log file path	/var/opt/mssql/log/
Recovery Interval (minutes)	0
Default index fill factor	0
Default backup media retention	0
Compress Backup	False

Advanced Server Settings

Property	Value
Locks	0
Nested triggers enabled	True
Allow triggers to fire others	True
Default language	English

Network packet size	4096
Default fulltext language LCID	1033
Two-digit year cutoff	2049
Remote login timeout	10
Cursor threshold	-1
Max text replication size	65536
Parallelism cost threshold	5
Max degree of parallelism	0
Min server memory	16
Max server memory	2147483647
Scan for startup procs	False
Transform noise words	False
CLR enabled	False
Blocked process threshold	0
Filestream access level	False
Optimize for ad hoc workloads	False
CLR strict security	True

☐ User databases

Databases (1)

MidtermDataModelingCSCl381NaderNehal

■ MidtermDataModelingCSCI381NaderNehal Database

Database Properties

Property	Value
SQL Server Version	Max
Compatibility Level	Max
Last backup time	-
Last log backup time	-
Creation date	Nov 17 2022
Users	4
Database Encryption Enabled	False
Database Encryption Algorithm	None
Database size	16.00 MB
Unallocated space	5.12 MB

Database Options

Property	Value
Compatibility Level	150
Database collation	SQL_Latin1_General_CP1_CI_AS
Restrict access	MULTI_USER
Is read-only	False
Auto close	False
Auto shrink	False
Database status	ONLINE
In standby	False
Cleanly shutdown	False
Supplemental logging enabled	False
Snapshot isolation state	OFF
Read committed snapshot on	False
Recovery model	FULL
Page verify option	CHECKSUM
Auto create statistics	True
Auto update statistics	True
Auto update statistics asynchronously	False
ANSI NULL default	False
ANSI NULL enabled	False
ANSI padding enabled	False

ANSI warnings enabled	False
Arithmetic abort enabled	False
Concatenating NULL yields NULL	False
Numeric roundabort enabled	False
Quoted Identifier On	False
Recursive triggers enabled	False
Close cursors on commit	False
Local cursors by default	False
Fulltext enabled	True
Trustworthy	False
Database chaining	False
Forced parameterization	False
Master key encrypted by server	False
Published	False
Subscribed	False
Merge published	False
Is distribution database	False
Sync with backup	False
Service broker GUID	b7e9ac94-875c-4b38-a058-e139e24e4012
Service broker enabled	False
Log reuse wait	NOTHING
Date correlation	False
CDC enabled	False
Encrypted	False
Honor broker priority	False
Default language	English
Default fulltext language LCID	1033
Nested triggers enabled	True
Transform noise words	False
Two-digit year cutoff	2049
Containment	NONE
Target recovery time	60
Database owner	sa

Files

Name	Туре	Size	Maxsize	Autogrowth	File Name
MidtermDataModelingCSCl381Nader- Nehal	Data	8.00 MB	unlimited	64.00 MB	/var/opt/mssql/data/Mi dtermDataModeling- CSCl381Nader- Nehal.mdf
MidtermDataModelingCSCl381Nader-	Log	8.00 MB	2048.00 GB	64.00 MB	/var/opt/mssql/log/Midt ermDataModeling-

Nehal_log		CSCI381Nader-
		Nehal_log.ldf

■ Tables

Objects

Name
dbo.Category
dbo.Customer
dbo.Employee
dbo.Nums
dbo.OrderDetail
dbo.Product
dbo.Shipper
dbo.Supplier
dbo.UserAuthorization
dbo.VersionedEmployeeHistory

☐ [dbo].[Category]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:09 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PKP C	Categoryld	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	CategoryName	[dbo].[CategoryName]	30	NOT NULL		
	Description	[dbo].[Description]	400	NOT NULL		('Add a description')
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL		
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_Categories	Categoryld	True

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
tD_Category	True	True	After Delete
tU_Category	True	True	After Update

Foreign Keys

Name Columns

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FK UserAuthorization_Category

UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Category]
[CategoryId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[CategoryName] [dbo].[CategoryName] NOT NULL,
[Description] [dbo].[Description] NOT NULL CONSTRAINT [DF Description 1180252515]
DEFAULT ('Add a description'),
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 2071549246] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 1005911966] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
CREATE TRIGGER [dbo].[tD Category] ON [dbo].[Category] FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on Category */
BEGIN
 DECLARE @errno int,
          @severity int,
           @state
                   int,
          @errmsg varchar(255)
   /* erwin Builtin Trigger */
   /* Category (Category to Product) Product on parent delete no action */
    /* ERWIN RELATION: CHECKSUM="0002c14e", PARENT OWNER="", PARENT TABLE="Category"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Category to Product)", C2P VERB PHRASE="(Product from Category)",
   FK CONSTRAINT="FK Category Product", FK COLUMNS="CategoryId" */
   IF EXISTS (
     SELECT * FROM deleted, Product
     WHERE
       /* %JoinFKPK(Product, deleted, " = ", " AND") */
       Product.CategoryId = deleted.CategoryId
   BEGIN
     SELECT @errno = 30001,
           @errmsg = 'Cannot delete Category because Product exists.'
     GOTO error
   /* erwin Builtin Trigger */
   /* UserAuthorization (UserAuthorization to Category) Category on child delete no
action */
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Category"
   P2C VERB PHRASE="(UserAuthorization to Category)", C2P_VERB_PHRASE="(Category from
UserAuthorization)",
    FK CONSTRAINT="FK UserAuthorization Category", FK COLUMNS="UserAuthorizationId" */
    IF EXISTS (SELECT * FROM deleted, UserAuthorization
```

```
WHERE
        /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
       deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
       NOT EXISTS (
         SELECT * FROM Category
         WHERE
           /* %JoinFKPK(Category, UserAuthorization, " = "," AND") */
           Category.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   )
   BEGIN
     SELECT @errno = 30010,
            @errmsg = 'Cannot delete last Category because UserAuthorization exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0~255).
   rollback transaction
END
GO
CREATE TRIGGER [dbo].[tU Category] ON [dbo].[Category] FOR UPDATE AS
/* erwin Builtin Trigger */
/* UPDATE trigger on Category */
BEGIN
 DECLARE @numrows int,
          @nullcnt int,
          @validcnt int,
          @insCategoryId SurrogateKeyInt,
          @errno int,
          @severity int,
           @state int,
          @errmsg varchar(255)
 SELECT @numrows = @@rowcount
  /* erwin Builtin Trigger */
  /* Category (Category to Product) Product on parent update no action */
 /* ERWIN RELATION: CHECKSUM="0002e088", PARENT OWNER="", PARENT TABLE="Category"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Category to Product)", C2P VERB PHRASE="(Product from Category)",
   FK CONSTRAINT="FK Category Product", FK COLUMNS="CategoryId" */
   /* %ParentPK(" OR",UPDATE) */
   UPDATE (CategoryId)
   IF EXISTS (
     SELECT * FROM deleted, Product
     WHERE
```

```
/* %JoinFKPK(Product, deleted, " = ", " AND") */
       Product.CategoryId = deleted.CategoryId
   )
   BEGIN
     SELECT @errno = 30005,
            @errmsg = 'Cannot update Category because Product exists.'
     GOTO error
   END
 END
 /* erwin Builtin Trigger */
  / \\ * \ \textit{UserAuthorization (UserAuthorization to Category) Category on child update no} \\
action */
 /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Category"
   P2C_VERB_PHRASE="(UserAuthorization to Category)", C2P_VERB_PHRASE="(Category from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Category", FK COLUMNS="UserAuthorizationId" */
   /* %ChildFK(" OR",UPDATE) */
   UPDATE(UserAuthorizationId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, UserAuthorization
       WHERE
         /* %JoinFKPK(inserted, UserAuthorization) */
         inserted.UserAuthorizationId = UserAuthorization.UserAuthorizationId
    /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
   BEGIN
     SELECT @errno = 30007,
            @errmsg = 'Cannot update Category because UserAuthorization does not
exist.'
    GOTO error
   END
 END
 /* erwin Builtin Trigger */
 RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             (0 \sim 255).
   rollback transaction
END
ALTER TABLE [dbo].[Category] ADD CONSTRAINT [PK_Categories] PRIMARY KEY CLUSTERED
([CategoryId]) ON [PRIMARY]
GO
ALTER TABLE [dbo].[Category] ADD CONSTRAINT [FK UserAuthorization Category] FOREIGN KEY
```

([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])

GO

Uses

[dbo].[UserAuthorization]

[dbo].[CategoryName]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[Description]

[dbo].[SurrogateKeyInt]

Used By

[dbo].[Product]

[dbo].[uvw_ProductionCategory]

III [dbo].[Customer]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabi lity	Identit y	Default	Rule
PK <mark>P</mark> C	CustomerId	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1		
	CustomerCompanyName	[dbo].[CompanyName]	30	NOT NULL			
	CustomerContactName	[dbo].[ContactName]	30	NOT NULL			
	CustomerContactTitle	[dbo].[Title]	60	NOT NULL			
	CustomerAddress	[dbo].[Address]	120	NOT NULL			
	CustomerCity	[dbo].[City]	30	NOT NULL			
	CustomerRegion	[dbo].[Region]	30	NULL allowed			
	CustomerPostalCode	[dbo].[PostalCode]	20	NULL allowed			
	CustomerCountry	[dbo].[Country]	30	NOT NULL			
	CustomerPhoneNumber	[dbo].[Telephone- Number]	48	NOT NULL			CHK Phone- Numbe r
	CustomerFaxNumber	[dbo].[Telephone- Number]	48	NULL allowed			CHK Phone- Numbe r
	UserAuthrorizationId	[dbo].[SurrogateKeyInt]	4	NULL allowed			
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdat etime())	
	DateOfLastUpdate	[dbo].[DateOfLast- Update]	8	NULL allowed		(sysdat etime())	

Indexes

Key	Name	Key Columns	Unique
PK G	PK_Customers	CustomerId	True

Foreign Keys

Name	Columns
FK_UserAuthorization_Customer	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Customer]
[CustomerId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[CustomerCompanyName] [dbo].[CompanyName] NOT NULL,
[CustomerContactName] [dbo].[ContactName] NOT NULL,
[CustomerContactTitle] [dbo].[Title] NOT NULL,
[CustomerAddress] [dbo].[Address] NOT NULL,
[CustomerCity] [dbo].[City] NOT NULL,
[CustomerRegion] [dbo].[Region] NULL,
[CustomerPostalCode] [dbo].[PostalCode] NULL,
[CustomerCountry] [dbo].[Country] NOT NULL,
[CustomerPhoneNumber] [dbo].[TelephoneNumber] NOT NULL,
[CustomerFaxNumber] [dbo].[TelephoneNumber] NULL,
[UserAuthrorizationId] [dbo].[SurrogateKeyInt] NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 1989063380] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 870518166] DEFAULT (sysdatetime()),
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NULL
) ON [PRIMARY]
ALTER TABLE [dbo].[Customer] ADD CONSTRAINT [PK Customers] PRIMARY KEY CLUSTERED
([CustomerId]) ON [PRIMARY]
ALTER TABLE [dbo].[Customer] ADD CONSTRAINT [FK UserAuthorization Customer] FOREIGN KEY
([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])
EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[Customer].[CustomerPhoneNumber]'
EXEC sp bindrule N'[dbo].[CHK PhoneNumber]', N'[dbo].[Customer].[CustomerFaxNumber]'
GΩ
```

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Tables > dbo.Customer

Uses

[dbo].[UserAuthorization]

[dbo].[CHK_PhoneNumber]

[dbo].[Address]

[dbo].[City]

[dbo].[CompanyName]

[dbo].[ContactName]

[dbo].[Country]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[PostalCode]

[dbo].[Region]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[dbo].[Title]

Used By

[dbo].[uvw_SalesCustomer]

■ [dbo].[Employee]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:09 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabi lity	Identit y	Default	Rule
PK <mark>P</mark> C	Employeeld	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1		
	EmployeeLastName	[dbo].[LastName]	70	NOT NULL			
	EmployeeFirstName	[dbo].[FirstName]	50	NOT NULL			
	EmployeeTitle	[dbo].[Title]	60	NOT NULL			
	EmployeeTitleOfCourtesy	[dbo].[TitleOfCourtesy]	10	NOT NULL			
	BirthDate	[dbo].[Date- YYYYMMDD]	3	NOT NULL			
	HireDate	[dbo].[Date- YYYYMMDD]	3	NOT NULL			
	EmployeeAddress	[dbo].[Address]	120	NOT NULL			
	EmployeeCity	[dbo].[City]	30	NULL allowed			
	EmployeeRegion	[dbo].[Region]	30	NULL allowed			
	EmployeePostalCode	[dbo].[PostalCode]	20	NULL allowed			
	EmployeeCountry	[dbo].[Country]	30	NOT NULL			
	EmployeePhoneNumber	[dbo].[Telephone- Number]	48	NOT NULL			CHK Phone- Number
FK	EmployeeManagerId	[dbo].[SurrogateKeyInt]	4	NULL allowed			
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdat etime())	

	DateOfLastUpdate	[dbo].[DateOfLast- Update]	8	NULL allowed	(sysdat etime())	
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL		

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_Employees	Employeeld	True

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
tD_Employee	True	True	After Delete
tU_Employee	True	True	After Update

Foreign Keys

Name	Columns
FK_Employee_Employee	EmployeeManagerId->[dbo].[Employee].[EmployeeId]
FK_UserAuthorization_Employee	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Employee]
[EmployeeId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[EmployeeLastName] [dbo].[LastName] NOT NULL,
[EmployeeFirstName] [dbo].[FirstName] NOT NULL,
[EmployeeTitle] [dbo].[Title] NOT NULL,
[EmployeeTitleOfCourtesy] [dbo].[TitleOfCourtesy] NOT NULL,
[BirthDate] [dbo].[DateYYYYMMDD] NOT NULL,
[HireDate] [dbo].[DateYYYYMMDD] NOT NULL,
[EmployeeAddress] [dbo].[Address] NOT NULL,
[EmployeeCity] [dbo].[City] NULL,
[EmployeeRegion] [dbo].[Region] NULL,
[EmployeePostalCode] [dbo].[PostalCode] NULL,
[EmployeeCountry] [dbo].[Country] NOT NULL,
[EmployeePhoneNumber] [dbo].[TelephoneNumber] NOT NULL,
[EmployeeManagerId] [dbo].[SurrogateKeyInt] NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 1937355992] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 836702379] DEFAULT (sysdatetime()),
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL
ON [PRIMARY]
```

```
GO
CREATE TRIGGER [dbo].[tD Employee] ON [dbo].[Employee] FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on Employee */
BEGIN
 DECLARE @errno int,
           @severity int,
           @state
                   int,
           @errmsg varchar(255)
    /* erwin Builtin Trigger */
    /* UserAuthorization (UserAuthorization to Employee) Employee on child delete no
action */
   /* ERWIN RELATION: CHECKSUM="0001aadf", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Employee"
   P2C_VERB_PHRASE="(UserAuthorization to Employee)", C2P_VERB_PHRASE="(Employee from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Employee", FK COLUMNS="UserAuthorizationId" */
   IF EXISTS (SELECT * FROM deleted, UserAuthorization
     WHERE
        /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
       deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
       NOT EXISTS (
         SELECT * FROM Employee
         WHERE
           /* %JoinFKPK(Employee, UserAuthorization, " = "," AND") */
            Employee.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   )
   BEGIN
     SELECT @errno = 30010,
           @errmsg = 'Cannot delete last Employee because UserAuthorization exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0~255).
   rollback transaction
END
CREATE TRIGGER [dbo].[tU Employee] ON [dbo].[Employee] FOR UPDATE AS
/* erwin Builtin Trigger */
/* UPDATE trigger on Employee */
BEGIN
 DECLARE @numrows int,
           @nullcnt int,
           @validcnt int,
           @insEmployeeId SurrogateKeyInt,
           @errno int,
```

```
@severity int,
           @state int,
           @errmsg varchar(255)
 SELECT @numrows = @@rowcount
 /* erwin Builtin Trigger */
  /* UserAuthorization (UserAuthorization to Employee) Employee on child update no
action */
  /* ERWIN RELATION: CHECKSUM="0001c7fe", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Employee"
   P2C VERB PHRASE="(UserAuthorization to Employee)", C2P VERB PHRASE="(Employee from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Employee", FK COLUMNS="UserAuthorizationId" */
 ΙF
   /* %ChildFK(" OR",UPDATE) */
   UPDATE (UserAuthorizationId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, UserAuthorization
       WHERE
          /* %JoinFKPK(inserted, UserAuthorization) */
          inserted.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
   BEGIN
     SELECT @errno = 30007,
            @errmsg = 'Cannot update Employee because UserAuthorization does not
exist.'
    GOTO error
  END
 END
  /* erwin Builtin Trigger */
 RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0~255).
   rollback transaction
END
GO
ALTER TABLE [dbo].[Employee] ADD CONSTRAINT [PK Employees] PRIMARY KEY CLUSTERED
([EmployeeId]) ON [PRIMARY]
ALTER TABLE [dbo].[Employee] ADD CONSTRAINT [FK Employee Employee] FOREIGN KEY
([EmployeeManagerId]) REFERENCES [dbo].[Employee] ([EmployeeId])
ALTER TABLE [dbo]. [Employee] ADD CONSTRAINT [FK UserAuthorization Employee] FOREIGN KEY
([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])
```

```
EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[Employee].[EmployeePhoneNumber]'
GO
```

Uses

[dbo].[UserAuthorization]

[dbo].[CHK_PhoneNumber]

[dbo].[Address]

[dbo].[City]

[dbo].[Country]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[DateYYYYMMDD]

[dbo].[FirstName]

[dbo].[LastName]

[dbo].[PostalCode]

[dbo].[Region]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[dbo].[Title]

[dbo].[TitleOfCourtesy]

Used By

[dbo].[VersionedEmployeeHistory]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[Nums]

Properties

Property	Value
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:10 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK	N	[dbo].[SurrogateKeyInt]	4	NOT NULL	
Fy	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dbo].[DateAdded]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK G	PK_Nums	N	True

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
tD_Nums	True	True	After Delete
tU_Nums	True	True	After Update

Foreign Keys

Name	Columns
FK_UserAuthorization_Nums	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Nums]
(
[N] [dbo].[SurrogateKeyInt] NOT NULL,
```

```
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 186338919] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 1739556599] DEFAULT (sysdatetime())
) ON [PRIMARY]
CREATE TRIGGER [dbo].[tD Nums] ON [dbo].[Nums] FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on Nums */
BEGIN
 DECLARE @errno int,
           @severity int,
           @state
                   int,
           @errmsg varchar(255)
   /* erwin Builtin Trigger */
    /* UserAuthorization (UserAuthorization to Nums) Nums on child delete no action */
    /* ERWIN RELATION: CHECKSUM="00019903", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Nums"
   P2C VERB PHRASE="(UserAuthorization to Nums)", C2P VERB PHRASE="(Nums from User-
Authorization)",
   FK_CONSTRAINT="FK_UserAuthorization_Nums", FK_COLUMNS="UserAuthorizationId" */
   IF EXISTS (SELECT * FROM deleted, UserAuthorization
        /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
        deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
       NOT EXISTS (
         SELECT * FROM Nums
         WHERE
            /* %JoinFKPK(Nums, UserAuthorization, " = ", " AND") */
            Nums.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   BEGIN
     SELECT @errno = 30010,
           @errmsg = 'Cannot delete last Nums because UserAuthorization exists.'
     GOTO error
    END
   /* erwin Builtin Trigger */
   RETURN
  RAISERROR (@errmsg, -- Message text.
              @severity, -- Severity (0~25).
              estate) -- State (0~255).
   rollback transaction
END
CREATE TRIGGER [dbo].[tU Nums] ON [dbo].[Nums] FOR UPDATE AS
/* erwin Builtin Trigger */
/* UPDATE trigger on Nums */
BEGIN
```

```
DECLARE @numrows int,
           @nullcnt int,
          @validcnt int,
          @insN SurrogateKeyInt,
           @errno int,
           @severity int,
           @state int,
           @errmsg varchar(255)
 SELECT @numrows = @@rowcount
 /* erwin Builtin Trigger */
 /* UserAuthorization (UserAuthorization to Nums) Nums on child update no action */
  /* ERWIN RELATION: CHECKSUM="0001b1b1", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Nums"
   P2C VERB PHRASE="(UserAuthorization to Nums)", C2P_VERB_PHRASE="(Nums from User-
Authorization)",
   FK_CONSTRAINT="FK_UserAuthorization_Nums", FK_COLUMNS="UserAuthorizationId" */
   /* %ChildFK(" OR",UPDATE) */
   UPDATE(UserAuthorizationId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, UserAuthorization
          /* %JoinFKPK(inserted, UserAuthorization) */
         inserted.UserAuthorizationId = UserAuthorization.UserAuthorizationId
    /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
   BEGIN
     SELECT @errno = 30007,
           @errmsq = 'Cannot update Nums because UserAuthorization does not exist.'
     GOTO error
   END
 END
 /* erwin Builtin Trigger */
 RETURN
error:
  RAISERROR (@errmsq, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0\sim255).
   rollback transaction
END
ALTER TABLE [dbo].[Nums] ADD CONSTRAINT [PK Nums] PRIMARY KEY CLUSTERED ([N]) ON
[PRIMARY]
ALTER TABLE [dbo]. [Nums] ADD CONSTRAINT [FK UserAuthorization Nums] FOREIGN KEY ([User-
AuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])
```

GO

Uses

[dbo].[UserAuthorization]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[SurrogateKeyInt]

[dbo].[OrderDetail]

Properties

Property	Value
Row Count (~)	0
Created	3:18:57 AM Thursday, November 17, 2022
Last Modified	3:20:08 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabilit y	Default	Rule
PK C	Orderld	[dbo].[SurrogateKeyInt]	4	NOT NULL		
PKC FKD	ProductId	[dbo].[SurrogateKeyInt]	4	NOT NULL		
	UnitPrice	[dbo].[Currency]	8	NOT NULL	((0))	
	Quantity	[dbo].[QuantitySmall]	2	NOT NULL	((1))	
	DiscountPercentage	[dbo].[Percentage]	5	NOT NULL	((0))	CHK Discount- Percentag e
	DateAdded	[dbo].[DateAdded]	8	NULL allowed	(sysdateti me())	
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed	(sysdateti me())	
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL		

Indexes

Key	Name	Key Columns	Unique
PK	PK_OrderDetails	Orderld, ProductId	True

Foreign Keys

Name	Columns
FK_Product_OrderDetail	ProductId->[dbo].[Product].[ProductId]
FK_UserAuthorization_OrderDetail	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

SQL Script

```
CREATE TABLE [dbo].[OrderDetail]
[OrderId] [dbo].[SurrogateKeyInt] NOT NULL,
[ProductId] [dbo].[SurrogateKeyInt] NOT NULL,
[UnitPrice] [dbo].[Currency] NOT NULL CONSTRAINT [DFT OrderDetails UnitPrice] DEFAULT
((0)),
[Quantity] [dbo]. [QuantitySmall] NOT NULL CONSTRAINT [DFT OrderDetails Quantity]
DEFAULT ((1)),
[DiscountPercentage] [dbo].[Percentage] NOT NULL CONSTRAINT [DFT OrderDetails Discount-
Percentage] DEFAULT ((0)),
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 1109534188] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 211994183] DEFAULT (sysdatetime()),
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL
ON [PRIMARY]
GO
ALTER TABLE [dbo].[OrderDetail] ADD CONSTRAINT [PK OrderDetails] PRIMARY KEY CLUSTERED
([OrderId], [ProductId]) ON [PRIMARY]
ALTER TABLE [dbo].[OrderDetail] ADD CONSTRAINT [FK Product OrderDetail] FOREIGN KEY
([ProductId]) REFERENCES [dbo].[Product] ([ProductId])
ALTER TABLE [dbo].[OrderDetail] ADD CONSTRAINT [FK UserAuthorization OrderDetail]
FOREIGN KEY ([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([User-
AuthorizationId])
EXEC sp bindrule N'[dbo].[CHK DiscountPercentage]', N'[dbo].[OrderDetail].[Discount-
Percentage] '
GΩ
```

Uses

[dbo].[Product]
[dbo].[UserAuthorization]
[dbo].[CHK_DiscountPercentage]
[dbo].[Currency]
[dbo].[DateAdded]
[dbo].[DateOfLastUpdate]
[dbo].[Percentage]
[dbo].[QuantitySmall]
[dbo].[SurrogateKeyInt]

Used By

[dbo].[uvw_OrderDetail]

☐ [dbo].[Product]

Properties

Property	Value		
Collation	SQL_Latin1_General_CP1_CI_AS		
Row Count (~)	0		
Created	3:20:05 AM Thursday, November 17, 2022		
Last Modified	3:20:10 AM Thursday, November 17, 2022		

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabil ity	Identity	Default	Rule
PK	ProductId	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1		
	ProductName	[dbo].[ProductName]	80	NOT NULL			
F	SupplierId	[dbo].[SurrogateKeyInt]	4	NOT NULL			
FK	Categoryld	[dbo].[SurrogateKeyInt]	4	NOT NULL			
	UnitPrice	[dbo].[Currency]	8	NOT NULL		((0))	CHK Product s_unitpri ce
	Discontinued	[dbo].[FlagBit]	1	NOT NULL		((0))	
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdate time())	
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed		(sysdate time())	
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL			

Indexes

Key	Name	Key Columns	Unique
PK	PK_Products	ProductId	True

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
------	---------------	----------------------	----

tD_Product	True	True	After Delete	
tU_Product	True	True	After Update	

Foreign Keys

Name	Columns
FK_Category_Product	CategoryId->[dbo].[Category].[CategoryId]
FK_Supplier_Product	SupplierId->[dbo].[Supplier].[SupplierId]
FK_UserAuthorization_Product	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Product]
[ProductId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[ProductName] [dbo].[ProductName] NOT NULL,
[SupplierId] [dbo].[SurrogateKeyInt] NOT NULL,
[CategoryId] [dbo].[SurrogateKeyInt] NOT NULL,
[UnitPrice] [dbo].[Currency] NOT NULL CONSTRAINT [DFT Products unitprice] DEFAULT
((0)),
[Discontinued] [dbo].[FlagBit] NOT NULL CONSTRAINT [DFT Products discontinued] DEFAULT
((0)),
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added 1938515127] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization_DateOfLastUpdate_2113924967] DEFAULT (sysdatetime()),
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL
) ON [PRIMARY]
GO
CREATE TRIGGER [dbo].[tD Product] ON [dbo].[Product] FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on Product */
BEGIN
 DECLARE @errno int,
           @severity int,
           @state int,
           @errmsg varchar(255)
   /* erwin Builtin Trigger */
   /* Product (Product to OrderDetail) OrderDetail on parent delete no action */
   /* ERWIN RELATION: CHECKSUM="0005510f", PARENT OWNER="", PARENT TABLE="Product"
   CHILD OWNER="", CHILD TABLE="OrderDetail"
   P2C VERB PHRASE="(Product to OrderDetail)", C2P VERB PHRASE="(OrderDetail from
Product)",
   FK CONSTRAINT="FK Product OrderDetail", FK COLUMNS="ProductId" */
   IF EXISTS (
     SELECT * FROM deleted,OrderDetail
        /* %JoinFKPK(OrderDetail, deleted, " = ", " AND") */
       OrderDetail.ProductId = deleted.ProductId
```

```
BEGIN
     SELECT @errno = 30001,
            @errmsg = 'Cannot delete Product because OrderDetail exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   /* UserAuthorization (UserAuthorization to Product) Product on child delete no
action */
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(UserAuthorization to Product)", C2P_VERB_PHRASE="(Product from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Product", FK COLUMNS="UserAuthorizationId" */
   IF EXISTS (SELECT * FROM deleted, UserAuthorization
     WHERE
       /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
        deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
       NOT EXISTS (
        SELECT * FROM Product
         WHERE
            /* %JoinFKPK(Product, UserAuthorization, " = ", " AND") */
           Product.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   BEGIN
     SELECT @errno = 30010,
            @errmsg = 'Cannot delete last Product because UserAuthorization exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   /\!\!\!\!\!\!^* Supplier (Supplier to Product) Product on child delete no action ^*/\!\!\!\!\!
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Supplier"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Supplier to Product)", C2P VERB PHRASE="(Product from Supplier)",
   FK_CONSTRAINT="FK_Supplier_Product", FK_COLUMNS="SupplierId" */
   IF EXISTS (SELECT * FROM deleted, Supplier
     WHERE
        /* %JoinFKPK(deleted, Supplier, " = ", " AND") */
       deleted.SupplierId = Supplier.SupplierId AND
       NOT EXISTS (
         SELECT * FROM Product
         WHERE
           /* %JoinFKPK(Product, Supplier, " = ", " AND") */
           Product.SupplierId = Supplier.SupplierId
   BEGIN
     SELECT @errno = 30010,
           @errmsg = 'Cannot delete last Product because Supplier exists.'
     GOTO error
```

```
/* erwin Builtin Trigger */
   /* Category (Category to Product) Product on child delete no action */
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Category"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Category to Product)", C2P VERB PHRASE="(Product from Category)",
   FK_CONSTRAINT="FK_Category_Product", FK_COLUMNS="CategoryId" */
   IF EXISTS (SELECT * FROM deleted, Category
     WHERE
        /* %JoinFKPK(deleted, Category, " = ", " AND") */
       deleted.CategoryId = Category.CategoryId AND
       NOT EXISTS (
         SELECT * FROM Product
         WHERE
           /* %JoinFKPK(Product, Category, " = ", " AND") */
           Product.CategoryId = Category.CategoryId
   )
   BEGIN
     SELECT @errno = 30010,
            @errmsq = 'Cannot delete last Product because Category exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   RETURN
error:
  RAISERROR (@errmsq, -- Message text.
             @severity, -- Severity (0~25).
             Ostate) -- State (0~255).
   rollback transaction
END
CREATE TRIGGER [dbo].[tU Product] ON [dbo].[Product] FOR UPDATE AS
/* erwin Builtin Trigger */
/* UPDATE trigger on Product */
BEGIN
 DECLARE @numrows int,
          @nullcnt int,
           @validcnt int,
          @insProductId SurrogateKeyInt,
          @errno int,
          @severity int,
           @state int,
           @errmsg varchar(255)
 SELECT @numrows = @@rowcount
  /* erwin Builtin Trigger */
  /* Product (Product to OrderDetail) OrderDetail on parent update no action */
  /* ERWIN RELATION: CHECKSUM="0005c820", PARENT OWNER="", PARENT TABLE="Product"
   CHILD OWNER="", CHILD TABLE="OrderDetail"
   P2C VERB PHRASE="(Product to OrderDetail)", C2P_VERB_PHRASE="(OrderDetail from
```

```
Product)",
   FK CONSTRAINT="FK Product OrderDetail", FK COLUMNS="ProductId" */
   /* %ParentPK(" OR", UPDATE) */
   UPDATE (ProductId)
 BEGIN
   IF EXISTS (
    SELECT * FROM deleted, OrderDetail
     WHERE
       /* %JoinFKPK(OrderDetail, deleted, " = ", " AND") */
       OrderDetail.ProductId = deleted.ProductId
   BEGIN
     SELECT @errno = 30005,
           @errmsg = 'Cannot update Product because OrderDetail exists.'
     GOTO error
 END
  /* erwin Builtin Trigger */
  /* UserAuthorization (UserAuthorization to Product) Product on child update no action
  /* ERWIN RELATION:CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Product"
  P2C VERB PHRASE="(UserAuthorization to Product)", C2P VERB PHRASE="(Product from
UserAuthorization)",
  FK CONSTRAINT="FK UserAuthorization Product", FK COLUMNS="UserAuthorizationId" */
 TR
   /* %ChildFK(" OR",UPDATE) */
   UPDATE (UserAuthorizationId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, UserAuthorization
       WHERE
         /* %JoinFKPK(inserted, UserAuthorization) */
         inserted.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where", " AND") */
   IF @validcnt + @nullcnt != @numrows
   BEGIN
     SELECT @errno = 30007,
            @errmsg = 'Cannot update Product because UserAuthorization does not
    GOTO error
   END
 END
  /* erwin Builtin Trigger */
  /* Supplier (Supplier to Product) Product on child update no action */
  /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Supplier"
   CHILD OWNER="", CHILD TABLE="Product"
```

```
P2C VERB PHRASE="(Supplier to Product)", C2P VERB PHRASE="(Product from Supplier)",
   FK CONSTRAINT="FK Supplier Product", FK COLUMNS="SupplierId" */
   /* %ChildFK(" OR", UPDATE) */
   UPDATE (SupplierId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, Supplier
       WHERE
         /* %JoinFKPK(inserted,Supplier) */
         inserted.SupplierId = Supplier.SupplierId
   /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
     SELECT @errno = 30007,
            @errmsq = 'Cannot update Product because Supplier does not exist.'
     GOTO error
   END
 END
  /* erwin Builtin Trigger */
  /* Category (Category to Product) Product on child update no action */
  /* ERWIN RELATION:CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Category"
  CHILD OWNER="", CHILD TABLE="Product"
  P2C VERB PHRASE="(Category to Product)", C2P VERB PHRASE="(Product from Category)",
   FK CONSTRAINT="FK Category Product", FK COLUMNS="CategoryId" */
   /* %ChildFK(" OR", UPDATE) */
   UPDATE (CategoryId)
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, Category
       WHERE
         /* %JoinFKPK(inserted, Category) */
         inserted.CategoryId = Category.CategoryId
    /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
     SELECT @errno = 30007,
            @errmsg = 'Cannot update Product because Category does not exist.'
     GOTO error
   END
 END
  /* erwin Builtin Trigger */
 RETURN
```

```
RAISERROR (@errmsg, -- Message text.

@severity, -- Severity (0~25).

@state) -- State (0~255).

rollback transaction

END

GO

ALTER TABLE [dbo].[Product] ADD CONSTRAINT [PK_Products] PRIMARY KEY CLUSTERED
([ProductId]) ON [PRIMARY]

GO

ALTER TABLE [dbo].[Product] ADD CONSTRAINT [FK_Category_Product] FOREIGN KEY ([Category-Id]) REFERENCES [dbo].[Category] ([CategoryId])

GO

ALTER TABLE [dbo].[Product] ADD CONSTRAINT [FK_Supplier_Product] FOREIGN KEY ([Supplier-Id]) REFERENCES [dbo].[Supplier] ([SupplierId])

GO

ALTER TABLE [dbo].[Product] ADD CONSTRAINT [FK_UserAuthorization_Product] FOREIGN KEY ([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])

GO

EXEC sp_bindrule N'[dbo].[CHK_Products_unitprice]', N'[dbo].[Product].[UnitPrice]'

GO
```

Uses

[dbo].[Category]

[dbo].[Supplier]

[dbo].[UserAuthorization]

[dbo].[CHK Products unitprice]

[dbo].[Currency]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[FlagBit]

[dbo].[ProductName]

[dbo].[SurrogateKeyInt]

Used By

[dbo].[OrderDetail]

[dbo].[Shipper]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:08 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabil ity	Identity	Default	Rule
PK	ShipperId	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1		
	ShipperCompanyName	[dbo].[CompanyName]	30	NOT NULL			
	PhoneNumber	[dbo].[Telephone- Number]	48	NOT NULL			CHK Phone- Number
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL			
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdat etime())	
	DateOfLastUpdate	[dbo].[DateOfLast- Update]	8	NULL allowed		(sysdat etime())	

Indexes

Key	Name	Key Columns	Unique
PK G	PK_Shippers	ShipperId	True

Foreign Keys

Name	Columns
FK_UserAuthorization_Shipper	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

SQL Script

CREATE TABLE [dbo].[Shipper]

Author: StudentCSCl381Erwin Copyright 2022 - All Rights Reserved

```
[ShipperId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[ShipperCompanyName] [dbo].[CompanyName] NOT NULL,
[PhoneNumber] [dbo].[TelephoneNumber] NOT NULL,
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF_DbSecurity.UserAuthorization_Date-Added_1803776181] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF_DbSecurity.User-Authorization_DateOfLastUpdate_1979848865] DEFAULT (sysdatetime())
) ON [PRIMARY]

GO
ALTER TABLE [dbo].[Shipper] ADD CONSTRAINT [PK_Shippers] PRIMARY KEY CLUSTERED ([ShipperId]) ON [PRIMARY]

GO
ALTER TABLE [dbo].[Shipper] ADD CONSTRAINT [FK_UserAuthorization_Shipper] FOREIGN KEY ([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])

GO
EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[Shipper].[PhoneNumber]'
GO
```

Uses

[dbo].[UserAuthorization]

[dbo].[CHK_PhoneNumber]

[dbo].[CompanyName]

[dbo].[DateAdded]

[dbo].[DateOfLastUpdate]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

Used By

[dbo].[uvw_SalesShipper]

[dbo].[Supplier]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:10 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabil ity	Identity	Default	Rule
PK <mark>P</mark> G	SupplierId	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1		
	SupplierCompanyName	[dbo].[CompanyName]	30	NOT NULL			
	SupplierContactName	[dbo].[ContactName]	30	NOT NULL			
	SupplierContactTitle	[dbo].[ContactTitle]	30	NOT NULL			
	SupplierAddress	[dbo].[Address]	120	NOT NULL			
	SupplierCity	[dbo].[City]	30	NOT NULL			
	SupplierRegion	[dbo].[Region]	30	NULL allowed			
	SupplierPostalCode	[dbo].[PostalCode]	20	NULL allowed			
	SupplierCountry	[dbo].[Country]	30	NOT NULL			
	SupplierPhoneNumber	[dbo].[Telephone- Number]	48	NOT NULL			CHK Phone- Number
	SupplierFaxNumber	[dbo].[Telephone- Number]	48	NULL allowed			CHK Phone- Number
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL			
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdat etime())	
	DateOfLastUpdate	[dbo].[DateOfLast- Update]	8	NULL allowed		(sysdat etime())	

Indexes

Key	Name	Key Columns	Unique
PK2 C	PK_Suppliers	SupplierId	True

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
tD_Supplier	True	True	After Delete
tU_Supplier	True	True	After Update

Foreign Keys

Name	Columns
FK_UserAuthorization_Supplier	UserAuthorizationId->[dbo].[UserAuthorization].[UserAuthorizationId]

```
CREATE TABLE [dbo].[Supplier]
[SupplierId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[SupplierCompanyName] [dbo].[CompanyName] NOT NULL,
[SupplierContactName] [dbo].[ContactName] NOT NULL,
[SupplierContactTitle] [dbo].[ContactTitle] NOT NULL,
[SupplierAddress] [dbo].[Address] NOT NULL,
[SupplierCity] [dbo].[City] NOT NULL,
[SupplierRegion] [dbo].[Region] NULL,
[SupplierPostalCode] [dbo].[PostalCode] NULL,
[SupplierCountry] [dbo].[Country] NOT NULL,
[SupplierPhoneNumber] [dbo].[TelephoneNumber] NOT NULL,
[SupplierFaxNumber] [dbo].[TelephoneNumber] NULL,
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added_1938472912] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization_DateOfLastUpdate_652677274] DEFAULT (sysdatetime())
ON [PRIMARY]
GO
CREATE TRIGGER [dbo].[tD Supplier] ON [dbo].[Supplier] FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on Supplier */
BEGIN
 DECLARE @errno int,
          @severity int,
           @state
                   int,
           @errmsg varchar(255)
    /* erwin Builtin Trigger */
   /* Supplier (Supplier to Product) Product on parent delete no action */
```

```
/* ERWIN RELATION: CHECKSUM="0002c4ed", PARENT OWNER="", PARENT TABLE="Supplier"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Supplier to Product)", C2P VERB PHRASE="(Product from Supplier)",
   FK CONSTRAINT="FK Supplier Product", FK COLUMNS="SupplierId" */
   IF EXISTS (
     SELECT * FROM deleted, Product
     WHERE
       /* %JoinFKPK(Product, deleted, " = ", " AND") */
       Product.SupplierId = deleted.SupplierId
   BEGIN
     SELECT @errno = 30001,
            @errmsg = 'Cannot delete Supplier because Product exists.'
     GOTO error
   /* erwin Builtin Trigger */
   /* UserAuthorization (UserAuthorization to Supplier) Supplier on child delete no
action */
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Supplier"
   P2C VERB PHRASE="(UserAuthorization to Supplier)", C2P VERB PHRASE="(Supplier from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Supplier", FK COLUMNS="UserAuthorizationId" */
   IF EXISTS (SELECT * FROM deleted, UserAuthorization
     WHERE
        /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
       deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
       NOT EXISTS (
         SELECT * FROM Supplier
            /* %JoinFKPK(Supplier, UserAuthorization, " = "," AND") */
           Supplier.UserAuthorizationId = UserAuthorization.UserAuthorizationId
   )
   BEGIN
     SELECT @errno = 30010,
            @errmsg = 'Cannot delete last Supplier because UserAuthorization exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             (0\sim255).
   rollback transaction
END
GO
CREATE TRIGGER [dbo].[tU Supplier] ON [dbo].[Supplier] FOR UPDATE AS
/* erwin Builtin Trigger */
```

```
/* UPDATE trigger on Supplier */
BEGIN
 DECLARE @numrows int,
          @nullcnt int,
          @validcnt int,
           @insSupplierId SurrogateKeyInt,
           @errno int,
           @severity int,
                   int,
           @state
           @errmsg varchar(255)
 SELECT @numrows = @@rowcount
  /* erwin Builtin Trigger */
  /* Supplier (Supplier to Product) Product on parent update no action */
 /* ERWIN RELATION: CHECKSUM="0002f95f", PARENT OWNER="", PARENT TABLE="Supplier"
   CHILD OWNER="", CHILD TABLE="Product"
   P2C VERB PHRASE="(Supplier to Product)", C2P VERB PHRASE="(Product from Supplier)",
   FK CONSTRAINT="FK Supplier Product", FK COLUMNS="SupplierId" */
    /* %ParentPK(" OR",UPDATE) */
   UPDATE (SupplierId)
   IF EXISTS (
     SELECT * FROM deleted, Product
     WHERE
       /* %JoinFKPK(Product, deleted, " = ", " AND") */
       Product.SupplierId = deleted.SupplierId
   BEGIN
     SELECT @errno = 30005,
            @errmsg = 'Cannot update Supplier because Product exists.'
     GOTO error
   END
 END
 /* erwin Builtin Trigger */
 / \\ \hbox{$^{\prime}$ UserAuthorization (UserAuthorization to Supplier) Supplier on child update no} \\
action */
 /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
   CHILD OWNER="", CHILD TABLE="Supplier"
   P2C VERB PHRASE="(UserAuthorization to Supplier)", C2P VERB PHRASE="(Supplier from
UserAuthorization)",
   FK CONSTRAINT="FK UserAuthorization Supplier", FK COLUMNS="UserAuthorizationId" */
 TF
   /* %ChildFK(" OR", UPDATE) */
   UPDATE (UserAuthorizationId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, UserAuthorization
       WHERE
          /* %JoinFKPK(inserted, UserAuthorization) */
          inserted.UserAuthorizationId = UserAuthorization.UserAuthorizationId
```

```
/* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
     SELECT @errno = 30007,
            @errmsg = 'Cannot update Supplier because UserAuthorization does not
exist.'
     GOTO error
   END
 END
  /* erwin Builtin Trigger */
 RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             Ostate) -- State (0~255).
   rollback transaction
END
GO
ALTER TABLE [dbo].[Supplier] ADD CONSTRAINT [PK Suppliers] PRIMARY KEY CLUSTERED
([SupplierId]) ON [PRIMARY]
ALTER TABLE [dbo].[Supplier] ADD CONSTRAINT [FK UserAuthorization Supplier] FOREIGN KEY
([UserAuthorizationId]) REFERENCES [dbo].[UserAuthorization] ([UserAuthorizationId])
EXEC sp bindrule N'[dbo].[CHK PhoneNumber]', N'[dbo].[Supplier].[SupplierPhoneNumber]'
EXEC sp bindrule N'[dbo].[CHK PhoneNumber]', N'[dbo].[Supplier].[SupplierFaxNumber]'
GO
```

Uses

```
[dbo].[UserAuthorization]
[dbo].[CHK_PhoneNumber]
[dbo].[Address]
[dbo].[City]
[dbo].[CompanyName]
[dbo].[ContactName]
[dbo].[ContactTitle]
[dbo].[Country]
[dbo].[DateAdded]
[dbo].[DateOfLastUpdate]
[dbo].[PostalCode]
[dbo].[Region]
[dbo].[SurrogateKeyInt]
[dbo].[TelephoneNumber]
```

Used By

[dbo].[Product]

Author: StudentCSCI381Erwin

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Tables > dbo.Supplier [dbo].[uvw_ProductionSupplier]

[dbo].[UserAuthorization]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:05 AM Thursday, November 17, 2022
Last Modified	3:20:08 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabili ty	Identity	Default
PK C	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	ClassTime	[dbo].[ClassTime]	10	NULL allowed		('9:15')
	IndividualProject	[dbo].[IndividualProject]	120	NULL allowed		('CSCI38 1 Midterm Project')
	GroupMemberLastName	[dbo].[GroupMemberLast- Name]	70	NOT NULL		
	GroupMemberFirstName	[dbo].[GroupMemberFirst- Name]	50	NOT NULL		
	GroupName	[dbo].[GroupName]	40	NOT NULL		
	DateAdded	[dbo].[DateAdded]	8	NULL allowed		(sysdateti me())
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK G	XPKUserAuthorization	UserAuthorizationId	True

Check Constraints

Name	On Column	Constraint
CHK_Length_FirstName_1569711807	GroupMemberFirstName	(len([GroupMemberFirstName])<=(25))

SQL Script

```
CREATE TABLE [dbo].[UserAuthorization]
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[ClassTime] [dbo].[ClassTime] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Class-
Time 1334187979] DEFAULT ('9:15'),
[IndividualProject] [dbo].[IndividualProject] NULL CONSTRAINT [DF_DbSecurity.User-
Authorization IndividualProject 250751839] DEFAULT ('CSCI381 Midterm Project'),
[GroupMemberLastName] [dbo].[GroupMemberLastName] NOT NULL,
[GroupMemberFirstName] [dbo].[GroupMemberFirstName] NOT NULL,
[GroupName] [dbo].[GroupName] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added_1652412318] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization_DateOfLastUpdate_387522983] DEFAULT (sysdatetime())
ON [PRIMARY]
ALTER TABLE [dbo].[UserAuthorization] ADD CONSTRAINT [CHK Length FirstName 1569711807]
CHECK ((len([GroupMemberFirstName]) <= (25)))</pre>
ALTER TABLE [dbo].[UserAuthorization] ADD CONSTRAINT [XPKUserAuthorization] PRIMARY KEY
CLUSTERED ([UserAuthorizationId]) ON [PRIMARY]
GΩ
```

Uses

[dbo].[ClassTime]
[dbo].[DateAdded]
[dbo].[DateOfLastUpdate]
[dbo].[GroupMemberFirstName]
[dbo].[GroupMemberLastName]
[dbo].[GroupName]
[dbo].[IndividualProject]
[dbo].[SurrogateKeyInt]

Used By

[dbo].[Category]
[dbo].[Customer]
[dbo].[Employee]
[dbo].[Nums]
[dbo].[OrderDetail]
[dbo].[Product]
[dbo].[Shipper]
[dbo].[Supplier]
[dbo].[VersionedEmployeeHistory]

[dbo].[VersionedEmployeeHistory]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	0
Created	3:20:06 AM Thursday, November 17, 2022
Last Modified	3:20:10 AM Thursday, November 17, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKP FKP	EmployeeId	[dbo].[SurrogateKeyInt]	4	NOT NULL	
	EmployeeFullName	varchar(25)	25	NOT NULL	
	Department	varchar(50)	50	NOT NULL	
	Salary	money	8	NOT NULL	
	Notes	varchar(60)	60	NOT NULL	
P	SysStart	datetime2	8	NOT NULL	
P	SysEnd	datetime2	8	NOT NULL	
FK	UserAuthorizationId	[dbo].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dbo].[DateAdded]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[dbo].[DateOfLastUpdate]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK	XPKVersionedEmployeeHistory	Employeeld	True
P	ix_VersionedEmployeeHistory	SysEnd, SysStart	

Triggers

Name	ANSI Nulls On	Quoted Identifier On	On
tD_VersionedEmployeeHistory	True	True	After Delete
tU_VersionedEmployeeHistory	True	True	After Update

Foreign Keys

Name	Columns
FK_Employee_VersionedEmployeeHistory	Employeeld->[dbo].[Employee].[Employeeld]
FK_UserAuthorization_VersionedEmployeeHistory	UserAuthorizationId->[dbo].[UserAuthorization].[User-AuthorizationId]

```
CREATE TABLE [dbo].[VersionedEmployeeHistory]
[EmployeeId] [dbo].[SurrogateKeyInt] NOT NULL,
[EmployeeFullName] [varchar] (25) COLLATE SQL Latin1 General CP1 CI AS NOT NULL,
[Department] [varchar] (50) COLLATE SQL Latin1 General CP1 CI AS NOT NULL,
[Salary] [money] NOT NULL,
[Notes] [varchar] (60) COLLATE SQL Latin1 General CP1 CI AS NOT NULL,
[SysStart] [datetime2] NOT NULL,
[SysEnd] [datetime2] NOT NULL,
[UserAuthorizationId] [dbo].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dbo].[DateAdded] NULL CONSTRAINT [DF DbSecurity.UserAuthorization Date-
Added_1094937139] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dbo].[DateOfLastUpdate] NULL CONSTRAINT [DF DbSecurity.User-
Authorization DateOfLastUpdate 2089042657] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
CREATE TRIGGER [dbo].[tD VersionedEmployeeHistory] ON [dbo].[VersionedEmployeeHistory]
FOR DELETE AS
/* erwin Builtin Trigger */
/* DELETE trigger on VersionedEmployeeHistory */
BEGIN
 DECLARE @errno int,
           @severity int,
           @state
           @errmsg varchar(255)
   /* erwin Builtin Trigger */
    / \\ \star \\ \texttt{Employee} \\ \texttt{(Employee to VersionedEmployeeHistory)} \\ \texttt{VersionedEmployeeHistory} \\ \texttt{on} \\
child delete no action */
   /* ERWIN RELATION: CHECKSUM="00051b77", PARENT OWNER="", PARENT TABLE="Employee"
   CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
   P2C VERB PHRASE="(Employee to VersionedEmployeeHistory)", C2P VERB -
PHRASE="(VersionedEmployeeHistory from Employee)",
   FK CONSTRAINT="FK Employee VersionedEmployeeHistory", FK COLUMNS="EmployeeId" */
   IF EXISTS (SELECT * FROM deleted, Employee
        /* %JoinFKPK(deleted, Employee, " = ", " AND") */
        deleted.EmployeeId = Employee.EmployeeId AND
        NOT EXISTS (
          SELECT * FROM VersionedEmployeeHistory
            /* %JoinFKPK(VersionedEmployeeHistory, Employee, " = ", " AND") */
            VersionedEmployeeHistory.EmployeeId = Employee.EmployeeId
```

```
)
    BEGIN
      SELECT @errno = 30010,
             @errmsq = 'Cannot delete last VersionedEmployeeHistory because Employee
exists.'
     GOTO error
   END
    /* erwin Builtin Trigger */
    / \\ \star \\ \texttt{Employee} \\ \texttt{(Employee to VersionedEmployeeHistory)} \\ \texttt{VersionedEmployeeHistory} \\ \texttt{on} \\
child delete no action */
    /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Employee"
    CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
   P2C VERB PHRASE="(Employee to VersionedEmployeeHistory)", C2P_VERB_-
PHRASE="(VersionedEmployeeHistory from Employee)",
    FK CONSTRAINT="FK Employee VersionedEmployeeHistory", FK COLUMNS="EmployeeId" */
    IF EXISTS (SELECT * FROM deleted, Employee
     WHERE
        /* %JoinFKPK(deleted, Employee, " = ", " AND") */
        deleted.EmployeeId = Employee.EmployeeId AND
        NOT EXISTS (
         SELECT * FROM VersionedEmployeeHistory
          WHERE
            /* %JoinFKPK(VersionedEmployeeHistory, Employee," = "," AND") */
            VersionedEmployeeHistory.EmployeeId = Employee.EmployeeId
   )
    BEGIN
      SELECT @errno = 30010,
             @errmsg = 'Cannot delete last VersionedEmployeeHistory because Employee
exists.'
    GOTO error
   END
   /* erwin Builtin Trigger */
    /* UserAuthorization (UserAuthorization to VersionedEmployeeHistory) Versioned-
EmployeeHistory on child delete no action */
    /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
    CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
    P2C VERB PHRASE="(UserAuthorization to VersionedEmployeeHistory)", C2P VERB -
PHRASE="(VersionedEmployeeHistory from UserAuthorization)",
    FK CONSTRAINT="FK UserAuthorization VersionedEmployeeHistory", FK_COLUMNS="User-
AuthorizationId" */
    IF EXISTS (SELECT * FROM deleted, UserAuthorization
        /* %JoinFKPK(deleted, UserAuthorization, " = "," AND") */
        deleted.UserAuthorizationId = UserAuthorization.UserAuthorizationId AND
        NOT EXISTS (
          SELECT * FROM VersionedEmployeeHistory
          WHERE
            /* %JoinFKPK(VersionedEmployeeHistory,UserAuthorization," = "," AND") */
            VersionedEmployeeHistory.UserAuthorizationId = UserAuthorization.User-
AuthorizationId
```

```
)
   BEGIN
     SELECT @errno = 30010,
            @errmsg = 'Cannot delete last VersionedEmployeeHistory because User-
Authorization exists.'
     GOTO error
   END
   /* erwin Builtin Trigger */
   RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0~255).
   rollback transaction
END
GO
CREATE TRIGGER [dbo].[tU VersionedEmployeeHistory] ON [dbo].[VersionedEmployeeHistory]
FOR UPDATE AS
/* erwin Builtin Trigger */
/* UPDATE trigger on VersionedEmployeeHistory */
BEGIN
 DECLARE @numrows int,
          @nullcnt int,
          @validcnt int,
          @insEmployeeId SurrogateKeyInt,
          @errno int,
           @severity int,
           @state int,
           @errmsq varchar(255)
 SELECT @numrows = @@rowcount
 /* erwin Builtin Trigger */
  /* Employee (Employee to VersionedEmployeeHistory) VersionedEmployeeHistory on child
update no action */
 /* ERWIN RELATION: CHECKSUM="00053863", PARENT OWNER="", PARENT TABLE="Employee"
   CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
   P2C VERB PHRASE="(Employee to VersionedEmployeeHistory)", C2P VERB -
PHRASE="(VersionedEmployeeHistory from Employee)",
   FK CONSTRAINT="FK Employee VersionedEmployeeHistory", FK COLUMNS="EmployeeId" */
    /* %ChildFK(" OR", UPDATE) */
   UPDATE (EmployeeId)
 BEGIN
   SELECT @nullcnt = 0
   SELECT @validcnt = count(*)
     FROM inserted, Employee
          /* %JoinFKPK(inserted,Employee) */
         inserted.EmployeeId = Employee.EmployeeId
   /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
```

```
IF @validcnt + @nullcnt != @numrows
             SELECT @errno = 30007,
                            @errmsg = 'Cannot update VersionedEmployeeHistory because Employee does
not exist.'
          GOTO error
       END
   END
    /* erwin Builtin Trigger */
   /* Employee (Employee to VersionedEmployeeHistory) VersionedEmployeeHistory on child
update no action */
    /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="Employee"
        CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
        P2C VERB PHRASE="(Employee to VersionedEmployeeHistory)", C2P VERB -
PHRASE="(VersionedEmployeeHistory from Employee)",
        FK CONSTRAINT="FK Employee VersionedEmployeeHistory", FK COLUMNS="EmployeeId" */
        /* %ChildFK(" OR",UPDATE) */
       UPDATE (EmployeeId)
   BEGIN
       SELECT @nullcnt = 0
       SELECT @validcnt = count(*)
            FROM inserted, Employee
                 WHERE
                      /* %JoinFKPK(inserted, Employee) */
                      inserted.EmployeeId = Employee.EmployeeId
         /* %NotnullFK(inserted," IS NULL","select @nullcnt = count(*) from inserted
where"," AND") */
        IF @validcnt + @nullcnt != @numrows
        BEGIN
             SELECT @errno = 30007,
                            @errmsg = 'Cannot update VersionedEmployeeHistory because Employee does
not exist.'
         GOTO error
       END
   END
   /* erwin Builtin Trigger */
   / \\ * \ {\tt UserAuthorization} \ ({\tt UserAuthorization} \ to \ {\tt VersionedEmployeeHistory}) \ {\tt Versioned-model} \\ \\ + \ {\tt Versioned-model} \\ + 
EmployeeHistory on child update no action */
   /* ERWIN RELATION: CHECKSUM="00000000", PARENT OWNER="", PARENT TABLE="User-
Authorization"
        CHILD OWNER="", CHILD TABLE="VersionedEmployeeHistory"
        P2C VERB PHRASE="(UserAuthorization to VersionedEmployeeHistory)", C2P VERB -
PHRASE="(VersionedEmployeeHistory from UserAuthorization)",
        FK CONSTRAINT="FK UserAuthorization VersionedEmployeeHistory", FK COLUMNS="User-
AuthorizationId" */
         /* %ChildFK(" OR", UPDATE) */
       UPDATE(UserAuthorizationId)
   BEGIN
        SELECT @nullcnt = 0
        SELECT @validcnt = count(*)
```

```
FROM inserted, UserAuthorization
        WHERE
          /* %JoinFKPK(inserted, UserAuthorization) */
          \verb|inserted.UserAuthorizationId| = \verb|UserAuthorization.UserAuthorizationId| \\
    /* %NotnullFK(inserted," IS NULL", "select @nullcnt = count(*) from inserted
where"," AND") */
   IF @validcnt + @nullcnt != @numrows
   BEGIN
     SELECT @errno = 30007,
            @errmsg = 'Cannot update VersionedEmployeeHistory because User-
Authorization does not exist.'
    GOTO error
   END
 END
  /* erwin Builtin Trigger */
 RETURN
error:
  RAISERROR (@errmsg, -- Message text.
             @severity, -- Severity (0~25).
             @state) -- State (0~255).
   rollback transaction
END
GO
ALTER TABLE [dbo]. [VersionedEmployeeHistory] ADD CONSTRAINT [XPKVersionedEmployee-
History] PRIMARY KEY NONCLUSTERED ([EmployeeId]) ON [PRIMARY]
CREATE CLUSTERED INDEX [ix VersionedEmployeeHistory] ON [dbo].[VersionedEmployee-
History] ([SysEnd], [SysStart]) ON [PRIMARY]
ALTER TABLE [dbo]. [VersionedEmployeeHistory] ADD CONSTRAINT [FK Employee Versioned-
EmployeeHistory] FOREIGN KEY ([EmployeeId]) REFERENCES [dbo].[Employee] ([EmployeeId])
ALTER TABLE [dbo]. [VersionedEmployeeHistory] ADD CONSTRAINT [FK UserAuthorization -
VersionedEmployeeHistory] FOREIGN KEY ([UserAuthorizationId]) REFERENCES [dbo].[User-
Authorization] ([UserAuthorizationId])
```

Uses

[dbo].[Employee] [dbo].[UserAuthorization] [dbo].[DateAdded] [dbo].[DateOfLastUpdate] [dbo].[SurrogateKeyInt]

■ Views

Objects

Name
dbo.uvw_HumanResourcesEmployee
dbo.uvw_OrderDetail
dbo.uvw_ProductionCategory
dbo.uvw_ProductionSupplier
dbo.uvw_SalesCustomer
dbo.uvw_SalesShipper
Utils.uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint

[dbo].[uvw_HumanResourcesEmployee]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:06 AM Thursday, November 17, 2022
Last Modified	3:20:06 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)	Identity
EmployeeObjectId	[dbo].[SurrogateKeyInt]	4	0 - 0
EmployeeLastName	[dbo].[LastName]	70	
EmployeeFirstName	[dbo].[FirstName]	50	
EmployeeTitle	[dbo].[Title]	60	
EmployeeTitleOfCourtesy	[dbo].[TitleOfCourtesy]	10	
BirthDate	[dbo].[DateYYYYMMDD]	3	
HireDate	[dbo].[DateYYYYMMDD]	3	
EmployeeAddress	[dbo].[Address]	120	
EmployeeCity	[dbo].[City]	30	
EmployeeRegion	[dbo].[Region]	30	
EmployeePostalCode	[dbo].[PostalCode]	20	
EmployeeCountry	[dbo].[Country]	30	
EmployeePhoneNumber	[dbo].[TelephoneNumber]	48	
EmployeeManagerId	[dbo].[SurrogateKeyInt]	4	

```
CREATE VIEW [dbo]. [uvw_HumanResourcesEmployee] ([EmployeeObjectId], [EmployeeLast-Name], [EmployeeFirstName], [EmployeeTitle], [EmployeeTitleOfCourtesy], [BirthDate], [Hire-Date], [EmployeeAddress], [EmployeeCity], [EmployeeRegion], [EmployeePostalCode], [Employee-Country], [EmployeePhoneNumber], [EmployeeManagerId])

AS

SELECT E. [EmployeeId], E. [EmployeeLastName], E. [EmployeeFirstName], E. [Employee-Title], E. [EmployeeTitleOfCourtesy], E. [BirthDate], E. [HireDate], E. [Employee-Address], E. [EmployeeCity], E. [EmployeeRegion], E. [EmployeePostalCode], E. [Employee-Country], E. [EmployeePhoneNumber], E. [EmployeeManagerId]

FROM [Employee] E

GO
```

Uses

[dbo].[Employee]

[dbo].[Address]

[dbo].[City]

[dbo].[Country]

[dbo].[DateYYYYMMDD]

[dbo].[FirstName]

[dbo].[LastName]

[dbo].[PostalCode]

[dbo].[Region]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[dbo].[Title]

[dbo].[TitleOfCourtesy]

[dbo].[uvw_OrderDetail]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:07 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)
Orderld	[dbo].[SurrogateKeyInt]	4
ProductId	[dbo].[SurrogateKeyInt]	4
UnitPrice	[dbo].[Currency]	8
Quantity	[dbo].[QuantitySmall]	2
DiscountPercentage	[dbo].[Percentage]	5

SQL Script

```
CREATE VIEW [dbo].[uvw_OrderDetail]([OrderId],[ProductId],[Unit-Price],[Quantity],[DiscountPercentage])

AS

SELECT OD.[OrderId],OD.[ProductId],OD.[UnitPrice],OD.[Quantity],OD.[DiscountPercentage]

FROM [OrderDetail] OD

GO
```

Uses

[dbo].[OrderDetail]

[dbo].[Currency]

[dbo].[Percentage]

[dbo].[QuantitySmall]

[dbo].[SurrogateKeyInt]

[dbo].[uvw_ProductionCategory]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:06 AM Thursday, November 17, 2022
Last Modified	3:20:06 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)	Identity
CategoryObjectId	[dbo].[SurrogateKeyInt]	4	0 - 0
CategoryName	[dbo].[CategoryName]	30	
Description	[dbo].[Description]	400	

SQL Script

```
CREATE VIEW [dbo].[uvw_ProductionCategory]([CategoryObjectId],[Category-
Name],[Description])
AS
SELECT [Category].[CategoryId],[Category].[CategoryName],[Category].[Description]
    FROM [Category]
GO
```

Uses

[dbo].[Category]

[dbo].[CategoryName]

[dbo].[Description]

[dbo].[SurrogateKeyInt]

[dbo].[uvw_ProductionSupplier]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:07 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)	Identity
SupplierObjectId	[dbo].[SurrogateKeyInt]	4	0 - 0
SupplierCompanyName	[dbo].[CompanyName]	30	
SupplierContactName	[dbo].[ContactName]	30	
SupplierContactTitle	[dbo].[ContactTitle]	30	
SupplierAddress	[dbo].[Address]	120	
SupplierCity	[dbo].[City]	30	
SupplierRegion	[dbo].[Region]	30	
SupplierPostalCode	[dbo].[PostalCode]	20	
SupplierCountry	[dbo].[Country]	30	
SupplierPhoneNumber	[dbo].[TelephoneNumber]	48	
SupplierFaxNumber	[dbo].[TelephoneNumber]	48	

```
CREATE VIEW [dbo].[uvw_ProductionSupplier]([SupplierObjectId],[SupplierCompany-
Name],[SupplierContactName],[SupplierContactTitle],[SupplierAddress],[Supplier-
City],[SupplierRegion],[SupplierPostalCode],[SupplierCountry],[SupplierPhone-
Number],[SupplierFaxNumber])
AS
SELECT S.[SupplierId],S.[SupplierCompanyName],S.[SupplierContactName],S.[Supplier-
ContactTitle],S.[SupplierAddress],S.[SupplierCity],S.[SupplierRegion],S.[SupplierPostal-
Code],S.[SupplierCountry],S.[SupplierPhoneNumber],S.[SupplierFaxNumber]
FROM [Supplier] S
```

 $\label{local_project} Project > 127.0.0.1, 13001 > User\ databases > MidtermDataModelingCSCl381NaderNehal > Views > dbo.uvw_-ProductionSupplier$

Uses

[dbo].[Supplier]

[dbo].[Address]

[dbo].[City]

[dbo].[CompanyName]

[dbo].[ContactName]

[dbo].[ContactTitle]

[dbo].[Country]

[dbo].[PostalCode]

[dbo].[Region]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[dbo].[uvw_SalesCustomer]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:07 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)	Identity
CustomerObjectId	[dbo].[SurrogateKeyInt]	4	0 - 0
CustomerCompanyName	[dbo].[CompanyName]	30	
CustomerContactName	[dbo].[ContactName]	30	
CustomerContactTitle	[dbo].[Title]	60	
CustomerAddress	[dbo].[Address]	120	
CustomerCity	[dbo].[City]	30	
CustomerRegion	[dbo].[Region]	30	
CustomerPostalCode	[dbo].[PostalCode]	20	
CustomerCountry	[dbo].[Country]	30	
CustomerPhoneNumber	[dbo].[TelephoneNumber]	48	
CustomerFaxNumber	[dbo].[TelephoneNumber]	48	

```
CREATE VIEW [dbo].[uvw_SalesCustomer]([CustomerObjectId], [CustomerCompany-
Name], [CustomerContactName], [CustomerContactTitle], [CustomerAddress], [Customer-
City], [CustomerRegion], [CustomerPostalCode], [CustomerCountry], [CustomerPhone-
Number], [CustomerFaxNumber])

AS
SELECT C.[CustomerId], C.[CustomerCompanyName], C.[CustomerContactName], C.[Customer-
ContactTitle], C.[CustomerAddress], C.[CustomerCity], C.[CustomerRegion], C.[CustomerPostal-
Code], C.[CustomerCountry], C.[CustomerPhoneNumber], C.[CustomerFaxNumber]

FROM [Customer] C
GO
```

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Views > dbo.uvw_-SalesCustomer

Uses

[dbo].[Customer]

[dbo].[Address]

[dbo].[City]

[dbo].[CompanyName]

[dbo].[ContactName]

[dbo].[Country]

[dbo].[PostalCode]

[dbo].[Region]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[dbo].[Title]

[dbo].[uvw_SalesShipper]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:07 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)	Identity
ShipperObjectId	[dbo].[SurrogateKeyInt]	4	0 - 0
ShipperCompanyName	[dbo].[CompanyName]	30	
PhoneNumber	[dbo].[TelephoneNumber]	48	

SQL Script

```
CREATE VIEW [dbo].[uvw_SalesShipper]([ShipperObjectId],[ShipperCompanyName],[Phone-Number])
AS
SELECT S.[ShipperId],S.[ShipperCompanyName],S.[PhoneNumber]
    FROM [Shipper] S
GO
```

Uses

[dbo].[Shipper]

[dbo].[CompanyName]

[dbo].[SurrogateKeyInt]

[dbo].[TelephoneNumber]

[Utils].[uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	3:20:07 AM Thursday, November 17, 2022
Last Modified	3:20:07 AM Thursday, November 17, 2022

Columns

Name	Data Type	Max Length (Bytes)
FullyQualifiedTableName	nvarchar(257)	514
SchemaName	[sys].[sysname]	256
TableName	[sys].[sysname]	256
ColumnName	[sys].[sysname]	256
OrdinalPosition	int	4
FullyQualifiedDomainName	nvarchar(257)	514
DomainName	[sys].[sysname]	256
DataType	nvarchar(128)	256
IsNullable	varchar(3)	3
DefaultName	[sys].[sysname]	256
DefaultNameDefinition	nvarchar(4000)	8000
CheckConstraintRuleName	[sys].[sysname]	256
CheckConstraintRuleNameDefinition	nvarchar(4000)	8000

SQL Script

CREATE VIEW [Utils].[uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint] AS SELECT concat(tbl.TABLE_SCHEMA , '.' , tbl.TABLE_NAME) AS FullyQualifiedTableName, tbl.TABLE_SCHEMA AS SchemaName, tbl.TABLE_NAME AS TableName, col.COLUMN_NAME AS Column-Name, col.ORDINAL_POSITION AS OrdinalPosition, concat(col.DOMAIN_SCHEMA , '.' , col.DOMAIN_NAME) AS FullyQualifiedDomainName, col.DOMAIN_NAME AS DomainName, CASE WHEN col.DATA_TYPE = 'varchar' THEN concat('varchar(' , CHARACTER_MAXIMUM_LENGTH , ')') WHEN col.DATA_TYPE = 'char' THEN concat('char(' , CHARACTER_MAXIMUM_LENGTH , ')') WHEN col.DATA_TYPE = 'nvarchar' THEN concat('nvarchar(' , CHARACTER_MAXIMUM_LENGTH , ')') WHEN col.DATA_TYPE = 'nchar' THEN concat('nchar(' , CHARACTER_MAXIMUM_LENGTH , ')') WHEN col.DATA_TYPE = 'nchar' THEN concat('nchar(' , CHARACTER_-MAXIMUM_LENGTH , ')') WHEN col.DATA_TYPE = 'numeric' THEN concat('numeric(' , NUMERIC_PRECISION_RADIX , ', ' , NUMERIC_SCALE , ')') WHEN col.DATA_TYPE = 'decimal' THEN concat('decimal(' , NUMERIC_PRECISION_RADIX , ', ' , NUMERIC_SCALE , ')') ELSE col.DATA_TYPE END AS DataType, col.IS_NULLABLE AS IsNullable, dcn.DefaultName, col.COLUMN_DEFAULT AS DefaultNameDefinition, cc.CONSTRAINT_NAME AS CheckConstraintRule-Name, cc.CHECK CLAUSE AS CheckConstraintRuleNameDefinition FROM (SELECT TABLE -

CATALOG, TABLE SCHEMA, TABLE NAME, TABLE_TYPE FROM INFORMATION_SCHEMA.TABLES WHERE (TABLE TYPE = 'BASE TABLE')) AS tbl INNER JOIN (SELECT TABLE CATALOG, TABLE -SCHEMA, TABLE NAME, COLUMN NAME, ORDINAL POSITION, COLUMN DEFAULT, IS NULLABLE, DATA -TYPE, CHARACTER_MAXIMUM_LENGTH, CHARACTER_OCTET_LENGTH, NUMERIC_PRECISION, NUMERIC_-PRECISION RADIX, NUMERIC SCALE, DATETIME PRECISION, CHARACTER SET CATALOG, CHARACTER SET SCHEMA, CHARACTER SET NAME, COLLATION CATALOG, COLLATION SCHEMA, COLLATION NAME, DOMAIN CATALOG, DOMAIN SCHEMA, DOMAIN NAME FROM INFORMATION SCHEMA.COLUMNS) AS col ON col.TABLE_CATALOG = tbl.TABLE_CATALOG AND col.TABLE_SCHEMA = tbl.TABLE_SCHEMA AND col.TABLE NAME = tbl.TABLE NAME LEFT OUTER JOIN (SELECT t.name AS TableName, schema_name(s.schema_id) AS SchemaName, ac.name AS ColumnName, d.name AS DefaultName FROM sys.all_columns AS ac INNER JOIN sys.tables AS t ON ac.object_id = t.object_id INNER JOIN sys.schemas AS s ON t.schema_id = s.schema_id INNER JOIN sys.default constraints AS d ON ac.default object id = d.object id) AS dcn ON dcn.SchemaName = tbl.TABLE SCHEMA AND dcn.TableName = tbl.TABLE NAME AND dcn.ColumnName = col.COLUMN_NAME LEFT OUTER JOIN (SELECT cu.TABLE_CATALOG, cu.TABLE_SCHEMA, cu. TABLE NAME, cu. COLUMN NAME, c. CONSTRAINT CATALOG, c. CONSTRAINT SCHEMA, c. CONSTRAINT -NAME, c. CHECK CLAUSE FROM INFORMATION SCHEMA. CONSTRAINT COLUMN USAGE AS CU INNER JOIN INFORMATION SCHEMA.CHECK CONSTRAINTS AS c ON c.CONSTRAINT NAME = cu.CONSTRAINT NAME) AS CC ON CC. TABLE SCHEMA = tbl. TABLE SCHEMA AND CC. TABLE NAME = tbl. TABLE NAME AND cc.COLUMN NAME = col.COLUMN NAMEGO

Uses

Utils

 $\label{local_project} Project > 127.0.0.1, 13001 > User \ databases > MidtermDataModelingCSCl381NaderNehal > Programmability > Stored Procedures$

Stored Procedures Objects

Name

dbo.usp_getorders

[dbo].[usp_getorders]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@country	nvarchar(40)	80

iii User-Defined Data Types

Objects

Name
dbo.Address
dbo.CategoryName
dbo.City
dbo.ClassTime
dbo.CompanyName
dbo.ContactName
dbo.ContactTitle
dbo.Country
dbo.Currency
dbo.DateAdded
dbo.DateOfLastUpdate
dbo.DateYYYYMMDD
dbo.dBlob
dbo.dDateTime
dbo.Description
dbo.dNumber
dbo.FaxNumber
dbo.FirstName
dbo.FlagBit
dbo.FlagChar
dbo.Grade
dbo.GroupMemberFirstName
dbo.GroupMemberLastName
dbo.GroupName
dbo.IndividualProject
dbo.lsDeletion
dbo.LastName
dbo.Name
dbo.Note
dbo.Percentage
dbo.PostalCode
dbo.ProductName
dbo.QuantitySmall
dbo.Region

dbo.Salary
dbo.Score
dbo.sdAddress.String
dbo.sdBlobDefinition.Varbinary
dbo.sdClassTime.String
dbo.sdCurrency.Integer
dbo.sdDateYYYY.String
dbo.sdDescription.String
dbo.sdFlag.Integer
dbo.sdFlag.String
dbo.sdGrade.Integer
dbo.sdldentification.String
dbo.sdKeyVarchar.String
dbo.sdLocation.String
dbo.sdName.String
dbo.sdNotes.String
dbo.sdPhoneNumber.String
dbo.sdPostalCode.String
dbo.sdQuantity.Integer
dbo.sdSalary.Integer
dbo.sdSequence.Integer
dbo.sdSurrogateKey.Integer
dbo.sdTimeStamp.DateTime
dbo.sdTitle.String
dbo.sdTriggers.String
dbo.sdVersion.Integer
dbo.SequenceNo
dbo.ShortDescription
dbo.StateName
dbo.StudentIdentification
dbo.SurrogateKeyInt
dbo.SysEnd
dbo.SysStart
dbo.TelephoneNumber
dbo.TextKeyVarchar10
dbo.Title
dbo.TitleOfCourtesy
dbo.TriggerOption
dbo.Version
dbo.YYYY

iii [dbo].[Address]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	60

SQL Script

```
CREATE TYPE [dbo].[Address] FROM nvarchar (60) NULL
GO
```

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[CategoryName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[CategoryName] FROM nvarchar (15) NULL
GO

Used By

[dbo].[Category]
[dbo].[uvw_ProductionCategory]

iii [dbo].[City]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[City] FROM nvarchar (15) NULL
GO

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[ClassTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nchar
Length	5

SQL Script

CREATE TYPE [dbo].[ClassTime] FROM nchar (5) NULL
GO

Used By

[dbo].[CompanyName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[CompanyName] FROM nvarchar (15) NULL
GO

Used By

[dbo].[Customer]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[uvw_SalesShipper]

[dbo].[ContactName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[ContactName] FROM nvarchar (15) NULL
GO

Used By

[dbo].[Customer]
[dbo].[Supplier]
[dbo].[uvw_ProductionSupplier]
[dbo].[uvw_SalesCustomer]

[dbo].[ContactTitle]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[ContactTitle] FROM nvarchar (15) NULL
GO

Used By

[dbo].[Supplier]

[dbo].[uvw_ProductionSupplier]

iii [dbo].[Country]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

```
CREATE TYPE [dbo].[Country] FROM nvarchar (15) NULL
GO
```

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

iii [dbo].[Currency]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	money
Length	8

SQL Script

CREATE TYPE [dbo].[Currency] FROM money NULL
GO

Used By

[dbo].[OrderDetail] [dbo].[Product] [dbo].[uvw_OrderDetail]

[dbo].[DateAdded]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[DateAdded] FROM datetime2 NULL
GO

Used By

[dbo].[Category]

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Nums]

[dbo].[OrderDetail]

[dbo].[Product]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[UserAuthorization]

[dbo].[VersionedEmployeeHistory]

[dbo].[DateOfLastUpdate]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[DateOfLastUpdate] FROM datetime2 NULL
GO

Used By

[dbo].[Category]

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Nums]

[dbo].[OrderDetail]

[dbo].[Product]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[UserAuthorization]

[dbo].[VersionedEmployeeHistory]

[dbo].[DateYYYYMMDD]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	date
Length	3

SQL Script

CREATE TYPE [dbo].[DateYYYYMMDD] FROM date NOT NULL
GO

Used By

[dbo].[Employee]

[dbo].[uvw_HumanResourcesEmployee]

iii [dbo].[dBlob]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varbinary
Length	max

SQL Script

CREATE TYPE [dbo].[dBlob] FROM varbinary (max) NULL
GO

[dbo].[dDateTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[dDateTime] FROM datetime2 NULL
GO

[dbo].[Description]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	200

SQL Script

CREATE TYPE [dbo].[Description] FROM nvarchar (200) NULL
GO

Used By

[dbo].[Category]
[dbo].[uvw_ProductionCategory]

iii [dbo].[dNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [dbo].[dNumber] FROM int NULL
GO
```

[dbo].[FaxNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Bound Rule	CHK_PhoneNumber
Length	24

SQL Script

```
CREATE TYPE [dbo].[FaxNumber] FROM nvarchar (24) NULL

GO

EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[FaxNumber]'

GO
```

Uses

[dbo].[CHK_PhoneNumber]

[dbo].[FirstName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	25

SQL Script

CREATE TYPE [dbo].[FirstName] FROM nvarchar (25) NULL
GO

Used By

[dbo].[Employee]

[dbo].[uvw_HumanResourcesEmployee]

iii [dbo].[FlagBit]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	bit
Length	1

SQL Script

CREATE TYPE [dbo].[FlagBit] FROM bit NULL
GO

Used By

[dbo].[Product]

iii [dbo].[FlagChar]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	char
Length	1

SQL Script

CREATE TYPE [dbo].[FlagChar] FROM char (1) NOT NULL
GO



Properties

Property	Value
Nullability	NULL allowed
Base Type Name	tinyint
Length	1

SQL Script

CREATE TYPE [dbo].[Grade] FROM tinyint NULL
GO

[dbo].[GroupMemberFirstName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	25

SQL Script

CREATE TYPE [dbo].[GroupMemberFirstName] FROM nvarchar (25) NOT NULL
GO

Used By

[dbo].[GroupMemberLastName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	35

SQL Script

CREATE TYPE [dbo].[GroupMemberLastName] FROM nvarchar (35) NOT NULL GO

Used By

[dbo].[GroupName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	20

SQL Script

CREATE TYPE [dbo].[GroupName] FROM nvarchar (20) NOT NULL
GO

Used By

[dbo].[IndividualProject]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	60

SQL Script

CREATE TYPE [dbo].[IndividualProject] FROM nvarchar (60) NULL
GO

Used By

[dbo].[IsDeletion]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	char
Length	1

SQL Script

CREATE TYPE [dbo].[IsDeletion] FROM char (1) NOT NULL
GO

iii [dbo].[LastName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	35

SQL Script

CREATE TYPE [dbo].[LastName] FROM nvarchar (35) NULL
GO

Used By

[dbo].[Employee]

[dbo].[uvw_HumanResourcesEmployee]



Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	40

SQL Script

CREATE TYPE [dbo].[Name] FROM nvarchar (40) NULL
GO



Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	200

SQL Script

CREATE TYPE [dbo].[Note] FROM nvarchar (200) NULL GO

iii [dbo].[Percentage]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	numeric
Length	5

SQL Script

CREATE TYPE [dbo].[Percentage] FROM numeric (4, 3) NULL
GO

Used By

[dbo].[OrderDetail] [dbo].[uvw_OrderDetail]

[dbo].[PostalCode]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	10

SQL Script

```
CREATE TYPE [dbo].[PostalCode] FROM nvarchar (10) NULL
GO
```

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[ProductName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	40

SQL Script

CREATE TYPE [dbo].[ProductName] FROM nvarchar (40) NULL
GO

Used By

[dbo].[Product]

[dbo].[QuantitySmall]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	smallint
Length	2

SQL Script

CREATE TYPE [dbo].[QuantitySmall] FROM smallint NULL
GO

Used By

[dbo].[OrderDetail] [dbo].[uvw_OrderDetail]

iii [dbo].[Region]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

```
CREATE TYPE [dbo].[Region] FROM nvarchar (15) NULL
GO
```

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]



Properties

Property	Value
Nullability	NULL allowed
Base Type Name	money
Length	8

SQL Script

CREATE TYPE [dbo].[Salary] FROM money NULL GO

iii [dbo].[Score]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	tinyint
Length	1

SQL Script

CREATE TYPE [dbo].[Score] FROM tinyint NOT NULL
GO

[dbo].[sdAddress.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	60

SQL Script

CREATE TYPE [dbo].[sdAddress.String] FROM nvarchar (60) NULL GO

[dbo].[sdBlobDefinition.Varbinary]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varbinary
Length	max

SQL Script

CREATE TYPE [dbo].[sdBlobDefinition.Varbinary] FROM varbinary (max) NULL GO

[dbo].[sdClassTime.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nchar
Length	5

SQL Script

CREATE TYPE [dbo].[sdClassTime.String] FROM nchar (5) NULL
GO

[dbo].[sdCurrency.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	money
Length	8

SQL Script

CREATE TYPE [dbo].[sdCurrency.Integer] FROM money NULL GO

[dbo].[sdDateYYYY.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	char
Length	4

SQL Script

CREATE TYPE [dbo].[sdDateYYYY.String] FROM char (4) NULL
GO

[dbo].[sdDescription.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	200

SQL Script

CREATE TYPE [dbo].[sdDescription.String] FROM nvarchar (200) NULL GO

[dbo].[sdFlag.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	bit
Length	1

SQL Script

CREATE TYPE [dbo].[sdFlag.Integer] FROM bit NULL
GO

[dbo].[sdFlag.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	char
Length	1

SQL Script

CREATE TYPE [dbo].[sdFlag.String] FROM char (1) NULL
GO

[dbo].[sdGrade.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	tinyint
Length	1

SQL Script

CREATE TYPE [dbo].[sdGrade.Integer] FROM tinyint NULL GO

[dbo].[sdldentification.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	10

SQL Script

CREATE TYPE [dbo].[sdIdentification.String] FROM nvarchar (10) NULL GO

[dbo].[sdKeyVarchar.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	10

SQL Script

CREATE TYPE [dbo].[sdKeyVarchar.String] FROM nvarchar (10) NULL GO

[dbo].[sdLocation.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[sdLocation.String] FROM nvarchar (15) NULL GO

[dbo].[sdName.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[sdName.String] FROM nvarchar (15) NULL
GO

[dbo].[sdNotes.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	200

SQL Script

CREATE TYPE [dbo].[sdNotes.String] FROM nvarchar (200) NULL
GO

[dbo].[sdPhoneNumber.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Bound Rule	CHK_PhoneNumber
Length	24

SQL Script

```
CREATE TYPE [dbo].[sdPhoneNumber.String] FROM nvarchar (24) NULL

GO

EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[sdPhoneNumber.String]'

GO
```

Uses

[dbo].[CHK_PhoneNumber]

[dbo].[sdPostalCode.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	10

SQL Script

CREATE TYPE [dbo].[sdPostalCode.String] FROM nvarchar (10) NULL GO

[dbo].[sdQuantity.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	smallint
Length	2

SQL Script

CREATE TYPE [dbo].[sdQuantity.Integer] FROM smallint NULL GO

[dbo].[sdSalary.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[sdSalary.Integer] FROM int NULL GO

[dbo].[sdSequence.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[sdSequence.Integer] FROM int NULL
GO

[dbo].[sdSurrogateKey.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[sdSurrogateKey.Integer] FROM int NULL GO

[dbo].[sdTimeStamp.DateTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[sdTimeStamp.DateTime] FROM datetime2 NULL GO

[dbo].[sdTitle.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[sdTitle.String] FROM nvarchar (15) NULL
GO

[dbo].[sdTriggers.String]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	char
Length	1

SQL Script

CREATE TYPE [dbo].[sdTriggers.String] FROM char (1) NULL
GO

[dbo].[sdVersion.Integer]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[sdVersion.Integer] FROM int NULL
GO

[dbo].[SequenceNo]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[SequenceNo] FROM int NULL
GO

[dbo].[ShortDescription]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	200

SQL Script

CREATE TYPE [dbo].[ShortDescription] FROM nvarchar (200) NULL GO

[dbo].[StateName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	15

SQL Script

CREATE TYPE [dbo].[StateName] FROM nvarchar (15) NOT NULL
GO

[dbo].[StudentIdentification]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	10

SQL Script

CREATE TYPE [dbo].[StudentIdentification] FROM nvarchar (10) NULL GO

[dbo].[SurrogateKeyInt]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [dbo].[SurrogateKeyInt] FROM int NULL
GO
```

Used By

[dbo].[Category]

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Nums]

[dbo].[OrderDetail]

[dbo].[Product]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[UserAuthorization]

[dbo].[VersionedEmployeeHistory]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_OrderDetail]

[dbo].[uvw_ProductionCategory]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[uvw_SalesShipper]

iii [dbo].[SysEnd]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[SysEnd] FROM datetime2 NULL GO

[dbo].[SysStart]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dbo].[SysStart] FROM datetime2 NULL GO

[dbo].[TelephoneNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Bound Rule	CHK_PhoneNumber
Length	24

SQL Script

```
CREATE TYPE [dbo].[TelephoneNumber] FROM nvarchar (24) NULL

GO

EXEC sp_bindrule N'[dbo].[CHK_PhoneNumber]', N'[dbo].[TelephoneNumber]'

GO
```

Uses

$[dbo].[CHK_PhoneNumber]$

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[uvw_ProductionSupplier]

[dbo].[uvw_SalesCustomer]

[dbo].[uvw_SalesShipper]

[dbo].[TextKeyVarchar10]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	10

SQL Script

CREATE TYPE [dbo].[TextKeyVarchar10] FROM nvarchar (10) NOT NULL GO

dbo].[Title]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	30

SQL Script

CREATE TYPE [dbo].[Title] FROM nvarchar (30) NOT NULL
GO

Used By

[dbo].[Customer]
[dbo].[Employee]
[dbo].[uvw_HumanResourcesEmployee]
[dbo].[uvw_SalesCustomer]

[dbo].[TitleOfCourtesy]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	5

SQL Script

CREATE TYPE [dbo].[TitleOfCourtesy] FROM nvarchar (5) NOT NULL
GO

Used By

[dbo].[Employee]

[dbo].[uvw_HumanResourcesEmployee]

[dbo].[TriggerOption]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	char
Length	1

SQL Script

CREATE TYPE [dbo].[TriggerOption] FROM char (1) NOT NULL GO

iii [dbo].[Version]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dbo].[Version] FROM int NULL
GO



Properties

Property	Value
Nullability	NOT NULL
Base Type Name	char
Length	4

SQL Script

CREATE TYPE [dbo].[YYYY] FROM char (4) NOT NULL GO



Objects

Name
dbo.CHK_ClassTime
dbo.CHK_DiscountPercentage
dbo.CHK_PhoneNumber
dbo.CHK_Products_unitprice

[dbo].[CHK_ClassTime]

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE RULE [dbo].[CHK_ClassTime]

AS @col IN ('9:15')

GO
```

[dbo].[CHK_DiscountPercentage]

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE RULE [dbo].[CHK_DiscountPercentage]

AS @col BETWEEN 0 AND 1

GO
```

Used By

[dbo].[OrderDetail]

[dbo].[CHK_PhoneNumber]

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE RULE [dbo].[CHK_PhoneNumber]

AS len(@col) Between 10 AND 24

GO
```

Used By

[dbo].[Customer]

[dbo].[Employee]

[dbo].[Shipper]

[dbo].[Supplier]

[dbo].[FaxNumber]

[dbo].[sdPhoneNumber.String]

[dbo].[TelephoneNumber]

[dbo].[CHK_Products_unitprice]

Properties

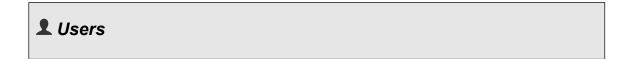
Property	Value
Owner	dbo

SQL Script

```
CREATE RULE [dbo].[CHK_Products_unitprice]
   AS @col >= 0
GO
```

Used By

[dbo].[Product]



Objects

Name	
dbo	
guest	



Properties

Property	Value
Туре	SqlUser
Login Name	sa
Default Schema	dbo

Database Level Permissions

Туре	Action
CONNECT	Grant

SQL Script

GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Users > guest



Properties

Property	Value
Туре	SqlUser
Default Schema	guest

SQL Script

La Database Roles

Objects

Name
db_accessadmin
db_backupoperator
db_datareader
db_datawriter
db_ddladmin
db_denydatareader
db_denydatawriter
db_owner
db_securityadmin
public

db_accessadmin

Properties

Property	Value
Owner	dbo

db_backupoperator

Properties

Property	Value
Owner	dbo

♣ db_datareader

Properties

Property	Value
Owner	dbo

db_datawriter

Properties

Property	Value
Owner	dbo

db_ddladmin

Properties

Property	Value
Owner	dbo

db_denydatareader

Properties

Property	Value
Owner	dbo

db_denydatawriter

Properties

Property	Value
Owner	dbo

db_owner

Properties

Property	Value
Owner	dbo

db_securityadmin

Properties

Property	Value
Owner	dbo

♣•• public

Properties

Property	Value
Owner	dbo

△ Schemas

Objects

Name
Audit
DbSecurity
Example
HumanResources
JsonOutput
myudt
Production
RelationalCalculii
RelationalCrossJoin
Sales
SystemVersioned
Temporal
Triggered
Udt
Utils
validations

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Audit



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Audit]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > DbSecurity



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [DbSecurity]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Example



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Example]
AUTHORIZATION [dbo]
GO

△ HumanResources

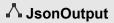
Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [HumanResources]
AUTHORIZATION [dbo]
GO

 $\label{local_project} Project > 127.0.0.1, 13001 > User\ databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > JsonOutput$



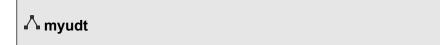
Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [JsonOutput]
AUTHORIZATION [dbo]
GO

 $\label{eq:project} Project > 127.0.0.1, 13001 > User\ databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > myudt$



Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [myudt]
AUTHORIZATION [dbo]
GO
```

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Production



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Production]
AUTHORIZATION [dbo]
GO



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [RelationalCalculii]
AUTHORIZATION [dbo]
GO

⚠ RelationalCrossJoin

Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [RelationalCrossJoin]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Salas



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Sales]
AUTHORIZATION [dbo]
GO

△ SystemVersioned

Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [SystemVersioned]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Temporal



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Temporal]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Triggered



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Triggered]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Udt



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Udt]
AUTHORIZATION [dbo]
GO

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > Litils



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [Utils]
AUTHORIZATION [dbo]
GO

Used By

 $[Utils]. [uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint] \\$

Project > 127.0.0.1,13001 > User databases > MidtermDataModelingCSCl381NaderNehal > Security > Schemas > validations



Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [validations]
AUTHORIZATION [dbo]
GO