localhost,12001 Documentation

QueensClassSchedule

Server	localhost,12001
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localhost,12001

Databases (1)

- QueensClassSchedule

Server Properties

Property	Value
Product	Microsoft SQL Server
Version	15.0.4083.2
Language	English
Platform	NT x64
Edition	Developer Edition (64-bit)
Engine Edition	3 (Enterprise)
Processors	8
OS Version	6.2 (9200)
Physical Memory	8895
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)

- QueensClassSchedule

QueensClassSchedule Database

Database Properties

Property	Value
SQL Server Version	Max
Compatibility Level	SQL Server 2016
Last backup time	05/09/2021
Last log backup time	-
Creation date	Apr 25 2021
Users	7
Database Encryption Enabled	False
Database Encryption Algorithm	None
Database size	336.00 MB
Unallocated space	65.65 MB

Database Options

Property	Value
Compatibility Level	130
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	True
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	9f5d9c27-bc5c-4d67-9b27-e7ae78bc354f
Service broker enabled	False
Log reuse wait	LOG_BACKUP
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	Type	Size	Maxsize	Autogrowth	File Name
QC2019	Data	72.00 MB	unlimited	64.00 MB	/var/opt/mssql/data/QueensClass-ScheduleCurrentSemester.mdf
QC2019_log	Log	264.00 MB	2048.00 GB	64.00 MB	/var/opt/mssql/log/QueensClass-ScheduleCurrentSemester_0.ldf

Tables

Objects

Name
College.Building
College.Class
College.Course
College.Department
College.DepartmentInstructorDetails
College.Instructor
College.ModeOfInstruction
College.Room
DbSecurity.UserAuthorization
Process.WorkFlowSteps
Uploadfile.CurrentSemesterCourseOfferings

[College].[Building]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	24
Created	2:49:54 AM Sunday, May 9, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	BuildingId	[Udt].[SurrogateKey]	4	NOT NULL	
	BuildingFullName	[Udt].[BuildingFullName]	20	NULL allowed	
	BuildingName	[Udt].[BuildingName]	2	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NOT NULL	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Building	BuildingId	True
	IX_BuildingName	BuildingId	True

SQL Script

```
CREATE TABLE [College].[Building]
(
[BuildingId] [Udt].[SurrogateKey] NOT NULL,
[BuildingFullName] [Udt].[BuildingFullName] NULL,
[BuildingName] [Udt].[BuildingName] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NOT NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Building_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Building_DateOfLastUpdate]
DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[Building] ADD CONSTRAINT [PK_Building] PRIMARY KEY CLUSTERED
```

```
([BuildingId]) ON [PRIMARY]
GO
CREATE UNIQUE NONCLUSTERED INDEX [IX_BuildingName] ON [College].[Building]
([BuildingId]) ON [PRIMARY]
GO
```

Uses

[Udt].[BuildingFullName]
[Udt].[BuildingName]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
College

Used By

[College].[Room]
[Project3].[InPersonClasses]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadQueensCourseSchedule]
[Project3].[LoadRoom]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[Class]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4522
Created	5:44:22 AM Sunday, May 9, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	ClassId	[Udt].[SurrogateKey]	4	NOT NULL	
FK	CourseId	[Udt].[SurrogateKey]	4	NOT NULL	
	Section	[Udt].[Section]	6	NULL allowed	
	Code	[Udt].[Code]	4	NULL allowed	
FK	DepartmentInstructorId	[Udt].[SurrogateKey]	4	NULL allowed	
FK	RoomId	[Udt].[SurrogateKey]	4	NULL allowed	
	DaysOfWeek	[Udt].[DayOfWeek]	10	NULL allowed	
	StartTime	[Udt].[ClockTime]	5	NULL allowed	
	EndTime	[Udt].[ClockTime]	5	NULL allowed	
	NumberEnrolled	[Udt].[NumStudents]	4	NULL allowed	
	NumLimit	[Udt].[NumStudents]	4	NULL allowed	
FK	ModeOfInstruction	[Udt].[SurrogateKey]	4	NOT NULL	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NOT NULL	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Class__CB1927C098262148	ClassId	True

Foreign Keys

Name	Columns
FK_Class_Course	CourseId->[College].[Course].[CourseId]
FK_Class_DI	DepartmentInstructorId->[College].[DepartmentInstructorDetails].[Department-

	InstructorId]
FK_Class_ModeOfInstruction	ModeOfInstruction->[College].[ModeOfInstruction].[ModeOfInstructionId]
FK_Class_Room	RoomId->[College].[Room].[RoomId]

SQL Script

```
CREATE TABLE [College].[Class]
(
[ClassId] [Udt].[SurrogateKey] NOT NULL,
[CourseId] [Udt].[SurrogateKey] NOT NULL,
[Section] [Udt].[Section] NULL,
[Code] [Udt].[Code] NULL,
[DepartmentInstructorId] [Udt].[SurrogateKey] NULL,
[RoomId] [Udt].[SurrogateKey] NULL,
[DaysOfWeek] [Udt].[DayOfWeek] NULL,
[StartTime] [Udt].[ClockTime] NULL,
[EndTime] [Udt].[ClockTime] NULL,
[NumberEnrolled] [Udt].[NumStudents] NULL,
[NumLimit] [Udt].[NumStudents] NULL,
[ModeOfInstruction] [Udt].[SurrogateKey] NOT NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NOT NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Class_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Class_DateOfLastUpdate]
DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[Class] ADD CONSTRAINT [PK__Class__CB1927C098262148] PRIMARY
KEY CLUSTERED  ([ClassId]) ON [PRIMARY]
GO
ALTER TABLE [College].[Class] ADD CONSTRAINT [FK_Class_Course] FOREIGN KEY ([Course-
Id]) REFERENCES [College].[Course] ([CourseId])
GO
ALTER TABLE [College].[Class] ADD CONSTRAINT [FK_Class_DI] FOREIGN KEY ([Department-
InstructorId]) REFERENCES [College].[DepartmentInstructorDetails] ([Department-
InstructorId])
GO
ALTER TABLE [College].[Class] ADD CONSTRAINT [FK_Class_ModeOfInstruction] FOREIGN
KEY ([ModeOfInstruction]) REFERENCES [College].[ModeOfInstruction] ([ModeOf-
InstructionId])
GO
ALTER TABLE [College].[Class] ADD CONSTRAINT [FK_Class_Room] FOREIGN KEY ([RoomId])
REFERENCES [College].[Room] ([RoomId])
GO
```

Uses

[College].[Course]
[College].[DepartmentInstructorDetails]
[College].[ModeOfInstruction]
[College].[Room]
[Udt].[ClockTime]
[Udt].[Code]
[Udt].[Date_Time]
[Udt].[DayOfWeek]

[Udt].[NumStudents]
[Udt].[Section]
[Udt].[SurrogateKey]
College

Used By

[Project3].[InPersonClasses]
[Project3].[LoadClass]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[Course]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1619
Created	7:38:56 PM Saturday, May 8, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	CourseId	[Udt].[SurrogateKey]	4	NOT NULL	
FK	DepartmentId	[Udt].[SurrogateKey]	4	NULL allowed	
	CourseNumber	[Udt].[CourseNumber]	5	NULL allowed	
	CourseName	[Udt].[CourseName]	31	NULL allowed	
	CourseCredits	[Udt].[Credits]	4	NULL allowed	
	CourseHours	[Udt].[Hours]	8	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Course__C92D71A7A42915D4	CourseId	True

Check Constraints

Name	On Column	Constraint
CK_CourseCredits	CourseCredits	([CourseCredits]=(9) OR [CourseCredits]=(6) OR [CourseCredits]=(5) OR [CourseCredits]=(4) OR [CourseCredits]=(3) OR [Course-Credits]=(2) OR [CourseCredits]=(1) OR [CourseCredits]=(0))

Foreign Keys

Name	Columns
FK_Course_Department	DepartmentId->[College].[Department].[DepartmentId]

SQL Script

```
CREATE TABLE [College].[Course]
(
[CourseId] [Udt].[SurrogateKey] NOT NULL,
[DepartmentId] [Udt].[SurrogateKey] NULL,
[CourseNumber] [Udt].[CourseNumber] NULL,
[CourseName] [Udt].[CourseName] NULL,
[CourseCredits] [Udt].[Credits] NULL,
[CourseHours] [Udt].[Hours] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Course_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Course_DateOfLastUpdate]
DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[Course] ADD CONSTRAINT [CK_CourseCredits] CHECK (([Course-
Credits]=(9) OR [CourseCredits]=(6) OR [CourseCredits]=(5) OR [CourseCredits]=(4) OR
[CourseCredits]=(3) OR [CourseCredits]=(2) OR [CourseCredits]=(1) OR [Course-
Credits]=(0)))
GO
ALTER TABLE [College].[Course] ADD CONSTRAINT [PK__Course__C92D71A7A42915D4] PRIMARY
KEY CLUSTERED  ([CourseId]) ON [PRIMARY]
GO
ALTER TABLE [College].[Course] ADD CONSTRAINT [FK_Course_Department] FOREIGN KEY
([DepartmentId]) REFERENCES [College].[Department] ([DepartmentId])
GO
```

Uses

[College].[Department]
[Udt].[CourseName]
[Udt].[CourseNumber]
[Udt].[Credits]
[Udt].[Date_Time]
[Udt].[Hours]
[Udt].[SurrogateKey]
College

Used By

[College].[Class]
[Project3].[InPersonClasses]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[Department]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	85
Created	3:05:51 AM Sunday, May 9, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	DepartmentId	[Udt].[SurrogateKey]	4	NOT NULL	
	DepartmentName	[Udt].[DepartmentName]	12	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Department	DepartmentId	True
	IX_DepartmentName	DepartmentId	True

Check Constraints

Name	On Column	Constraint
CK_DepartmentName	DepartmentName	(len([DepartmentName])<=(5))

SQL Script

```
CREATE TABLE [College].[Department]
(
[DepartmentId] [Udt].[SurrogateKey] NOT NULL,
[DepartmentName] [Udt].[DepartmentName] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Department_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Department_DateOfLast-
```

```
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[Department] ADD CONSTRAINT [CK_DepartmentName] CHECK
((len([DepartmentName])<=(5)))
GO
ALTER TABLE [College].[Department] ADD CONSTRAINT [PK_Department] PRIMARY KEY
CLUSTERED  ([DepartmentId]) ON [PRIMARY]
GO
CREATE UNIQUE NONCLUSTERED INDEX [IX_DepartmentName] ON [College].[Department]
([DepartmentId]) ON [PRIMARY]
GO
```

Uses

[Udt].[Date_Time]
[Udt].[DepartmentName]
[Udt].[SurrogateKey]
College

Used By

[College].[Course]
[College].[DepartmentInstructorDetails]
[Project3].[CountPerDepartment]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[DepartmentInstructorDetails]

Properties

Property	Value
Row Count (~)	1730
Created	3:24:05 AM Sunday, May 9, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	DepartmentInstructorId	[Udt].[SurrogateKey]	4	NOT NULL	(NEXT VALUE FOR [Pk-Sequence].[Department-InstructorId])
FK	DepartmentId	[Udt].[SurrogateKey]	4	NULL allowed	
FK	InstructorId	[Udt].[SurrogateKey]	4	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[DateAdded]	8	NULL allowed	
	DateOfLastUpdate	[Udt].[DateOfLastUpdate]	8	NULL allowed	

Indexes

Key	Name	Key Columns	Unique
PK C	PK_DepartmentInstructorDetails	DepartmentInstructorId	True

Foreign Keys

Name	Columns
FK_DI_Department	DepartmentId->[College].[Department].[DepartmentId]
FK_DI_Instructor	InstructorId->[College].[Instructor].[InstructorId]

SQL Script

```
CREATE TABLE [College].[DepartmentInstructorDetails]
(
[DepartmentInstructorId] [Udt].[SurrogateKey] NOT NULL CONSTRAINT [DF_Department-
InstructorDetails_DepartmentInstructorId] DEFAULT (NEXT VALUE FOR [Pk-
```

```
Sequence].[DepartmentInstructorId]),
[DepartmentId] [Udt].[SurrogateKey] NULL,
[InstructorId] [Udt].[SurrogateKey] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[DateAdded] NULL,
[DateOfLastUpdate] [Udt].[DateOfLastUpdate] NULL
) ON [PRIMARY]
GO
ALTER TABLE [College].[DepartmentInstructorDetails] ADD CONSTRAINT [PK_Department-
InstructorDetails] PRIMARY KEY CLUSTERED  ([DepartmentInstructorId]) ON [PRIMARY]
GO
ALTER TABLE [College].[DepartmentInstructorDetails] ADD CONSTRAINT [FK_DI_-
Department] FOREIGN KEY ([DepartmentId]) REFERENCES [College].[Department]
([DepartmentId])
GO
ALTER TABLE [College].[DepartmentInstructorDetails] ADD CONSTRAINT [FK_DI_-
Instructor] FOREIGN KEY ([InstructorId]) REFERENCES [College].[Instructor]
([InstructorId])
GO
```

Uses

[College].[Department]
[College].[Instructor]
[Udt].[DateAdded]
[Udt].[DateOfLastUpdate]
[Udt].[SurrogateKey]
College

Used By

[College].[Class]
[Project3].[CountPerDepartment]
[Project3].[InPersonClasses]
[Project3].[InstructorsInMultipleDepartments]
[Project3].[LoadClass]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[TruncateCollegeSchema]

[College].[Instructor]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1596
Created	9:45:39 PM Saturday, May 8, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	InstructorId	[Udt].[SurrogateKey]	4	NOT NULL	
	InstructorFirstName	[Udt].[InstructorFirstName]	25	NULL allowed	
	InstructorLastName	[Udt].[InstructorLastName]	25	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime ())

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Instruct__9D010A9BF5A5B1F6	InstructorId	True

SQL Script

```
CREATE TABLE [College].[Instructor]
(
[InstructorId] [Udt].[SurrogateKey] NOT NULL,
[InstructorFirstName] [Udt].[InstructorFirstName] NULL,
[InstructorLastName] [Udt].[InstructorLastName] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Instructor_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Instructor_DateOfLast-
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[Instructor] ADD CONSTRAINT [PK__Instruct__9D010A9BF5A5B1F6]
PRIMARY KEY CLUSTERED  ([InstructorId]) ON [PRIMARY]
GO
```

Uses

[Udt].[Date_Time]
[Udt].[InstructorFirstName]
[Udt].[InstructorLastName]
[Udt].[SurrogateKey]
College

Used By

[College].[DepartmentInstructorDetails]
[Project3].[InPersonClasses]
[Project3].[InstructorsInMultipleDepartments]
[Project3].[LoadClass]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[ModeOfInstruction]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4
Created	5:03:50 PM Saturday, May 8, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	ModeOfInstructionId	[Udt].[SurrogateKey]	4	NOT NULL	
	ModeDescription	[Udt].[ModeDescription]	12	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK__ModeOfIn__AAEA555397AFE6BE	ModeOfInstructionId	True
	IX_ModeOfInstruction	ModeOfInstructionId	True

SQL Script

```
CREATE TABLE [College].[ModeOfInstruction]
(
[ModeOfInstructionId] [Udt].[SurrogateKey] NOT NULL,
[ModeDescription] [Udt].[ModeDescription] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_ModeOfInstruction_DateAdded]
DEFAULT (sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_ModeOfInstruction_DateOf-
LastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [College].[ModeOfInstruction] ADD CONSTRAINT [PK__ModeOfIn__-
AAEA555397AFE6BE] PRIMARY KEY CLUSTERED  ([ModeOfInstructionId]) ON [PRIMARY]
GO
CREATE UNIQUE NONCLUSTERED INDEX [IX_ModeOfInstruction] ON [College].[ModeOf-
```

```
Instruction] ([ModeOfInstructionId]) ON [PRIMARY]
GO
```

Uses

[Udt].[Date_Time]
[Udt].[ModeDescription]
[Udt].[SurrogateKey]
College

Used By

[College].[Class]
[Project3].[LoadClass]
[Project3].[LoadModeOfInstruction]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[College].[Room]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	318
Created	9:18:36 PM Saturday, May 8, 2021
Last Modified	8:03:12 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	RoomId	[Udt].[SurrogateKey]	4	NOT NULL	
FK	BuildingId	[Udt].[SurrogateKey]	4	NULL allowed	
	RoomNumber	[Udt].[RoomNumber]	5	NULL allowed	
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	
	DateAdded	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[Udt].[Date_Time]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK__Room__32863939D74D15E8	RoomId	True

Foreign Keys

Name	Columns
FK_Room_Building	BuildingId->[College].[Building].[BuildingId]

SQL Script

```
CREATE TABLE [College].[Room]
(
[RoomId] [Udt].[SurrogateKey] NOT NULL,
[BuildingId] [Udt].[SurrogateKey] NULL,
[RoomNumber] [Udt].[RoomNumber] NULL,
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL,
[DateAdded] [Udt].[Date_Time] NULL CONSTRAINT [DF_Room_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [Udt].[Date_Time] NULL CONSTRAINT [DF_Room_DateOfLastUpdate]
DEFAULT (sysdatetime())
) ON [PRIMARY]
```

```
GO
ALTER TABLE [College].[Room] ADD CONSTRAINT [PK__Room__32863939D74D15E8] PRIMARY KEY
CLUSTERED  ([RoomId]) ON [PRIMARY]
GO
ALTER TABLE [College].[Room] ADD CONSTRAINT [FK_Room_Building] FOREIGN KEY
([BuildingId]) REFERENCES [College].[Building] ([BuildingId])
GO
```

Uses

[College].[Building]
[Udt].[Date_Time]
[Udt].[RoomNumber]
[Udt].[SurrogateKey]
College

Used By

[College].[Class]
[Project3].[InPersonClasses]
[Project3].[LoadClass]
[Project3].[LoadRoom]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[DbSecurity].[UserAuthorization]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	6
Created	9:45:11 PM Saturday, May 8, 2021
Last Modified	9:45:11 PM Saturday, May 8, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NOT NULL	((1))
	ClassTime	[Udt].[ClassTime]	10	NOT NULL	(N'0915')
	IndividualProject	[Udt].[IndividualProject]	18	NOT NULL	(N'PROJECT 3 ERD - GROUP8 -- QUEENS COLLEGE SEMESTER COURSE DATABASE')
	GroupMemberLastName	[Udt].[FirstName]	25	NOT NULL	(N'')
	GroupMemberFirstName	[Udt].[LastName]	25	NOT NULL	(N'')
	GroupName	[Udt].[GroupName]	14	NOT NULL	(N'Group 8')
	DateAdded	[Udt].[Date_Time]	8	NOT NULL	(sysdatetime( ))

Indexes

Key	Name	Key Columns	Unique
PK C	PK_UserAuthorization	UserAuthorizationKey	True

SQL Script

```
CREATE TABLE [DbSecurity].[UserAuthorization]
(
[UserAuthorizationKey] [Udt].[SurrogateKey] NOT NULL CONSTRAINT [DF_User-
Authorization_UserAuthorizationKey] DEFAULT ((1)),
[ClassTime] [Udt].[ClassTime] NOT NULL CONSTRAINT [DF_UserAuthorization_ClassTime]
DEFAULT (N'0915'),
[IndividualProject] [Udt].[IndividualProject] NOT NULL CONSTRAINT [DF_User-
Authorization_IndividualProject] DEFAULT (N'PROJECT 3 ERD - GROUP8 -- QUEENS COLLEGE
SEMESTER COURSE DATABASE'),
[GroupMemberLastName] [Udt].[FirstName] NOT NULL CONSTRAINT [DF_UserAuthorization_-
GroupMemberLastName] DEFAULT (N''),
[GroupMemberFirstName] [Udt].[LastName] NOT NULL CONSTRAINT [DF_UserAuthorization_-
```

```
GroupMemberFirstName] DEFAULT (N''),
[GroupName] [Udt].[GroupName] NOT NULL CONSTRAINT [DF_UserAuthorization_GroupName]
DEFAULT (N'Group 8'),
[DateAdded] [Udt].[Date_Time] NOT NULL CONSTRAINT [DF_UserAuthorization_DateAdded]
DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [DbSecurity].[UserAuthorization] ADD CONSTRAINT [PK_UserAuthorization]
PRIMARY KEY CLUSTERED  ([UserAuthorizationKey]) ON [PRIMARY]
GO
```

Uses

[Udt].[ClassTime]
[Udt].[Date_Time]
[Udt].[FirstName]
[Udt].[GroupName]
[Udt].[IndividualProject]
[Udt].[LastName]
[Udt].[SurrogateKey]
DbSecurity

Used By

[Process].[usp_ShowWorkflowSteps]

[Process].[WorkFlowSteps]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	13
Created	10:46:02 PM Friday, May 7, 2021
Last Modified	3:10:06 AM Sunday, May 9, 2021

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	WorkFlowStepKey	[Udt].[SurrogateKey]	4	NOT NULL	
	WorkFlowStepDescription	[Udt].[WorkFlowStepDescription]	200	NULL allowed	
	WorkFlowStepTableRowCount	[Udt].[WorkFlowStepTAbleRow-Count]	4	NULL allowed	((0))
	StartingDateTime	[Udt].[Date_Time]	8	NULL allowed	(sysdate time())
	EndingDateTime	[Udt].[Date_Time]	8	NULL allowed	(sysdate time())
	ClassTime	[Udt].[ClassTime]	10	NULL allowed	('0915')
	UserAuthorizationKey	[Udt].[SurrogateKey]	4	NULL allowed	((2))

Indexes

Key	Name	Key Columns	Unique
PK C	PK_WorkFlowSteps	WorkFlowStepKey	True

SQL Script

```
CREATE TABLE [Process].[WorkFlowSteps]
(
[WorkFlowStepKey] [Udt].[SurrogateKey] NOT NULL,
[WorkFlowStepDescription] [Udt].[WorkFlowStepDescription] NULL,
[WorkFlowStepTableRowCount] [Udt].[WorkFlowStepTAbleRowCount] NULL CONSTRAINT [DF_-
WorkFlowSteps_WorkFlowStepTableRowCount] DEFAULT ((0)),
[StartingDateTime] [Udt].[Date_Time] NULL CONSTRAINT [DF_WorkFlowSteps_StartingDate-
Time] DEFAULT (sysdatetime()),
[EndingDateTime] [Udt].[Date_Time] NULL CONSTRAINT [DF_WorkFlowSteps_EndingDateTime]
DEFAULT (sysdatetime()),
[ClassTime] [Udt].[ClassTime] NULL CONSTRAINT [DF_WorkFlowSteps_ClassTime] DEFAULT
('0915'),
```

```
[UserAuthorizationKey] [Udt].[SurrogateKey] NULL CONSTRAINT [DF_WorkFlowSteps_User-
AuthorizationKey] DEFAULT ((2))
) ON [PRIMARY]
GO
ALTER TABLE [Process].[WorkFlowSteps] ADD CONSTRAINT [PK_WorkFlowSteps] PRIMARY KEY
CLUSTERED  ([WorkFlowStepKey]) ON [PRIMARY]
GO
```

Uses

[Udt].[ClassTime]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepDescription]
[Udt].[WorkFlowStepTAbleRowCount]
Process

Used By

[Process].[usp_ShowWorkflowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[LoadQueensCourseSchedule]
[Project3].[TruncateCollegeSchema]

[Uploadfile].[CurrentSemesterCourseOfferings]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Heap	True
Row Count (~)	4522
Created	4:31:20 PM Monday, April 12, 2021
Last Modified	4:33:21 PM Monday, April 12, 2021

Columns

Name	Data Type	Max Length (Bytes)	Nullability	Default
Semester	varchar(50)	50	NULL allowed	('Current Semester')
Sec	varchar(50)	50	NULL allowed	
Code	varchar(50)	50	NULL allowed	
Course (hr, crd)	varchar(50)	50	NULL allowed	
Description	varchar(50)	50	NULL allowed	
Day	varchar(50)	50	NULL allowed	
Time	varchar(50)	50	NULL allowed	
Instructor	varchar(50)	50	NULL allowed	
Location	varchar(50)	50	NULL allowed	
Enrolled	varchar(50)	50	NULL allowed	
Limit	varchar(50)	50	NULL allowed	
Mode of Instruction	varchar(50)	50	NULL allowed	

SQL Script

```
CREATE TABLE [Uploadfile].[CurrentSemesterCourseOfferings]
(
[Semester] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL CONSTRAINT [DF_-
CurrentSemesterCourseOfferings_Semester] DEFAULT ('Current Semester'),
[Sec] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Code] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Course (hr, crd)] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Description] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Day] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Time] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Instructor] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Location] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Enrolled] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
```

```
GO
```

Uses

Uploadfile

Used By

[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadRoom]

Views

Objects

Name
Project3.CountPerDepartment
Project3.InPersonClasses
Project3.InstructorsInMultipleDepartments
Utils.uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint

[Project3].[CountPerDepartment]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	5:52:40 AM Sunday, May 9, 2021
Last Modified	5:52:40 AM Sunday, May 9, 2021

Columns

Name	Data Type	Max Length (Bytes)
DepartmentName	[Udt].[DepartmentName]	12
Count	int	4

SQL Script

```
CREATE VIEW  [Project3].[CountPerDepartment]
AS

    -- how many instructors are in each department
    WITH C1 AS(
        SELECT  di.DepartmentId, COUNT(DISTINCT InstructorId) AS [Count]
        FROM [College].[DepartmentInstructorDetails] AS di
        GROUP BY di.DepartmentId
    )
    SELECT d.DepartmentName, [Count]
    FROM C1
        INNER JOIN College.Department AS d
            ON d.DepartmentId = C1.DepartmentId
GO
```

Uses

[College].[Department]
[College].[DepartmentInstructorDetails]
[Udt].[DepartmentName]
Project3

[Project3].[InPersonClasses]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	6:10:43 AM Sunday, May 9, 2021
Last Modified	6:10:43 AM Sunday, May 9, 2021

Columns

Name	Data Type	Max Length (Bytes)
Instructor	varchar(51)	51
CourseName	[Udt].[CourseName]	31
Location	varchar(8)	8
NumberEnrolled	[Udt].[NumStudents]	4
NumLimit	[Udt].[NumStudents]	4

SQL Script

```
CREATE VIEW  [Project3].[InPersonClasses]
AS

-- show all instructors who are teaching classes in multiple departments


    SELECT CONCAT(i.InstructorFirstName,' ',i.InstructorLastName) AS Instructor,
        co.CourseName,
        CONCAT( b.BuildingName, ' ' , r.RoomNumber) AS Location,
        c.NumberEnrolled,
        c.NumLimit
    FROM College.Class AS c
        INNER JOIN College.Room AS r
            ON r.RoomId = c.RoomId
        INNER JOIN College.Course AS co
            ON c.CourseId = co.CourseId
        INNER JOIN [College].[DepartmentInstructorDetails] AS di
            ON di.DepartmentInstructorId = c.DepartmentInstructorId
        INNER JOIN College.Instructor AS i
            ON i.InstructorId = di.InstructorId
        INNER JOIN College.Building AS b
            ON b.BuildingId = r.BuildingId

GO
```

Uses

[College].[Building]
[College].[Class]
[College].[Course]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[College].[Room]
[Udt].[CourseName]
[Udt].[NumStudents]
Project3

[Project3].[InstructorsInMultipleDepartments]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	5:52:09 AM Sunday, May 9, 2021
Last Modified	5:52:09 AM Sunday, May 9, 2021

Columns

Name	Data Type	Max Length (Bytes)
InstructorsInMultipleDepartments	varchar(52)	52

SQL Script

```
-- show all instructors who are teaching classes in multiple departments
CREATE VIEW  [Project3].[InstructorsInMultipleDepartments]
AS

    WITH C1 AS(
        SELECT DISTINCT InstructorId, COUNT(*) AS [Count]
        FROM [College].[DepartmentInstructorDetails]
        GROUP BY InstructorId
    )
    SELECT CONCAT(i.InstructorLastName ,', ' ,i.InstructorFirstName) AS Instructors-
InMultipleDepartments
    FROM C1
        INNER JOIN College.Instructor AS i
            ON i.InstructorId = C1.InstructorId
    WHERE [Count] >1
GO
```

Uses

[College].[DepartmentInstructorDetails]
[College].[Instructor]
Project3

[Utils].[uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
ANSI Nulls On	True
Quoted Identifier On	True
Created	9:19:15 AM Sunday, October 27, 2019
Last Modified	9:19:15 AM Sunday, October 27, 2019

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 ColumnName ,
        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 = 'nvarchar'
```

```
            THEN CONCAT('nvarchar(', 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 CheckConstraintRuleName,
        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_NAME


GO
```

Uses

Utils

Stored Procedures

Objects

Name
Process.usp_ShowWorkflowSteps
Process.usp_TrackWorkFlow
Project3.AddForeignKeys
Project3.DropForeignKeys
Project3.LoadBuilding
Project3.LoadClass
Project3.LoadCourse
Project3.LoadDepartment
Project3.LoadDepartmentInstructorDetails
Project3.LoadInstructor
Project3.LoadModeOfInstruction
Project3.LoadQueensCourseSchedule
Project3.LoadRoom
Project3.ShowTableStatusRowCount
Project3.TruncateCollegeSchema

[Process].[usp_ShowWorkflowSteps]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```
-- =============================================
-- Author:        Sharlene Zar
-- Procedure:    [Process].[usp_ShowWorkflowSteps]
-- Create date: 05/6/21
-- Description:    Selects Process.WorkFlowSteps Table and Computes Exec Time
-- =============================================
CREATE PROCEDURE [Process].[usp_ShowWorkflowSteps]
AS
BEGIN

    -- Selects Process.WorkFlowSteps and exec time per task
    SELECT WorkFlowStepKey,
           WorkFlowStepDescription,
           WorkFlowStepTableRowCount,
           StartingDateTime,
           EndingDateTime,
           ClassTime,
           UserAuthorizationKey,
           DATEDIFF(MILLISECOND, StartingDateTime, EndingDateTime) AS ExecutionTime
    FROM [Process].[WorkFlowSteps];


    -- Gets Total Execution Time
    SELECT DATEDIFF(MILLISECOND, StartingDateTime, EndingDateTime) AS TotalExecution-
Time
    FROM Process.WorkFlowSteps
    WHERE WorkFlowStepDescription LIKE ('%Star%')

    -- Get Execution Time Per Member
    SELECT w.UserAuthorizationKey, db.GroupMemberFirstName,SUM(DATEDIFF(MILLISECOND,
w.StartingDateTime, w.EndingDateTime)) AS ExecutionTimePerMember
    FROM Process.WorkFlowSteps AS w
    INNER JOIN DbSecurity.UserAuthorization AS db
        ON db.UserAuthorizationKey = w.UserAuthorizationKey
    GROUP BY w.UserAuthorizationKey, db.GroupMemberFirstName

END


GO
```

Uses

[DbSecurity].[UserAuthorization]

[Process].[WorkFlowSteps]

Process

Used By

[Project3].[LoadQueensCourseSchedule]

[Process].[usp_TrackWorkFlow]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@WorkFlowStepDescription	WorkFlowStepDescription	200
@WorkFlowStepTableRowCount	WorkFlowStepTAbleRowCount	4
@StartingDateTime	Date_Time	8
@EndingDateTime	Date_Time	8
@UserAuthorizationKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author: Ensar Dogrusoz
-- Procedure: [Process].[usp_TrackWorkFlow]
-- Create date: 05/6/21
-- Description:    Inserts a new row of data in Process.WorkFlowSteps
-- ============================================

CREATE PROCEDURE [Process].[usp_TrackWorkFlow]
    @WorkFlowStepDescription udt.WorkFlowStepDescription,
    @WorkFlowStepTableRowCount udt.WorkFlowStepTAbleRowCount,
    @StartingDateTime udt.Date_Time,
    @EndingDateTime udt.Date_Time,
    @UserAuthorizationKey udt.SurrogateKey
AS
BEGIN
    SET NOCOUNT ON;
    INSERT INTO [Process].[WorkFlowSteps]
    (
        WorkFlowStepKey,
        WorkFlowStepDescription,
        WorkFlowStepTableRowCount,
        StartingDateTime,
        EndingDateTime,
        ClassTime,
        UserAuthorizationKey
    )
    VALUES
    (
    NEXT VALUE FOR [PkSequence].[WorkFlowStepsSequenceObject],
```

```
    @WorkFlowStepDescription,
    @WorkFlowStepTableRowCount,
    @StartingDateTime,
    @EndingDateTime,
    '0915',
    @UserAuthorizationKey);
END;
GO
```

Uses

[Process].[WorkFlowSteps]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepDescription]
[Udt].[WorkFlowStepTAbleRowCount]
Process
[PKSequence].[WorkFlowStepsSequenceObject]

Used By

[Project3].[AddForeignKeys]
[Project3].[DropForeignKeys]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadQueensCourseSchedule]
[Project3].[LoadRoom]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

[Project3].[AddForeignKeys]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- =============================================
-- Author:        Matin Nazamy
-- Procedure: [Project3].[AddForeignKeys]
-- Create date: 05/05/21
-- Description:    Add All Foreign Keys
--
-- =============================================


CREATE PROCEDURE [Project3].[AddForeignKeys]
    -- Add the parameters for the stored procedure here
    @UserKey Udt.SurrogateKey
AS
BEGIN
    -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
    SET NOCOUNT ON;

    DECLARE @WorkFlowStepTableRowCount INT;

    SET @WorkFlowStepTableRowCount = @@ROWCOUNT;

    DECLARE @EndingDateTime DATETIME2 = SYSDATETIME();

    DECLARE @StartingDateTime DATETIME2(7) = SYSDATETIME();


    ALTER TABLE College.Room
    ADD CONSTRAINT FK_Room_Building
        FOREIGN KEY (BuildingId)
        REFERENCES College.Building (BuildingId);

    ALTER TABLE College.Course
    ADD CONSTRAINT FK_Course_Department
```

```
        FOREIGN KEY (DepartmentId)
        REFERENCES College.Department (DepartmentId);

    ALTER TABLE College.Class
    ADD CONSTRAINT FK_Class_Course
        FOREIGN KEY (CourseId)
        REFERENCES College.Course (CourseId);

    ALTER TABLE College.Class
    ADD CONSTRAINT FK_Class_ModeOfInstruction
        FOREIGN KEY (ModeOfInstruction)
        REFERENCES College.ModeOfInstruction (ModeOfInstructionId);

    ALTER TABLE College.Class
    ADD CONSTRAINT FK_Class_DI
        FOREIGN KEY (DepartmentInstructorID)
        REFERENCES College.DepartmentInstructorDetails(DepartmentInstructorID);

    ALTER TABLE College.Class
    ADD CONSTRAINT FK_Class_Room
        FOREIGN KEY (RoomId)
        REFERENCES College.Room (RoomId);


    ALTER TABLE College.DepartmentInstructorDetails
    ADD CONSTRAINT FK_DI_Department
        FOREIGN KEY(DepartmentId)
        REFERENCES College.Department(DepartmentId);

    ALTER TABLE College.DepartmentInstructorDetails
    ADD CONSTRAINT FK_DI_Instructor
        FOREIGN KEY(InstructorId)
        REFERENCES College.Instructor(InstructorId);









    EXEC Process.usp_TrackWorkFlow 'Add Foreign Keys',
                                   @WorkFlowStepTableRowCount,
                                   @StartingDateTime,
                                   @EndingDateTime,
                                   @UserKey;



END;

GO
```

Uses

[Process].[usp_TrackWorkFlow]

[Udt].[SurrogateKey]
Project3

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[DropForeignKeys]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- =============================================
-- Author:        Luis Diaz
-- Procedure:    [Project3].[DropForeignKeys]
-- Create date:    05/06/2021
-- Description:   Drops Foreign Keys If They Exist
--
--
-- =============================================
CREATE PROCEDURE [Project3].[DropForeignKeys]
    -- Add the parameters for the stored procedure here
    @UserKey Udt.SurrogateKey
AS
BEGIN
    -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
    SET NOCOUNT ON;

    DECLARE @WorkFlowStepTableRowCount INT;

    SET @WorkFlowStepTableRowCount = @@ROWCOUNT;

    DECLARE @EndingDateTime DATETIME2 = SYSDATETIME();

    DECLARE @StartingDateTime DATETIME2(7) = SYSDATETIME();



    ALTER TABLE College.Room DROP CONSTRAINT IF EXISTS FK_Room_Building;
    ALTER TABLE College.Course DROP CONSTRAINT IF EXISTS  FK_Course_Department;
    ALTER TABLE College.Class DROP CONSTRAINT IF EXISTS FK_Class_Course;


    ALTER TABLE College.Class DROP CONSTRAINT IF EXISTS  FK_Class_ModeOfInstruction;
```

```
    ALTER TABLE College.Class DROP CONSTRAINT IF EXISTS  FK_Class_DI;


    ALTER TABLE College.Class DROP CONSTRAINT  IF EXISTS FK_Class_Room;

    ALTER TABLE college.DepartmentInstructorDetails DROP CONSTRAINT IF EXISTS  FK_-
DI_Department;
    ALTER TABLE college.DepartmentInstructorDetails DROP CONSTRAINT IF EXISTS  FK_-
DI_Instructor;









    EXEC Process.usp_TrackWorkFlow 'Drop Foreign Keys',
                                   @WorkFlowStepTableRowCount,
                                   @StartingDateTime,
                                   @EndingDateTime,
                                   @UserKey;



END;
GO
```

Uses

[Process].[usp_TrackWorkFlow]
[Udt].[SurrogateKey]
Project3

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadBuilding]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:        Ensar Dogrusoz
-- Procedure: [Project3].[LoadBuilding]
-- Create date: 05/07/21
-- Description:    Load data into College.Building
--
-- @GroupMemberUserAuthorizationKey is the
-- UserAuthorizationKey of the Group Member who completed
-- this stored procedure.
--
-- ============================================


CREATE PROCEDURE [Project3].[LoadBuilding]
    @UserKey udt.SurrogateKey
AS
BEGIN
    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

    WITH C1 AS(
        SELECT
         DISTINCT SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location])) AS
BuildingName, -- BuildingName - BuildingName
        (
        CASE
                --WHEN old.[Mode of Instruction] LIKE ('%Online%') THEN 'Virtual'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%PH' THEN 'PowderMaker Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%IB' THEN 'I Building'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%GC' THEN 'Gertz Center'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%QH' THEN 'Queens Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
```

```
LIKE '%SU' THEN 'Student Union'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%RA' THEN 'Rathaus Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%MU' THEN 'Music Building'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%KY' THEN 'Kiely Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%RZ' THEN 'Razran Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%SB' THEN 'Science Building'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%CH' THEN 'Colwin Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%HH' THEN 'Honors Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%AR' THEN 'Outdoors'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%DY' THEN 'Delany Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%RO' THEN 'Rosenthal Library'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%FG' THEN 'FitzGerald Gym'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%CD' THEN 'Colden Auditorium'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%KG' THEN 'King Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%JH' THEN 'Jefferson Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%RE' THEN 'Remsen Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%KP' THEN 'Klapper Hall'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%GT' THEN 'Goldstein Theatre'
                WHEN SUBSTRING( old.[Location], 0, CHARINDEX(' ', old.[Location]))
LIKE '%GB' THEN 'G Building'
                ELSE 'N/A'
            END
            ) AS FullName
        FROM  [Uploadfile].[CurrentSemesterCourseOfferings] AS old
    )


    INSERT INTO [College].Building
    (
        BuildingId,
        BuildingName,
        BuildingFullName,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )

    SELECT
        NEXT VALUE FOR PKSequence.BuildingObject,
        C1.BuildingName,
        C1.FullName,
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
```

```
    FROM C1


    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    SELECT * FROM College.Building


    EXEC [Process].[usp_TrackWorkFlow] 'Load Building Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;

GO
```

Uses

[College].[Building]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[BuildingObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:        Matin Nazamy
-- Procedure: [Project3].[LoadClass]
-- Create date: 05/06/21
-- Description:    Loads data into College.Class
--
-- ============================================


CREATE PROCEDURE [Project3].[LoadClass]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

WITH
    C1 AS(
        SELECT
              d.DepartmentId,
              c.CourseId AS CourseId,
              --SUBSTRING([Course (hr, crd)], 0, CHARINDEX(' ', [Course (hr, crd)]))
AS DeptName,
              --SUBSTRING([Course (hr, crd)], CHARINDEX(' ',[Course (hr, crd)]),
CHARINDEX(' ',[Course (hr, crd)])-1) AS CourseNumber, -- course number
              --[Course (hr, crd)],
              Sec,
              Code,
              dt.[DepartmentInstructorId],
              --Description,
              b.BuildingId,
              r.RoomId,
              Day,
              Time,
```

```
                SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor])) AS LastName,
                RIGHT([Instructor], LEN([Instructor]) - CHARINDEX(',',[Instructor]))
AS FirstName,
                SUBSTRING(Time, 0, CHARINDEX('M', [Time])+1) AS StartTime,
                SUBSTRING([TIME],CHARINDEX('-',[TIME])+2, CHARINDEX('M',[TIME])+1)  AS
EndTime,
                Enrolled,
                Limit,
                m.ModeOfInstructionId
        FROM [Uploadfile].[CurrentSemesterCourseOfferings]
            INNER JOIN College.Department AS d
                ON d.DepartmentName = SUBSTRING([Course (hr, crd)], 0, CHARINDEX('
', [Course (hr, crd)]))
            INNER JOIN College.Course AS c
                ON    c.DepartmentId = d.DepartmentId
                            AND
                      c.CourseName = Description
                            AND
                      c.CourseNumber = SUBSTRING([Course (hr, crd)], CHARINDEX('
',[Course (hr, crd)]), CHARINDEX(' ',[Course (hr, crd)])-1)
                            AND
                      c.CourseCredits = SUBSTRING([Course (hr, crd)],
CHARINDEX(')',[Course (hr, crd)])-1, 1 )
                            AND
                      C.CourseHours =  SUBSTRING([Course (hr, crd)], CHARINDEX('(',
[Course (hr, crd)]) + 1,  CHARINDEX(',', [Course (hr, crd)]) -  CHARINDEX('(',
[Course (hr, crd)]) -1 )

            LEFT OUTER JOIN College.Instructor AS i
                          ON i.InstructorLastName =
SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor]))
                            AND
                            i.InstructorFirstName = RIGHT([Instructor],
LEN([Instructor]) - CHARINDEX(' ',[Instructor]))

            LEFT OUTER JOIN [College].[DepartmentInstructorDetails] AS dt
                ON dt.instructorId = i.InstructorId
                        AND
                    dt.departmentId = d.DepartmentId

            INNER JOIN College.Building AS b
                ON b.BuildingName = SUBSTRING([Location], 0, CHARINDEX(' ',
[Location]))

            INNER JOIN College.Room AS r
                ON r.BuildingId = b.BuildingId
                    AND
                r.RoomNumber = SUBSTRING([Location],CHARINDEX('
',[Location])+1,CHARINDEX(' ',[Location])+1)

            INNER JOIN College.ModeOfInstruction AS m
                ON m.ModeDescription = [Mode of Instruction]


    )
    INSERT INTO [College].Class
    (
        ClassId, -- auto generate??
        CourseId,
        Section,
```

```
        Code,
        DepartmentInstructorId,
        RoomId,
        DaysOfWeek,
        StartTime,
        EndTime,
        NumberEnrolled,
        NumLimit,
        ModeOfInstruction,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )
    SELECT
        NEXT VALUE FOR PKSequence.ClassObject, -- ClassId - SurrogateKey
        C1.CourseId, -- CourseId - SurrogateKey
        C1.Sec, -- Section - Section
        C1.Code, -- Code - Code
        C1.DepartmentInstructorId, -- InstructorId - SurrogateKey
        C1.RoomId, -- Room - CourseName
        C1.[Day], -- DaysOfWeek - DayOfWeek
        C1.StartTime, -- StartTime - Date_Time
        C1.EndTime, -- EndTime - Date_Time
        C1.Enrolled, -- NumberEnrolled - NumStudents
        C1.Limit, -- NumLimit - NumStudents
        C1.ModeOfInstructionId, -- ModeOfInstruction - SurrogateKey
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
    FROM C1



    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    SELECT * FROM College.Class



    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Load Class Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;

GO
```

Uses

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[ClassObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadCourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- =============================================
-- Author:       Humaira Qadeer
-- Procedure:    [Project3].[LoadCourse]
-- Create date:    05/06/2021
-- Description:   Loads data into College.Course
--
--
-- =============================================


CREATE PROCEDURE [Project3].[LoadCourse]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

    WITH C1 AS(
        SELECT [Course (hr, crd)],
           SUBSTRING([Course (hr, crd)], 0, CHARINDEX(' ', [Course (hr, crd)])) AS
Dept,
           SUBSTRING([Course (hr, crd)], CHARINDEX(' ', [Course (hr, crd)]),
CHARINDEX(' ', [Course (hr, crd)]) - 1) AS Course,
           SUBSTRING([Course (hr, crd)], CHARINDEX('(', [Course (hr, crd)]) + 1,
CHARINDEX(',', [Course (hr, crd)]) -  CHARINDEX('(', [Course (hr, crd)]) -1 ) AS
Hrs,
           SUBSTRING([Course (hr, crd)], CHARINDEX(')', [Course (hr, crd)]) - 1, 1)
AS Credits,
           [Description]
        FROM [Uploadfile].[CurrentSemesterCourseOfferings]
    ),
    C2 AS (
        SELECT DISTINCT Dept, Course, [Description], Hrs, Credits
        FROM C1
    )
```

```
    INSERT INTO [College].Course
    (
        CourseId,
        DepartmentId,
        CourseName,
        CourseNumber,
        CourseCredits,
        CourseHours,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )
    SELECT
        NEXT VALUE FOR PKSequence.CourseObject,    -- NULL, -- CourseId - Surrogate-
Key -- auto generate??
        d.DepartmentId, -- DepartmentId - SurrogateKey
        C2.[Description], -- CourseName - CourseName
        C2.Course, -- COURSE num
        C2.Credits, -- course creds
        C2.Hrs, -- course hours
        1, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
    FROM C2
        INNER JOIN College.Department AS d
            ON d.DepartmentName = C2.Dept


    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    SELECT * FROM College.Course
    ORDER BY CourseId

    EXEC [Process].[usp_TrackWorkFlow] 'Load Course Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;
GO
```

Uses

[College].[Course]
[College].[Department]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]

[Udt].[Date_Time]

[Udt].[SurrogateKey]

[Udt].[WorkFlowStepTAbleRowCount]

Project3

[PKSequence].[CourseObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:      Steven Necola
-- Procedure:    [Project3].[LoadCourse]
-- Create date:    05/06/2021
-- Description:   Loads data into College.Department
--
-- ============================================
CREATE PROCEDURE [Project3].[LoadDepartment]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

    WITH C1 AS
    (
        SELECT DISTINCT SUBSTRING([Course (hr, crd)], 0, CHARINDEX(' ', [Course (hr,
crd)])) AS DepartmentName
        FROM [Uploadfile].[CurrentSemesterCourseOfferings]


    )

    INSERT INTO [College].[Department]
    (
        [DepartmentId],
        [DepartmentName],
        [UserAuthorizationKey],
        [DateAdded],
        [DateOfLastUpdate]
    )
    SELECT
        NEXT VALUE FOR PKSequence.DepartmentObject, -- DepartmentId - SurrogateKey
        C1.DepartmentName,
        @UserKey, -- UserAuthorizationKey - SurrogateKey
```

```
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME() -- DateOfLastUpdate - Date_Time
    FROM C1



    -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
    SET NOCOUNT ON;

    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    SELECT * FROM College.Department


    EXEC [Process].[usp_TrackWorkFlow] 'Load Department Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;
GO
```

Uses

[College].[Department]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[DepartmentObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadDepartmentInstructorDetails]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
-- =============================================
-- Author:      Sharlene Zar
-- Procedure:    [Project3].[LoadDepartmentInstructorDetails]
-- Create date:    05/06/2021
-- Description:   Loads data into College.DepartmentInstructorDetails
--
--
-- =============================================
CREATE PROCEDURE [Project3].[LoadDepartmentInstructorDetails]
    @UserKey int
    AS
BEGIN
    DECLARE @StartTime DATETIME2 = SYSDATETIME();

    WITH C1 AS(

        SELECT
        DISTINCT d.DepartmentId, i.InstructorId

        FROM [Uploadfile].[CurrentSemesterCourseOfferings] AS old
            INNER JOIN College.Department AS d
                ON SUBSTRING([Course (hr, crd)], 0, CHARINDEX(' ', [Course (hr,
crd)])) = d.DepartmentName
            INNER JOIN College.Instructor AS i
                ON i.InstructorFirstName =RIGHT([Instructor], LEN([Instructor]) -
CHARINDEX(' ',[Instructor]))
                        AND
                    i.InstructorLastName =
SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor]))
        WHERE
            LEN(SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor]))) > 0
                AND
        LEN(RIGHT([Instructor], LEN([Instructor]) - CHARINDEX(',',[Instructor])) ) >
0
```

```
    )
    INSERT INTO [College].DepartmentInstructorDetails
    (
        DepartmentInstructorId,
        DepartmentId,
        InstructorId, -- should auto generate??
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )

    SELECT
        NEXT VALUE FOR PKSequence.DepartmentInstructorId, -- InstructorId -
SurrogateKey
        C1.DepartmentId,
        C1.InstructorId,
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
    FROM C1

    SELECT * FROM [College].[DepartmentInstructorDetails]

    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;


    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Load Dept-Instructor Details Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END

GO
```

Uses

[College].[Department]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[DepartmentInstructorId]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:        Luis Dias
-- Procedure: [Project3].[LoadInstructor]
-- Create date: 05/07/21
-- Description:    Load data into College.Instructor
--
--
-- ============================================



CREATE PROCEDURE [Project3].[LoadInstructor]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;


    WITH C1 AS(

        SELECT
        DISTINCT RIGHT([Instructor], LEN([Instructor]) - CHARINDEX('
',[Instructor])) AS [First], -- InstructorFirstName - InstructorFirstName
        SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor])) AS [Last] --
InstructorLastName - InstructorLastName
        FROM [Uploadfile].[CurrentSemesterCourseOfferings] AS old
        WHERE
            LEN(SUBSTRING([Instructor],0,CHARINDEX(',',[Instructor]))) > 0
                AND
        LEN(RIGHT([Instructor], LEN([Instructor]) - CHARINDEX(',',[Instructor])) ) >
0


    )
```

```
    INSERT INTO [College].Instructor
    (
        InstructorId, -- should auto generate??
        InstructorFirstName,
        InstructorLastName,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )

    SELECT
        NEXT VALUE FOR PKSequence.InstructorObject, -- InstructorId - SurrogateKey
        C1.[First],
        C1.[Last],
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
    FROM C1


    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    SELECT * FROM College.Instructor


    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Load Instructor Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;

GO
```

Uses

[College].[Instructor]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[InstructorObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadModeOfInstruction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:        Steven Necola
-- Procedure: [Project3].[LoadModeOfInstruction]
-- Create date: 05/07/21
-- Description:    Load data into College.Instructor
--
--
-- ============================================


CREATE PROCEDURE [Project3].[LoadModeOfInstruction]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

    WITH C1 AS(
        SELECT DISTINCT [Mode of Instruction]
        FROM [Uploadfile].[CurrentSemesterCourseOfferings]
    )
    INSERT INTO [College].ModeOfInstruction
    (
        ModeOfInstructionId,
        ModeDescription,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )

    SELECT
        NEXT VALUE FOR PKSequence.ModeOfInstructionObject, --ModeOfInstructionId
        C1.[Mode of Instruction],--ModeDescription,
```

```
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time
    FROM C1



    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    SELECT * FROM College.ModeOfInstruction

    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Load Mode Of Instruction Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;

GO
```

Uses

[College].[ModeOfInstruction]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[ModeOfInstructionObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[LoadQueensCourseSchedule]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```
-- =============================================
-- Author:      Ensar Dogrusoz
-- Procedure:    [Project3].[LoadQueensCourseSchedule]
-- Create date:    05/06/2021
-- Description: Calls All Stored Procedures to Execute In Order
--
-- =============================================
CREATE PROCEDURE [Project3].[LoadQueensCourseSchedule]
AS
BEGIN
    DECLARE @StartTime DATETIME2 = SYSDATETIME();

    TRUNCATE TABLE Process.WorkFlowSteps;
    ALTER SEQUENCE [PkSequence].[WorkFlowStepsSequenceObject] RESTART WITH 1;
    SET NOCOUNT ON;

    --    Drop All of the foreign keys prior to truncating tables in the star schema
    EXEC  [Project3].[DropForeignKeys] 6 ;

    --    Check row count before truncation
    EXEC [Project3].[ShowTableStatusRowCount] 'Pre-truncate of tables', 3

    --    Always truncate the Star Schema Data
    EXEC  [Project3].[TruncateCollegeSchema] 4;

    --    Check row count after truncation
    EXEC [Project3].[ShowTableStatusRowCount] 'Post-truncate of tables',3
    --
    --    Load the schema
    EXEC  [Project3].[LoadDepartment] 2
    EXEC  [Project3].[LoadCourse] 4
    EXEC  [Project3].[LoadBuilding] 5
    EXEC  [Project3].[LoadRoom] 4
    EXEC  [Project3].[LoadInstructor] 2
    EXEC  [Project3].[LoadDepartmentInstructorDetails] 3
    EXEC  [Project3].[LoadModeOfInstruction] 6
    EXEC  [Project3].[LoadClass] 1

    --    Check row count after adding rows
    EXEC [Project3].[ShowTableStatusRowCount] 'Row Count after loading the star
schema',3
```

```
     --    Recreate all of the foreign keys prior after loading the star schema
    EXEC [Project3].[AddForeignKeys] 1;
    SELECT * FROM College.Building
    DECLARE @RowCount INT;
    SET @Rowcount = @@ROWCOUNT;

    DECLARE @EndTime DATETIME2 = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Create Star Schema!!!',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       5;

    EXEC [Process].[usp_ShowWorkflowSteps];
END;
GO
```

Uses

[College].[Building]
[Process].[WorkFlowSteps]
[Process].[usp_ShowWorkflowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[AddForeignKeys]
[Project3].[DropForeignKeys]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadRoom]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]
Project3

[Project3].[LoadRoom]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserKey	SurrogateKey	4

SQL Script

```
-- ============================================
-- Author:        Humaira Qadeer
-- Procedure: [Project3].[Room]
-- Create date: 05/07/21
-- Description:    Load data into College.Instructor
--
-- ============================================

CREATE PROCEDURE [Project3].[LoadRoom]
    @UserKey udt.SurrogateKey
AS
BEGIN

    DECLARE @StartTime udt.Date_Time = SYSDATETIME();
    SET NOCOUNT ON;

    WITH C1 AS(

    SELECT
        DISTINCT SUBSTRING([Location], 0, CHARINDEX(' ', [Location])) AS Building
        ,SUBSTRING([Location],CHARINDEX(' ',[Location])+1 ,CHARINDEX('
',[Location])+1)  AS Room
    FROM [Uploadfile].[CurrentSemesterCourseOfferings]

    )
    INSERT INTO [College].Room
    (
        RoomId,
        BuildingId,
        RoomNumber,
        UserAuthorizationKey,
        DateAdded,
        DateOfLastUpdate
    )
    SELECT
```

```
        NEXT VALUE FOR PKSequence.RoomObject, -- RoomId
        b.BuildingId, -- BuildingId - SurrogateKey
        C1.Room, -- RoomNumber - RoomNumber
        @UserKey, -- UserAuthorizationKey - SurrogateKey
        SYSDATETIME(), -- DateAdded - Date_Time
        SYSDATETIME()  -- DateOfLastUpdate - Date_Time

    FROM C1
        INNER JOIN College.Building AS b
            ON b.BuildingName = C1.Building

    DECLARE @RowCount udt.WorkFlowStepTAbleRowCount;
    SET @Rowcount = @@ROWCOUNT;

    SELECT * FROM College.Room

    DECLARE @EndTime udt.Date_Time = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Load Course Table',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    /****** Script for SelectTopNRows command from SSMS  ******/
    --PRINT 'insert your statements within the Begin\End block which is the
equivalentof the Java { \ }'

END;

GO
```

Uses

[College].[Building]
[College].[Room]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlow]
[Udt].[Date_Time]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepTAbleRowCount]
Project3
[PKSequence].[RoomObject]

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[ShowTableStatusRowCount]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@TableStatus	varchar(64)	64
@UserKey	int	4

SQL Script

```
-- =============================================================================
COUNTING THE TABLE ROWS
-- Author:         Sharlene Zar
-- Procedure:     [Project3].[ShowTableStatusRowCount]
-- Create date:  05/05/2021
-- Description:  Shows amount of rows in each table
-- =============================================================================
CREATE PROCEDURE [Project3].[ShowTableStatusRowCount]
@TableStatus VARCHAR(64),
@UserKey int
AS
BEGIN
    -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
    SET NOCOUNT ON;

    DECLARE @StartTime AS DATETIME2 = SYSDATETIME();

    select TableStatus = @TableStatus, TableName ='[College].[Department]', COUNT(*)
as NumRows FROM [College].[Department]
    select TableStatus = @TableStatus, TableName ='[College].[Course]', COUNT(*) AS
NumRows FROM [College].[Course]
    select TableStatus = @TableStatus, TableName ='[College].[Instructor]', COUNT(*)
as NumRows FROM [College].[Instructor]
    select TableStatus = @TableStatus, TableName ='[College].[ModeOfInstruction]',
COUNT(*) as NumRows FROM [College].[ModeOfInstruction]
    select TableStatus = @TableStatus, TableName ='[College].[Building]', COUNT(*)
as NumRows FROM [College].[Building]
    select TableStatus = @TableStatus, TableName ='[College].[Room]', COUNT(*) as
NumRows FROM [College].[Room]
    select TableStatus = @TableStatus, TableName ='[College].[Class]', COUNT(*) as
NumRows FROM [College].[Class]


    DECLARE @RowCount int = @@RowCount;
```

```
    DECLARE @EndingDateTime AS DATETIME2 = SYSDATETIME();
    EXEC Process.usp_TrackWorkFlow  @WorkFlowStepDescription = N'Show Table Rows',
-- nvarchar(100)
                                    @WorkFlowStepTableRowCount = @RowCount ,
-- int
                                    @StartingDateTime = @StartTime, -- datetime2(7)
                                    @EndingDateTime = @EndingDateTime ,  --
datetime2(7)
                                    @UserAuthorizationKey = @UserKey;
END;

GO
```

Uses

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]
[Process].[usp_TrackWorkFlow]
Project3

Used By

[Project3].[LoadQueensCourseSchedule]

[Project3].[TruncateCollegeSchema]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
-- =============================================
-- Author: Steven Necola
-- Procedure: [Project3].[TruncateCollegeSchema]
-- Create date: 05/6/21
-- Description:    Clears All Tables and Resets All Sequence Objects
-- =============================================
CREATE PROCEDURE [Project3].[TruncateCollegeSchema]
@UserKey int
AS
BEGIN

    TRUNCATE TABLE Process.WorkFlowSteps;
    ALTER SEQUENCE [PkSequence].[WorkFlowStepsSequenceObject] RESTART WITH 1;
    SET NOCOUNT ON;
    DECLARE @StartTime DATETIME2 = SYSDATETIME();

    --
    --    TRUNCATE TABLES IN THIS ORDER
    ALTER SEQUENCE [PkSequence].ClassObject RESTART WITH 1
    TRUNCATE TABLE College.Class
    ALTER SEQUENCE [PkSequence].ModeOfInstructionObject RESTART WITH 1
    TRUNCATE TABLE College.ModeOfInstruction

    ALTER SEQUENCE [PkSequence].DepartmentInstructorId RESTART WITH 1
    TRUNCATE TABLE [College].[DepartmentInstructorDetails]

    ALTER SEQUENCE [PkSequence].RoomObject RESTART WITH 1
    TRUNCATE TABLE College.Room
    ALTER SEQUENCE [PkSequence].BuildingObject RESTART WITH 1
    TRUNCATE TABLE College.Building
    ALTER SEQUENCE [PkSequence].CourseObject RESTART WITH 1
    TRUNCATE TABLE College.Course
    ALTER SEQUENCE [PkSequence].InstructorObject RESTART WITH 1
    TRUNCATE TABLE College.Instructor
```

```
    ALTER SEQUENCE [PkSequence].DepartmentObject RESTART WITH 1
    TRUNCATE TABLE College.Department


    DECLARE @RowCount INT;
    SET @Rowcount = @@ROWCOUNT;

    DECLARE @EndTime DATETIME2 = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] 'Truncate College Schema',
                                       @RowCount,
                                       @StartTime,
                                       @EndTime,
                                       @UserKey;

    --EXEC [Process].[usp_ShowWorkflowSteps];
END
GO
```

Uses

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]
[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
Project3

Used By

[Project3].[LoadQueensCourseSchedule]

Table-valued Functions

Objects

Name
dbo.DatabaseObjects
dbo.JSONHierarchy

[dbo].[DatabaseObjects]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@ListOfObjectIDs	varchar(max)	max

SQL Script

```
create function [dbo].[DatabaseObjects]
/**
    Summary: >
      lists out the full names, schemas and (where appropriate)
      the owner of the object.
    Author: PhilFactor
    Date: 10/9/2017
    Examples:
       - Select * from dbo.DatabaseObjects('2123154609,960722475,1024722703')
    Returns: >
      A table with the id, name of object and so on.
            **/
(
    @ListOfObjectIDs varchar(max)
)
returns table
--WITH ENCRYPTION|SCHEMABINDING, ..
as
return
(
    select object_id
         , schema_name(schema_id) + '.' + coalesce(object_name(parent_object_id) +
'.', '') + name as name
    from sys.objects as ob
        inner join openjson(N'[' + @ListOfObjectIDs + N']')
            on convert(int, Value) = ob.object_id
);
GO
```

[dbo].[JSONHierarchy]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@JSONData	varchar(max)	max
@Parent_object_ID	int	4
@MaxObject_id	int	4
@type	int	4

SQL Script

```
create function [dbo].[JSONHierarchy]
(
    @JSONData varchar(max)
  , @Parent_object_ID int = null
  , @MaxObject_id int = 0
  , @type int = null
)
returns @ReturnTable table
(
    -- https://www.red-gate.com/simple-talk/blogs/consuming-hierarchical-json-documents-sql-server-using-openjson/?utm_source=simpletalk&utm_medium=pubemail&utm_content=20171010-slota1&utm_term=simpletalkmain
    --
    Element_ID int identity(1, 1) primary key /* internal surrogate primary key gives the order of parsing and the list order */
  , SequenceNo int null                       /* the sequence number in a list */
  , Parent_ID int                             /* if the element has a parent then it is in this column. The document is the ultimate parent, so you can get the structure from recursing from the document */
  , Object_ID int                             /* each list or object has an object id. This ties all elements to a parent. Lists are treated as objects here */
  , Name nvarchar(2000)                       /* the name of the object */
  , StringValue nvarchar(max) not null        /*the string representation of the value of the element. */
  , ValueType varchar(10) not null            /* the declared type of the value represented as a string in StringValue*/
)
as
begin
    --the types of JSON
    declare @null    int = 0
          , @string  int = 1
```

```
          , @int     int = 2
          , @boolean int = 3
          , @array   int = 4
          , @object  int = 5;

    declare @OpenJSONData table
    (
        sequence int identity(1, 1)
      , [key] varchar(200)
      , Value varchar(max)
      , type int
    );

    declare @key       varchar(200)
          , @Value     varchar(max)
          , @Thetype   int
          , @ii        int
          , @iiMax     int
          , @NewObject int
          , @firstchar char(1);

    insert into @OpenJSONData
    (
        [key]
      , Value
      , type
    )
    select [Key]
         , Value
         , Type
    from openjson(@JSONData);
    select @ii    = 1
         , @iiMax = scope_identity();
    select @firstchar
        = --the first character to see if it is an object or an array
        substring(
                    @JSONData
                  , patindex(
                                '%[^' + char(0) + '- ' + char(160) + ']%'
                              , ' ' + @JSONData + '!' collate SQL_Latin1_General_-
CP850_BIN
                            ) - 1
                  , 1
                );
    if @type is null
       and @firstchar in ( '[', '{' )
    begin
        insert into @ReturnTable
        (
            SequenceNo
          , Parent_ID
          , Object_ID
          , Name
          , StringValue
          , ValueType
        )
        select 1
```

```
              , null
              , 1
              , '-'
              , ''
              , case @firstchar
                    when '[' then
                        'array'
                    else
                        'object'
                end;
        select @type             = case @firstchar
                                        when '[' then
                                            @array
                                        else
                                            @object
                                    end
              , @Parent_object_ID = 1
              , @MaxObject_id     = coalesce(@MaxObject_id, 1) + 1;
    end;
    while (@ii <= @iiMax)
    begin
        --OpenJSON renames list items with 0-nn which confuses the consumers of the
table
        select @key     = case
                              when [key] like '[0-9]%' then
                                  null
                              else
                                  [key]
                          end
             , @Value   = Value
             , @Thetype = type
        from @OpenJSONData
        where sequence = @ii;

        if @Thetype in ( @array, @object ) --if we have been returned an array or
object
        begin
            select @MaxObject_id = coalesce(@MaxObject_id, 1) + 1;
            --just in case we have an object or array returned
            insert into @ReturnTable --record the object itself
            (
                SequenceNo
              , Parent_ID
              , Object_ID
              , Name
              , StringValue
              , ValueType
            )
            select @ii
                 , @Parent_object_ID
                 , @MaxObject_id
                 , @key
                 , ''
                 , case @Thetype
                       when @array then
                           'array'
                       else
```

```
                            'object'
                    end;

            insert into @ReturnTable --and return all its children
            (
                SequenceNo
              , Parent_ID
              , Object_ID
              , [Name]
              , StringValue
              , ValueType
            )
            select SequenceNo
                 , Parent_ID
                 , Object_ID
                 , [Name]
                 , StringValue
                 , ValueType
            from dbo.JSONHierarchy(@Value, @MaxObject_id, @MaxObject_id, @type);
            select @MaxObject_id = max(Object_ID) + 1
            from @ReturnTable;
        end;
        else
            insert into @ReturnTable
            (
                SequenceNo
              , Parent_ID
              , Object_ID
              , Name
              , StringValue
              , ValueType
            )
            select @ii
                 , @Parent_object_ID
                 , null
                 , @key
                 , @Value
                 , case @Thetype
                       when @string then
                           'string'
                       when @null then
                           'null'
                       when @int then
                           'int'
                       when @boolean then
                           'boolean'
                       else
                           'int'
                   end;

        select @ii = @ii + 1;
    end;

    return;
end;
GO
```

User-Defined Data Types

Objects

Name
Udt.BuildingFullName
Udt.BuildingName
Udt.BuildingRoom
Udt.ClassTime
Udt.ClockTime
Udt.Code
Udt.CourseName
Udt.CourseNumber
Udt.Credits
Udt.Date_Time
Udt.DateAdded
Udt.DateOfLastUpdate
Udt.DayOfWeek
Udt.DepartmentName
Udt.FirstName
Udt.GroupName
Udt.Hours
Udt.IndividualProject
Udt.InstructorFirstName
Udt.InstructorLastName
Udt.LastName
Udt.ModeDescription
Udt.ModeOfInstructionType
Udt.NumStudents
Udt.RoomNumber
Udt.Section
Udt.SurrogateKey
Udt.WorkFlowStepDescription
Udt.WorkFlowStepKey
Udt.WorkFlowStepTAbleRowCount

[Udt].[BuildingFullName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	20

SQL Script

```
CREATE TYPE [Udt].[BuildingFullName] FROM varchar (20) NULL
GO
```

Uses

Udt

Used By

[College].[Building]

[Udt].[BuildingName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	2

SQL Script

```
CREATE TYPE [Udt].[BuildingName] FROM varchar (2) NULL
GO
```

Uses

Udt

Used By

[College].[Building]

[Udt].[BuildingRoom]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	5

SQL Script

```
CREATE TYPE [Udt].[BuildingRoom] FROM varchar (5) NULL
GO
```

Uses

Udt

[Udt].[ClassTime]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nchar
Length	5

SQL Script

```
CREATE TYPE [Udt].[ClassTime] FROM nchar (5) NOT NULL
GO
```

Uses

Udt

Used By

[DbSecurity].[UserAuthorization]
[Process].[WorkFlowSteps]

[Udt].[ClockTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	time
Length	5

SQL Script

```
CREATE TYPE [Udt].[ClockTime] FROM time NULL
GO
```

Uses

Udt

Used By

[College].[Class]

[Udt].[Code]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[Code] FROM int NOT NULL
GO
```

Uses

Udt

Used By

[College].[Class]

[Udt].[CourseName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	varchar
Length	31

SQL Script

```
CREATE TYPE [Udt].[CourseName] FROM varchar (31) NOT NULL
GO
```

Uses

Udt

Used By

[College].[Course]
[Project3].[InPersonClasses]

[Udt].[CourseNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	5

SQL Script

```
CREATE TYPE [Udt].[CourseNumber] FROM varchar (5) NULL
GO
```

Uses

Udt

Used By

[College].[Course]

[Udt].[Credits]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[Credits] FROM int NULL
GO
```

Uses

Udt

Used By

[College].[Course]

[Udt].[Date_Time]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	datetime
Length	8

SQL Script

```
CREATE TYPE [Udt].[Date_Time] FROM datetime NOT NULL
GO
```

Uses

Udt

Used By

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]
[DbSecurity].[UserAuthorization]
[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadRoom]

[Udt].[DateAdded]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	datetime2
Length	8

SQL Script

```
CREATE TYPE [Udt].[DateAdded] FROM datetime2 NOT NULL
GO
```

Uses

Udt

Used By

[College].[DepartmentInstructorDetails]

[Udt].[DateOfLastUpdate]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	datetime2
Length	8

SQL Script

```
CREATE TYPE [Udt].[DateOfLastUpdate] FROM datetime2 NOT NULL
GO
```

Uses

Udt

Used By

[College].[DepartmentInstructorDetails]

[Udt].[DayOfWeek]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [Udt].[DayOfWeek] FROM varchar (10) NULL
GO
```

Uses

Udt

Used By

[College].[Class]

[Udt].[DepartmentName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	varchar
Length	12

SQL Script

```
CREATE TYPE [Udt].[DepartmentName] FROM varchar (12) NOT NULL
GO
```

Uses

Udt

Used By

[College].[Department]
[Project3].[CountPerDepartment]

[Udt].[FirstName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	25

SQL Script

```
CREATE TYPE [Udt].[FirstName] FROM varchar (25) NULL
GO
```

Uses

Udt

Used By

[DbSecurity].[UserAuthorization]

[Udt].[GroupName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	7

SQL Script

```
CREATE TYPE [Udt].[GroupName] FROM nvarchar (7) NOT NULL
GO
```

Uses

Udt

Used By

[DbSecurity].[UserAuthorization]

[Udt].[Hours]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	float
Length	8

SQL Script

```
CREATE TYPE [Udt].[Hours] FROM float NULL
GO
```

Uses

Udt

Used By

[College].[Course]

[Udt].[IndividualProject]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	9

SQL Script

```
CREATE TYPE [Udt].[IndividualProject] FROM nvarchar (9) NOT NULL
GO
```

Uses

Udt

Used By

[DbSecurity].[UserAuthorization]

[Udt].[InstructorFirstName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	25

SQL Script

```
CREATE TYPE [Udt].[InstructorFirstName] FROM varchar (25) NULL
GO
```

Uses

Udt

Used By

[College].[Instructor]

[Udt].[InstructorLastName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	25

SQL Script

```
CREATE TYPE [Udt].[InstructorLastName] FROM varchar (25) NULL
GO
```

Uses

Udt

Used By

[College].[Instructor]

[Udt].[LastName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	25

SQL Script

```
CREATE TYPE [Udt].[LastName] FROM varchar (25) NULL
GO
```

Uses

Udt

Used By

[DbSecurity].[UserAuthorization]

[Udt].[ModeDescription]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	12

SQL Script

```
CREATE TYPE [Udt].[ModeDescription] FROM varchar (12) NULL
GO
```

Uses

Udt

Used By

[College].[ModeOfInstruction]

[Udt].[ModeOfInstructionType]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	varchar
Length	12

SQL Script

```
CREATE TYPE [Udt].[ModeOfInstructionType] FROM varchar (12) NOT NULL
GO
```

Uses

Udt

[Udt].[NumStudents]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[NumStudents] FROM int NULL
GO
```

Uses

Udt

Used By

[College].[Class]
[Project3].[InPersonClasses]

[Udt].[RoomNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	5

SQL Script

```
CREATE TYPE [Udt].[RoomNumber] FROM varchar (5) NULL
GO
```

Uses

Udt

Used By

[College].[Room]

[Udt].[Section]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	6

SQL Script

```
CREATE TYPE [Udt].[Section] FROM varchar (6) NULL
GO
```

Uses

Udt

Used By

[College].[Class]

[Udt].[SurrogateKey]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[SurrogateKey] FROM int NULL
GO
```

Uses

Udt

Used By

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]
[DbSecurity].[UserAuthorization]
[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[AddForeignKeys]
[Project3].[DropForeignKeys]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadRoom]

[Udt].[WorkFlowStepDescription]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	100

SQL Script

```
CREATE TYPE [Udt].[WorkFlowStepDescription] FROM nvarchar (100) NOT NULL
GO
```

Uses

Udt

Used By

[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]

[Udt].[WorkFlowStepKey]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[WorkFlowStepKey] FROM int NOT NULL
GO
```

Uses

Udt

[Udt].[WorkFlowStepTAbleRowCount]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [Udt].[WorkFlowStepTAbleRowCount] FROM int NOT NULL
GO
```

Uses

Udt

Used By

[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadRoom]

Sequences

Objects

Name
PKSequence.BuildingObject
PKSequence.ClassObject
PKSequence.CourseObject
PKSequence.DepartmentInstructorId
PKSequence.DepartmentObject
PKSequence.InstructorObject
PKSequence.ModeOfInstructionObject
PKSequence.RoomObject
PKSequence.WorkFlowStepsSequenceObject

[PKSequence].[BuildingObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[BuildingObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadBuilding]

[PKSequence].[ClassObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[ClassObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadClass]

[PKSequence].[CourseObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[CourseObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadCourse]

[PKSequence].[DepartmentInstructorId]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[DepartmentInstructorId]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE -9223372036854775808
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadDepartmentInstructorDetails]

[PKSequence].[DepartmentObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[DepartmentObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadDepartment]

[PKSequence].[InstructorObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[InstructorObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadInstructor]

[PKSequence].[ModeOfInstructionObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[ModeOfInstructionObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadModeOfInstruction]

[PKSequence].[RoomObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[RoomObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Project3].[LoadRoom]

[PKSequence].[WorkFlowStepsSequenceObject]

Properties

Property	Value
Owner	PKSequence

SQL Script

```
CREATE SEQUENCE [PKSequence].[WorkFlowStepsSequenceObject]
AS bigint
START WITH 1
INCREMENT BY 1
MINVALUE 1
MAXVALUE 9223372036854775807
NO CYCLE
CACHE
GO
```

Uses

PKSequence

Used By

[Process].[usp_TrackWorkFlow]

Users

Objects

Name
BiStudent
dbo
EC3\thehitman
guest
student

BiStudent

Properties

Property	Value
Type	SqlUser
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
CREATE USER [BiStudent] WITHOUT LOGIN
GO
```

dbo

Properties

Property	Value
Type	SqlUser
Login Name	sa
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
GO
```

EC3\thehitman

Properties

Property	Value
Type	WindowsUser
Login Name	EC3\thehitman
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
IF NOT EXISTS (SELECT * FROM master.dbo.syslogins WHERE loginname =
N'EC3\thehitman')
CREATE LOGIN [EC3\thehitman] FROM WINDOWS
GO
CREATE USER [EC3\thehitman] FOR LOGIN [EC3\thehitman]
GO
```

guest

Properties

Property	Value
Type	SqlUser
Default Schema	guest

SQL Script

```
GO
```

student

Properties

Property	Value
Type	SqlUser
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
CREATE USER [student] WITHOUT LOGIN
GO
```

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

Members

- BiStudent
- student

SQL Script

```
ALTER ROLE [db_datareader] ADD MEMBER [BiStudent]
GO
ALTER ROLE [db_datareader] ADD MEMBER [student]
GO
```

Uses

BiStudent
student

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

Members

- EC3\thehitman

SQL Script

```
ALTER ROLE [db_owner] ADD MEMBER [EC3\thehitman]
GO
```

Uses

EC3\thehitman

db_securityadmin

Properties

Property	Value
Owner	dbo

public

Properties

Property	Value
Owner	dbo

Schemas

Objects

Name
College
DbSecurity
GroupNameProject3
PKSequence
Process
Project3
Udt
Uploadfile
Utils
YourLastName

College

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[College].[Building]
[College].[Class]
[College].[Course]
[College].[Department]
[College].[DepartmentInstructorDetails]
[College].[Instructor]
[College].[ModeOfInstruction]
[College].[Room]

DbSecurity

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[DbSecurity].[UserAuthorization]

GroupNameProject3

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [GroupNameProject3]
AUTHORIZATION [dbo]
GO
```

PKSequence

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[PKSequence].[BuildingObject]
[PKSequence].[ClassObject]
[PKSequence].[CourseObject]
[PKSequence].[DepartmentInstructorId]
[PKSequence].[DepartmentObject]
[PKSequence].[InstructorObject]
[PKSequence].[ModeOfInstructionObject]
[PKSequence].[RoomObject]
[PKSequence].[WorkFlowStepsSequenceObject]

Process

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Process].[WorkFlowSteps]
[Process].[usp_ShowWorkflowSteps]
[Process].[usp_TrackWorkFlow]

Project3

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [Project3]
AUTHORIZATION [dbo]
GO
```

Used By

[Project3].[CountPerDepartment]
[Project3].[InPersonClasses]
[Project3].[InstructorsInMultipleDepartments]
[Project3].[AddForeignKeys]
[Project3].[DropForeignKeys]
[Project3].[LoadBuilding]
[Project3].[LoadClass]
[Project3].[LoadCourse]
[Project3].[LoadDepartment]
[Project3].[LoadDepartmentInstructorDetails]
[Project3].[LoadInstructor]
[Project3].[LoadModeOfInstruction]
[Project3].[LoadQueensCourseSchedule]
[Project3].[LoadRoom]
[Project3].[ShowTableStatusRowCount]
[Project3].[TruncateCollegeSchema]

Udt

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Udt].[BuildingFullName]
[Udt].[BuildingName]
[Udt].[BuildingRoom]
[Udt].[ClassTime]
[Udt].[ClockTime]
[Udt].[Code]
[Udt].[CourseName]
[Udt].[CourseNumber]
[Udt].[Credits]
[Udt].[Date_Time]
[Udt].[DateAdded]
[Udt].[DateOfLastUpdate]
[Udt].[DayOfWeek]
[Udt].[DepartmentName]
[Udt].[FirstName]
[Udt].[GroupName]
[Udt].[Hours]
[Udt].[IndividualProject]
[Udt].[InstructorFirstName]
[Udt].[InstructorLastName]
[Udt].[LastName]
[Udt].[ModeDescription]
[Udt].[ModeOfInstructionType]
[Udt].[NumStudents]
[Udt].[RoomNumber]
[Udt].[Section]
[Udt].[SurrogateKey]
[Udt].[WorkFlowStepDescription]
[Udt].[WorkFlowStepKey]
[Udt].[WorkFlowStepTAbleRowCount]

Uploadfile

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Uploadfile].[CurrentSemesterCourseOfferings]

Utils

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Utils].[uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint]

YourLastName

Properties

Property	Value
Owner	dbo

SQL Script

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