localhost, 13001 Documentation

QueensClassSchedule

Server localhost,13001

Author timos

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■ localhost,13001

Databases (1)

• ■ QueensClassSchedule

Server Properties

Property	Value
Product	Microsoft SQL Server
Version	15.0.4188.2
Language	English
Platform	NT x64
Edition	Developer Edition (64-bit)
Engine Edition	3 (Enterprise)
Processors	8
OS Version	6.2 (9200)
Physical Memory	10079
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

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	lser	data	bases

Databases (1)

• **Q**ueensClassSchedule

■ QueensClassSchedule Database

Database Properties

Property	Value
SQL Server Version	Max
Compatibility Level	SQL Server 2016
Last backup time	05/08/2022
Last log backup time	-
Creation date	May 14 2022
Users	7
Database Encryption Enabled	False
Database Encryption Algorithm	None
Database size	208.00 MB
Unallocated space	60.77 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	False
Supplemental logging enabled	False
Snapshot isolation state	OFF
Read committed snapshot on	False
Recovery model	FULL
Page verify option	CHECKSUM
Auto create statistics	True
Auto update statistics	True
Auto update statistics asynchronously	False
ANSI NULL default	False
ANSI NULL enabled	False
ANSI padding enabled	False

ANSI warnings enabled	False
Arithmetic abort enabled	False
Concatenating NULL yields NULL	False
Numeric roundabort enabled	False
Quoted Identifier On	False
Recursive triggers enabled	False
Close cursors on commit	False
Local cursors by default	False
Fulltext enabled	True
Trustworthy	False
Database chaining	False
Forced parameterization	False
Master key encrypted by server	False
Published	False
Subscribed	False
Merge published	False
Is distribution database	False
Sync with backup	False
Service broker GUID	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	Туре	Size	Maxsize	Autogrowth	File Name
QC2019	Data	72.00 MB	unlimited	64.00 MB	/var/opt/mssql/data/QueensClassSchedule- CurrentSemester.mdf
QC2019_log	Log	136.00 MB	2048.00 GB	64.00 MB	/var/opt/mssql/log/QueensClassSchedule- CurrentSemester_0.ldf

■ Tables

Objects

Name
Class.Class
Class.ClassDay
Class.ClassModeOfInstruction
Class.Course
Class.ModeOfInstruction
DbSecurity.UserAuthorization
Department.Department
Location.BuildingLocation
Location.ClassRoomLocation
Location.RoomLocation
Process.WorkFlowStep
Staff.DepartmentInstructor
Staff.Instructor
Staff.InstructorClass
Temporal.Day
Uploadfile.CleanedCurrentSemesterCourseOfferings
Uploadfile.CurrentSemesterCourseOfferings

■ [Class].[Class]

Properties

Property	Value
Collation SQL_Latin1_General_CP1_CI_AS	
Row Count (~)	4276
Created	5:24:21 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Persis ted	Comp uted	Max Lengt h (Bytes	Nullab ility	ldentit y	Defaul t
PK <mark>P</mark> C	ClassId	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL	1 - 1	
	SemesterOfClass	[sdClass- String].[Semester- String]			32	NOT NULL		
	SectionCode	[sdClass- String].[Encoding- String]			10	NOT NULL		
	ClassCode	[sdClass- String].[Encoding- String]			10	NOT NULL		
FK	CourseName	[sdClass- String].[Course- Name]			28	NOT NULL		
	ClassTime	[sdClass- String].[ClassTime- Interval]			40	NOT NULL		(N'TB D')
	ClassLimit	[sdClass- Numeric].[Class- Statistic]			2	NOT NULL		
	EnrolledInClass	[sdClass- Numeric].[Class- Statistic]			2	NOT NULL		
	ClassOvertally	[sdClass- Numeric].[Class- Statistic]			2	NOT NULL		
	TotalEnrollmentInClass	smallint	True	True	2	NULL allowe d		
FK	UserAuthorizationKey	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL		

DateAdded	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysda tetime())
DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysda tetime())

Computed columns

Name	Column definition
TotalEnrollmentInClass	([EnrolledInClass]+[ClassOvertally])

Indexes

Key	Name	Key Columns	Unique
PK	PK_Class	ClassId	True

Check Constraints

Name	Constraint
CK_Class_EnrollmentCap	([ClassLimit]=(0) OR [ClassLimit]<>(0) AND [ClassLimit]>=[EnrolledIn-Class])
CK_Class_LimitAndEnrollmentValidity	([ClassLimit]>=(0) AND [EnrolledInClass]>=(0) AND [Class-Overtally]>=(0))

Foreign Keys

Name	Columns
FK_Class_Course	CourseName->[Class].[Course].[CourseName]
FK_Class_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorizationKey]

SQL Script

```
CREATE TABLE [Class].[Class]

(
[ClassId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),

[SemesterOfClass] [sdClassString].[SemesterString] NOT NULL,

[SectionCode] [sdClassString].[EncodingString] NOT NULL,

[ClassCode] [sdClassString].[EncodingString] NOT NULL,

[CourseName] [sdClassString].[CourseName] NOT NULL,

[ClassTime] [sdClassString].[ClassTimeInterval] NOT NULL CONSTRAINT [DF_Class_Class-Time] DEFAULT (N'TBD'),

[ClassLimit] [sdClassNumeric].[ClassStatistic] NOT NULL,

[EnrolledInClass] [sdClassNumeric].[ClassStatistic] NOT NULL,

[ClassOvertally] [sdClassNumeric].[ClassStatistic] NOT NULL,

[TotalEnrollmentInClass] AS ([EnrolledInClass]+[ClassOvertally]) PERSISTED,
```

```
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Class -
DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
Class DateOfLastUpdate] DEFAULT (sysdatetime())
ON [PRIMARY]
ALTER TABLE [Class].[Class] ADD CONSTRAINT [CK Class EnrollmentCap] CHECK (([Class-
Limit]=(0) OR [ClassLimit] <> (0) AND [ClassLimit] >= [EnrolledInClass]))
ALTER TABLE [Class].[Class] ADD CONSTRAINT [CK Class LimitAndEnrollmentValidity] CHECK
(([ClassLimit]>=(0) AND [EnrolledInClass]>=(0) AND [ClassOvertally]>=(0)))
ALTER TABLE [Class].[Class] ADD CONSTRAINT [PK Class] PRIMARY KEY CLUSTERED ([Class-
Id]) ON [PRIMARY]
ALTER TABLE [Class].[Class] ADD CONSTRAINT [FK Class Course] FOREIGN KEY ([CourseName])
REFERENCES [Class].[Course] ([CourseName])
ALTER TABLE [Class].[Class] ADD CONSTRAINT [FK Class UserAuthorization] FOREIGN KEY
([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
GO
```

Uses

[Class].[Course]

[DbSecurity].[UserAuthorization]

[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]

[sdClassNumeric].[ClassStatistic]

[sdClassString].[ClassTimeInterval]

[sdClassString].[CourseName]

[sdClassString].[EncodingString]

[sdClassString].[SemesterString]

[sdKeyNumeric].[SurrogateKeyInt]

Class

Used By

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Location].[ClassRoomLocation]

[Staff].[InstructorClass]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp_LoadClass]

[Project3Function].[tvf_CreateClassDay]

[Project3Function].[tvf_CreateClassModeOfInstruction]

[Project3Function].[tvf_CreateClassRoomLocation]

[Project3Function].[tvf_CreateInstructorClass]

■ [Class].[ClassDay]

Properties

Property	Value
Collation SQL_Latin1_General_CP1_CI_AS	
Row Count (~)	5762
Created	6:07:08 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKO FKO	ClassId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
PKO FKO	DayCode	[dString].[AbbreviationString]	10	NOT NULL	
FK	CourseName	[sdClassString].[CourseName]	28	NOT NULL	
F	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK G	PK_ClassDay	ClassId, DayCode	True

Foreign Keys

Name	Columns
FK_ClassDay_Class	ClassId->[Class].[Class].[ClassId]
FK_ClassDay_Course	CourseName->[Class].[Course].[CourseName]
FK_ClassDay_Day	DayCode->[Temporal].[Day].[DayCode]
FK_ClassDay_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorization-Key]

SQL Script

```
CREATE TABLE [Class].[ClassDay]
[ClassId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DayCode] [dString].[AbbreviationString] NOT NULL,
[CourseName] [sdClassString].[CourseName] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF ClassDay -
DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
ClassDay DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
ALTER TABLE [Class].[ClassDay] ADD CONSTRAINT [PK ClassDay] PRIMARY KEY CLUSTERED
([ClassId], [DayCode]) ON [PRIMARY]
ALTER TABLE [Class].[ClassDay] ADD CONSTRAINT [FK ClassDay Class] FOREIGN KEY ([Class-
Id]) REFERENCES [Class].[Class] ([ClassId])
ALTER TABLE [Class].[ClassDay] ADD CONSTRAINT [FK ClassDay Course] FOREIGN KEY ([Course-
Name]) REFERENCES [Class].[Course] ([CourseName])
ALTER TABLE [Class].[ClassDay] ADD CONSTRAINT [FK ClassDay_Day] FOREIGN KEY ([DayCode])
REFERENCES [Temporal].[Day] ([DayCode])
ALTER TABLE [Class].[ClassDay] ADD CONSTRAINT [FK ClassDay UserAuthorization] FOREIGN
KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
GO
```

Uses

[Class].[Class]
[Class].[Course]
[DbSecurity].[UserAuthorization]
[Temporal].[Day]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[AbbreviationString]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
Class

Used By

[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadClassDay]

■ [Class].[ClassModeOfInstruction]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4276
Created	6:06:46 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKO C FKO	ClassId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
PKC FKG	Modeld	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
FK	CourseName	[sdClassString].[CourseName]	28	NOT NULL	
FK	ModeOfInstruction	[sdClassString].[ModeType]	24	NOT NULL	
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK	PK_ClassModeOfInstruction	ClassId, Modeld	True

Foreign Keys

Name	Columns
FK_ClassModeOfInstruction_Class	ClassId->[Class].[ClassId]
FK_ClassModeOfInstruction_Course	CourseName->[Class].[Course].[CourseName]
FK_ClassModeOfInstruction_ModeOfInstruction_1	Modeld->[Class].[ModeOfInstruction].[Modeld]
FK_ClassModeOfInstruction_ModeOfInstruction_2	ModeOfInstruction->[Class].[ModeOfInstruction].[ModeOf-

	Instruction]
FK_ClassModeOfInstruction_UserAuthorization	UserAuthorizationKey->[DbSecurity].[User-Authorization].[UserAuthorizationKey]

SQL Script

```
CREATE TABLE [Class].[ClassModeOfInstruction]
[ClassId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[ModeId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[CourseName] [sdClassString].[CourseName] NOT NULL,
[ModeOfInstruction] [sdClassString].[ModeType] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF ClassMode-
OfInstruction_DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
ClassModeOfInstruction DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [PK ClassModeOfInstruction]
PRIMARY KEY CLUSTERED ([ClassId], [ModeId]) ON [PRIMARY]
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [FK ClassModeOfInstruction -
Class] FOREIGN KEY ([ClassId]) REFERENCES [Class].[Class] ([ClassId])
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [FK ClassModeOfInstruction -
Course] FOREIGN KEY ([CourseName]) REFERENCES [Class].[Course] ([CourseName])
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [FK ClassModeOfInstruction -
ModeOfInstruction 1] FOREIGN KEY ([ModeId]) REFERENCES [Class]. [ModeOfInstruction]
([ModeId])
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [FK ClassModeOfInstruction -
ModeOfInstruction 2] FOREIGN KEY ([ModeOfInstruction]) REFERENCES [Class].[ModeOf-
Instruction] ([ModeOfInstruction])
ALTER TABLE [Class].[ClassModeOfInstruction] ADD CONSTRAINT [FK ClassModeOfInstruction -
UserAuthorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
```

Uses

[Class].[Class]
[Class].[Course]
[Class].[ModeOfInstruction]
[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[sdClassString].[CourseName]
[sdClassString].[ModeType]
[sdKeyNumeric].[SurrogateKeyInt]
Class

Used By

[Project3Procedure].[ShowTableStatusRowCount] [Project3Procedure].[TruncateQueensCollegeScheduleDatabase] [Project3Procedure].[usp_LoadClassModeOfInstruction]

[Class].[Course]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1627
Created	11:18:32 AM Sunday, May 8, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabilit y	Identity	Default
PK <mark>P</mark> G	Courseld	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL	1 - 1	
ı.	CourseName	[sdClassString].[CourseName]	28	NOT NULL		
	CourseDescription	[sdClassString].[Course- DescriptionString]	80	NOT NULL		
	CourseHour	[sdClassNumeric].[Class- StatisticDecimal]	5	NOT NULL		
	CourseCredit	[sdClassNumeric].[Class- StatisticDecimal]	5	NOT NULL		
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Course	Courseld	True
	AK_CourseName	CourseName	True

Check Constraints

Name	On Column	Constraint	
CK_Course_CourseValidity		([CourseHour]>=(0.00) AND [CourseCredit]>=(0.00) AND [Course-	

		Name] like N'[A-Z][- A-Z][- A-Z][- A-Z0-9]%')	
CK_Course_CreditCap	CourseCredit	([CourseCredit]<=(12.00) AND [CourseCredit]>=(0.00))	

Foreign Keys

Name	Columns	
FK_Course_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorizationKey]	

SQL Script

```
CREATE TABLE [Class].[Course]
[CourseId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[CourseName] [sdClassString].[CourseName] NOT NULL,
[CourseDescription] [sdClassString].[CourseDescriptionString] NOT NULL,
[CourseHour] [sdClassNumeric].[ClassStatisticDecimal] NOT NULL,
[CourseCredit] [sdClassNumeric].[ClassStatisticDecimal] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Course -
DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
Course DateOfLastUpdate] DEFAULT (sysdatetime())
ON [PRIMARY]
GO
ALTER TABLE [Class].[Course] ADD CONSTRAINT [CK Course CourseValidity] CHECK (([Course-
\label{eq:hour} \verb|Hour|>=(0.00) AND [CourseCredit]>=(0.00) AND [CourseName] like N'[A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z][-A-Z]
A-Z0-91%'))
GO
ALTER TABLE [Class].[Course] ADD CONSTRAINT [CK Course CreditCap] CHECK (([Course-
Credit] <= (12.00) AND [CourseCredit] >= (0.00)))
ALTER TABLE [Class]. [Course] ADD CONSTRAINT [PK Course] PRIMARY KEY CLUSTERED ([Course-
Id]) ON [PRIMARY]
ALTER TABLE [Class].[Course] ADD CONSTRAINT [AK CourseName] UNIQUE NONCLUSTERED
([CourseName]) ON [PRIMARY]
ALTER TABLE [Class].[Course] ADD CONSTRAINT [FK Course UserAuthorization] FOREIGN KEY
([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
GO
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[sdClassNumeric].[ClassStatisticDecimal]
[sdClassString].[CourseDescriptionString]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]

Class

Used By

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Location].[ClassRoomLocation]

[Staff].[InstructorClass]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp_LoadCourse]

■ [Class].[ModeOfInstruction]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4
Created	5:59:24 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabilit y	Identity	Default
PK	Modeld	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL	1 - 1	
.	ModeOfInstruction	[sdClassString].[ModeType]	24	NOT NULL		
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_ModeOfInstruction	Modeld	True
	AK_ModeOfInstruction	ModeOfInstruction	True

Foreign Keys

Name	Columns
FK_ModeOfInstruction_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-AuthorizationKey]

SQL Script

CREATE TABLE [Class].[ModeOfInstruction]

```
[ModeId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[ModeOfInstruction] [sdClassString].[ModeType] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF_ModeOf-Instruction_DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF_ModeOfInstruction_DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]

GO

ALTER TABLE [Class].[ModeOfInstruction] ADD CONSTRAINT [PK_ModeOfInstruction] PRIMARY
KEY CLUSTERED ([ModeId]) ON [PRIMARY]

GO

ALTER TABLE [Class].[ModeOfInstruction] ADD CONSTRAINT [AK_ModeOfInstruction] UNIQUE NONCLUSTERED ([ModeOfInstruction]) ON [PRIMARY]

GO

ALTER TABLE [Class].[ModeOfInstruction] ADD CONSTRAINT [FK_ModeOfInstruction_User-Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-Authorization] ([UserAuthorizationKey])
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[sdClassString].[ModeType]
[sdKeyNumeric].[SurrogateKeyInt]
Class

Used By

[Class].[ClassModeOfInstruction]
[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadModeOfInstruction]
[Project3Function].[tvf_CreateClassModeOfInstruction]

[DbSecurity].[UserAuthorization]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	5
Created	4:23:41 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabili ty	Identity	Default
PK <mark>P</mark> C	UserAuthorizationKey	[sdKeyNumeric].[Surrogate- KeyInt]	4	NOT NULL	1 - 1	
	GroupMemberLastName	[dString].[PersonName]	100	NOT NULL		
	GroupMemberFirstName	[dString].[PersonName]	100	NOT NULL		
	GroupName	[dString].[AbbreviationString]	10	NOT NULL		(N'G9_5')
	IndividualProject	[dString].[ProjectDescription]	200	NOT NULL		(N'Project 3: Queens College Semester Course Database'
	ClassTime	[dString].[ClassTimeNchar5]	10	NOT NULL		(N'09:15')
	DateAdded	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK G	PK_UserAuthorization	UserAuthorizationKey	True

SQL Script

CREATE TABLE [DbSecurity].[UserAuthorization]

```
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[GroupMemberLastName] [dString].[PersonName] NOT NULL,
[GroupMemberFirstName] [dString].[PersonName] NOT NULL,
[GroupName] [dString].[AbbreviationString] NOT NULL CONSTRAINT [DF_UserAuthorization_-
GroupName] DEFAULT (N'G9_5'),
[IndividualProject] [dString].[ProjectDescription] NOT NULL CONSTRAINT [DF_User-
Authorization_IndividualProject] DEFAULT (N'Project 3: Queens College Semester Course
Database'),
[ClassTime] [dString].[ClassTimeNchar5] NOT NULL CONSTRAINT [DF_UserAuthorization_Class-
Time] DEFAULT (N'09:15'),
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF_User-
Authorization_DateAdded] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [DbSecurity].[UserAuthorization] ADD CONSTRAINT [PK_UserAuthorization]
PRIMARY KEY CLUSTERED ([UserAuthorizationKey]) ON [PRIMARY]
```

Uses

[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]

[dString].[AbbreviationString]

[dString].[ClassTimeNchar5]

[dString].[PersonName]

[dString].[ProjectDescription]

[sdKeyNumeric].[SurrogateKeyInt]

DbSecurity

Used By

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Class].[ModeOfInstruction]

[Department].[Department]

[Location].[BuildingLocation]

[Location].[ClassRoomLocation]

[Location].[RoomLocation]

[Process].[WorkFlowStep]

[Staff].[DepartmentInstructor]

[Staff].[Instructor]

[Staff].[InstructorClass]

[Temporal].[Day]

■ [Department].[Department]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	85
Created	4:37:35 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabilit y	Identity	Default
PK	DepartmentId	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL	1 - 1	
#	DepartmentName	[sdClassString].[Department-Name]	12	NOT NULL		
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Department	DepartmentId	True
	AK_DepartmentName	DepartmentName	True

Foreign Keys

Name	Columns
FK_Department_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorization-Key]

SQL Script

CREATE TABLE [Department].[Department]

```
[DepartmentId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[DepartmentName] [sdClassString].[DepartmentName] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF_-
Department_DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF_-
Department_DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]

GO

ALTER TABLE [Department].[Department] ADD CONSTRAINT [PK_Department] PRIMARY KEY
CLUSTERED ([DepartmentId]) ON [PRIMARY]

GO

ALTER TABLE [Department].[Department] ADD CONSTRAINT [AK_DepartmentName] UNIQUE
NONCLUSTERED ([DepartmentName]) ON [PRIMARY]

GO

ALTER TABLE [Department].[Department] ADD CONSTRAINT [FK_Department_UserAuthorization]
FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-AuthorizationKey])

GO
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[sdClassString].[DepartmentName]
[sdKeyNumeric].[SurrogateKeyInt]
Department

Used By

[Staff].[DepartmentInstructor]
[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadDepartment]
[Project3Function].[tvf_CreateDepartmentInstructor]

■ [Location].[BuildingLocation]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	24
Created	5:35:29 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabilit y	Identity	Default
PK C	BuildingId	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL	1 - 1	
.	BuildingName	[sdLocationString].[Building-Name]	50	NOT NULL		
. 	BuildingAbbreviation	[dString].[AbbreviationString]	10	NOT NULL		
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKey-Int]	4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_BuildingLocation	BuildingId	True
	AK_BuildingAbbreviation	BuildingAbbreviation	True
	AK_BuildingName	BuildingName	True

Foreign Keys

Name	Columns
FK_BuildingLocation_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-AuthorizationKey]

SQL Script

```
CREATE TABLE [Location].[BuildingLocation]
[BuildingId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[BuildingName] [sdLocationString].[BuildingName] NOT NULL,
[BuildingAbbreviation] [dString].[AbbreviationString] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Building-
Location DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
BuildingLocation DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
ALTER TABLE [Location].[BuildingLocation] ADD CONSTRAINT [PK BuildingLocation] PRIMARY
KEY CLUSTERED ([BuildingId]) ON [PRIMARY]
ALTER TABLE [Location].[BuildingLocation] ADD CONSTRAINT [AK BuildingAbbreviation]
UNIQUE NONCLUSTERED ([BuildingAbbreviation]) ON [PRIMARY]
ALTER TABLE [Location].[BuildingLocation] ADD CONSTRAINT [AK BuildingName] UNIQUE
NONCLUSTERED ([BuildingName]) ON [PRIMARY]
ALTER TABLE [Location].[BuildingLocation] ADD CONSTRAINT [FK BuildingLocation User-
Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[AbbreviationString]
[sdKeyNumeric].[SurrogateKeyInt]
[sdLocationString].[BuildingName]
Location

Used By

[Location].[ClassRoomLocation]
[Location].[RoomLocation]
[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadBuildingLocation]

■ [Location].[ClassRoomLocation]

Properties

Property	Value
Collation SQL_Latin1_General_CP1_CI_AS	
Row Count (~)	4309
Created	6:11:43 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKC FKD	ClassId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
PKC FKG	Roomld	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
FK	CourseName	[sdClassString].[CourseName]	28	NOT NULL	
FK	Building	[dString].[AbbreviationString]	10	NOT NULL	
FK	Room	[sdLocationString].[RoomString]	18	NOT NULL	
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK	PK_ClassRoomLocation	ClassId, RoomId	True

Foreign Keys

Name	Columns
FK_ClassRoomLocation_BuildingLocation	Building->[Location].[BuildingLocation].[BuildingAbbreviation]
FK_ClassRoomLocation_Class	ClassId->[Class].[ClassId]

FK_ClassRoomLocation_Course	CourseName->[Class].[Course].[CourseName]
FK_ClassRoomLocation_RoomLocation_1	RoomId->[Location].[RoomLocation].[RoomId]
FK_ClassRoomLocation_RoomLocation_2	Room->[Location].[RoomLocation].[Room]
FK_ClassRoomLocation_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-AuthorizationKey]

SQL Script

```
CREATE TABLE [Location].[ClassRoomLocation]
[ClassId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[RoomId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[CourseName] [sdClassString].[CourseName] NOT NULL,
[Building] [dString].[AbbreviationString] NOT NULL,
[Room] [sdLocationString].[RoomString] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF ClassRoom-
Location DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
ClassRoomLocation DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [PK ClassRoomLocation]
PRIMARY KEY CLUSTERED ([ClassId], [RoomId]) ON [PRIMARY]
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation -
BuildingLocation] FOREIGN KEY ([Building]) REFERENCES [Location].[BuildingLocation]
([BuildingAbbreviation])
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation Class]
FOREIGN KEY ([ClassId]) REFERENCES [Class].[Class] ([ClassId])
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation Course]
FOREIGN KEY ([CourseName]) REFERENCES [Class].[Course] ([CourseName])
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation Room-
Location 1] FOREIGN KEY ([RoomId]) REFERENCES [Location].[RoomLocation] ([RoomId])
ALTER TABLE [Location].[ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation Room-
Location 2] FOREIGN KEY ([Room]) REFERENCES [Location]. [RoomLocation] ([Room])
ALTER TABLE [Location]. [ClassRoomLocation] ADD CONSTRAINT [FK ClassRoomLocation User-
Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
```

Uses

[Class].[Class]
[Class].[Course]
[DbSecurity].[UserAuthorization]
[Location].[BuildingLocation]

[Location].[RoomLocation]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[AbbreviationString]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
[sdLocationString].[RoomString]
Location

Used By

[Project3Procedure].[ShowTableStatusRowCount] [Project3Procedure].[TruncateQueensCollegeScheduleDatabase] [Project3Procedure].[usp_LoadClassRoomLocation]

■ [Location].[RoomLocation]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	319
Created	8:58:46 AM Sunday, May 8, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Persis ted	Comp uted	Max Lengt h (Bytes	Nullab ility	ldentit y	Defaul t
₽ <mark>%</mark> C	Roomld	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL	1 - 1	
F	BuildingOfRoom	nvarchar(5)	True	True	10	NULL allowe d		
#	Room	[sdLocation- String].[RoomString]			18	NOT NULL		
F	UserAuthorizationKey	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]			8	NOT NULL		(sysda tetime())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]			8	NOT NULL		(sysda tetime())

Computed columns

Name	Column definition
BuildingOfRoom	(CONVERT([nvarchar](5),case when [Room]=N'TBD' then N'TBD' else left([Room],(2)) end,(0)))

Indexes

Key	Name	Key Columns	Unique
PK C	PK_RoomLocation	Roomld	True
	AK_Room	Room	True

Foreign Keys

Name	Columns
FK_RoomLocation_BuildingLocation	BuildingOfRoom->[Location].[BuildingLocation].[BuildingAbbreviation]
FK_RoomLocation_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-AuthorizationKey]

SQL Script

```
CREATE TABLE [Location].[RoomLocation]
[RoomId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[BuildingOfRoom] AS (CONVERT([nvarchar](5), case when [Room]=N'TBD' then N'TBD' else
left([Room],(2)) end,(0))) PERSISTED,
[Room] [sdLocationString].[RoomString] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Room-
Location DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
RoomLocation DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Location]. [RoomLocation] ADD CONSTRAINT [PK RoomLocation] PRIMARY KEY
CLUSTERED ([RoomId]) ON [PRIMARY]
ALTER TABLE [Location].[RoomLocation] ADD CONSTRAINT [AK Room] UNIQUE NONCLUSTERED
([Room]) ON [PRIMARY]
ALTER TABLE [Location]. [RoomLocation] ADD CONSTRAINT [FK RoomLocation BuildingLocation]
FOREIGN KEY ([BuildingOfRoom]) REFERENCES [Location].[BuildingLocation] ([Building-
Abbreviation])
ALTER TABLE [Location]. [RoomLocation] ADD CONSTRAINT [FK RoomLocation User-
Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
```

Uses

[DbSecurity].[UserAuthorization]
[Location].[BuildingLocation]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[sdKeyNumeric].[SurrogateKeyInt]
[sdLocationString].[RoomString]
Location

Used By

[Location].[ClassRoomLocation] [Project3Procedure].[ShowTableStatusRowCount] [Project3Procedure].[TruncateQueensCollegeScheduleDatabase] [Project3Procedure].[usp_LoadRoomLocation] [Project3Function].[tvf_CreateClassRoomLocation]

■ [Process].[WorkFlowStep]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	20
Created	4:31:41 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullabil ity	Identity	Default
PK	WorkFlowStepKey	[sdKeyNumeric].[Surrogate- KeyInt]	4	NOT NULL	1 - 1	
	WorkFlowStepDescription	[dString].[WorkFlow- Description]	1000	NOT NULL		
	WorkFlowStepTableRowCount	[dNumeric].[RowCount]	4	NOT NULL		((0))
	StartingDateTime	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdat etime())
	EndingDateTime	[dDateTime].[Date- YYYYMMDD-HH:MM:SS- 7Prec]	8	NOT NULL		(sysdat etime())
	ClassTime	[dString].[ClassTime- Nchar5]	10	NOT NULL		(N'09:1 5')
FK	UserAuthorizationKey	[sdKeyNumeric].[Surrogate- KeyInt]	4	NOT NULL		

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_WorkFlowStep	WorkFlowStepKey	True

Check Constraints

Name	On Column	Constraint
CK_WorkFlowStep_RowCountValidity	WorkFlowStepTableRowCount	([WorkFlowStepTableRow-Count]>=(0))

Foreign Keys

Name	Columns
FK_WorkFlowStep_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-AuthorizationKey]

SQL Script

```
CREATE TABLE [Process].[WorkFlowStep]
[WorkFlowStepKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[WorkFlowStepDescription] [dString].[WorkFlowDescription] NOT NULL,
[WorkFlowStepTableRowCount] [dNumeric].[RowCount] NOT NULL CONSTRAINT [DF WorkFlowStep -
WorkFlowStepTableRowCount] DEFAULT ((0)),
[StartingDateTime] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
WorkFlowStep StartingDateTime] DEFAULT (sysdatetime()),
[EndingDateTime] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Work-
FlowStep_EndingDateTime] DEFAULT (sysdatetime()),
[ClassTime] [dString].[ClassTimeNchar5] NOT NULL CONSTRAINT [DF WorkFlowStep ClassTime]
DEFAULT (N'09:15'),
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL
) ON [PRIMARY]
ALTER TABLE [Process]. [WorkFlowStep] ADD CONSTRAINT [CK WorkFlowStep RowCountValidity]
CHECK (([WorkFlowStepTableRowCount]>=(0)))
ALTER TABLE [Process].[WorkFlowStep] ADD CONSTRAINT [PK WorkFlowStep] PRIMARY KEY
CLUSTERED ([WorkFlowStepKey]) ON [PRIMARY]
ALTER TABLE [Process].[WorkFlowStep] ADD CONSTRAINT [FK WorkFlowStep UserAuthorization]
FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
GO
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dNumeric].[RowCount]
[dString].[ClassTimeNchar5]
[dString].[WorkFlowDescription]
[sdKeyNumeric].[SurrogateKeyInt]
Process

Used By

[Process].[usp_ShowWorkflowStep] [Process].[usp_TrackWorkFlows]

■ [Staff].[DepartmentInstructor]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1755
Created	6:16:19 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKC FKD	DepartmentId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
PKC FKD	InstructorId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
FK	Department	[sdClassString].[DepartmentName]	12	NOT NULL	
	InstructorFullName	[dString].[PersonName]	100	NOT NULL	
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_DepartmentInstructor	DepartmentId, InstructorId	True

Foreign Keys

Name	Columns
FK_DepartmentInstructor_Department_1	DepartmentId->[Department].[Department].[DepartmentId]
FK_DepartmentInstructor_Department_2	Department->[Department].[Department].[DepartmentName]
FK_DepartmentInstructor_Instructor	InstructorId->[Staff].[Instructor].[InstructorId]
FK_DepartmentInstructor_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-

AuthorizationKey]

SQL Script

```
CREATE TABLE [Staff].[DepartmentInstructor]
[DepartmentId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[InstructorId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[Department] [sdClassString].[DepartmentName] NOT NULL,
[InstructorFullName] [dString].[PersonName] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
DepartmentInstructor DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
DepartmentInstructor DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Staff].[DepartmentInstructor] ADD CONSTRAINT [PK DepartmentInstructor]
PRIMARY KEY CLUSTERED ([DepartmentId], [InstructorId]) ON [PRIMARY]
ALTER TABLE [Staff].[DepartmentInstructor] ADD CONSTRAINT [FK DepartmentInstructor -
Department 1] FOREIGN KEY ([DepartmentId]) REFERENCES [Department].[Department]
([DepartmentId])
ALTER TABLE [Staff].[DepartmentInstructor] ADD CONSTRAINT [FK DepartmentInstructor -
Department 2] FOREIGN KEY ([Department]) REFERENCES [Department].[Department]
([DepartmentName])
ALTER TABLE [Staff].[DepartmentInstructor] ADD CONSTRAINT [FK DepartmentInstructor -
Instructor] FOREIGN KEY ([InstructorId]) REFERENCES [Staff].[Instructor] ([Instructor-
Id1)
ALTER TABLE [Staff].[DepartmentInstructor] ADD CONSTRAINT [FK DepartmentInstructor User-
Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
GO
```

Uses

[DbSecurity].[UserAuthorization]
[Department].[Department]
[Staff].[Instructor]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[PersonName]
[sdClassString].[DepartmentName]
[sdKeyNumeric].[SurrogateKeyInt]
Staff

Used Bv

[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadDepartmentInstructor]

☐ [Staff].[Instructor]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1597
Created	6:27:19 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Persis ted	Comp uted	Max Lengt h (Bytes	Nullab ility	Identit y	Defaul t
₽ <mark>%</mark> G	InstructorId	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL	1 - 1	
	InstructorLastName	[dString].[Person- Name]			100	NOT NULL		
	InstructorFirstName	[dString].[Person- Name]			100	NOT NULL		
	InstructorFullName	nvarchar(102)	True	True	204	NOT NULL		
F	UserAuthorizationKey	[sdKey- Numeric].[Surrogate- KeyInt]			4	NOT NULL		
	DateAdded	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]			8	NOT NULL		(sysda tetime())
	DateOfLastUpdate	[dDateTime].[Date- YYYYMMDD- HH:MM:SS-7Prec]			8	NOT NULL		(sysda tetime())

Computed columns

Name	Column definition
InstructorFullName	(case when [InstructorLastName]=N'TBD' OR [InstructorFirstName]=N'TBD' then N'TBD' else concat([InstructorLastName],', ',[InstructorFirstName]) end)

Indexes

Key	Name	Key Columns	Unique
110	Namo	itey columnis	Omque



Foreign Keys

Name	Columns
FK_Instructor_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorization-Key]

SQL Script

```
CREATE TABLE [Staff].[Instructor]
[InstructorId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[InstructorLastName] [dString].[PersonName] NOT NULL,
[InstructorFirstName] [dString].[PersonName] NOT NULL,
[InstructorFullName] AS (case when [InstructorLastName]=N'TBD' OR [InstructorFirst-
Name] = N'TBD' then N'TBD' else concat([InstructorLastName],', ', [InstructorFirstName])
end) PERSISTED NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
Instructor DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
Instructor DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Staff].[Instructor] ADD CONSTRAINT [PK Instructor] PRIMARY KEY CLUSTERED
([InstructorId]) ON [PRIMARY]
ALTER TABLE [Staff].[Instructor] ADD CONSTRAINT [FK Instructor UserAuthorization]
FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
GO
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[PersonName]
[sdKeyNumeric].[SurrogateKeyInt]
Staff

Used By

[Staff].[DepartmentInstructor]

[Staff].[InstructorClass]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp_LoadInstructor]

[Project3Function].[tvf_CreateDepartmentInstructor]

[Project3Function].[tvf_CreateInstructorClass]

■ [Staff].[InstructorClass]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4475
Created	6:20:16 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PKC FKD	InstructorId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
PKC FKD	ClassId	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	InstructorFullName	[dString].[PersonName]	100	NOT NULL	
F	CourseName	[sdClassString].[CourseName]	28	NOT NULL	
FK	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PK	PK_InstructorClass	InstructorId, ClassId	True

Foreign Keys

Name	Columns
FK_InstructorClass_Class	ClassId->[Class].[ClassId]
FK_InstructorClass_Course	CourseName->[Class].[Course].[CourseName]
FK_InstructorClass_Instructor	InstructorId->[Staff].[Instructor].[InstructorId]
FK_InstructorClass_UserAuthorization	UserAuthorizationKey->[DbSecurity].[UserAuthorization].[User-

AuthorizationKey]

SQL Script

```
CREATE TABLE [Staff].[InstructorClass]
[InstructorId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[ClassId] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[InstructorFullName] [dString].[PersonName] NOT NULL,
[CourseName] [sdClassString].[CourseName] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
InstructorClass DateAdded] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
InstructorClass DateOfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Staff].[InstructorClass] ADD CONSTRAINT [PK_InstructorClass] PRIMARY KEY
CLUSTERED ([InstructorId], [ClassId]) ON [PRIMARY]
ALTER TABLE [Staff].[InstructorClass] ADD CONSTRAINT [FK InstructorClass Class] FOREIGN
KEY ([ClassId]) REFERENCES [Class].[Class] ([ClassId])
ALTER TABLE [Staff].[InstructorClass] ADD CONSTRAINT [FK InstructorClass Course]
FOREIGN KEY ([CourseName]) REFERENCES [Class].[Course] ([CourseName])
ALTER TABLE [Staff].[InstructorClass] ADD CONSTRAINT [FK InstructorClass Instructor]
FOREIGN KEY ([InstructorId]) REFERENCES [Staff].[Instructor] ([InstructorId])
ALTER TABLE [Staff].[InstructorClass] ADD CONSTRAINT [FK InstructorClass User-
Authorization] FOREIGN KEY ([UserAuthorizationKey]) REFERENCES [DbSecurity].[User-
Authorization] ([UserAuthorizationKey])
```

Uses

[Class].[Class]
[Class].[Course]
[DbSecurity].[UserAuthorization]
[Staff].[Instructor]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[PersonName]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
Staff

Used By

[Project3Procedure].[ShowTableStatusRowCount]
[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]
[Project3Procedure].[usp_LoadInstructorClass]

■ [Temporal].[Day]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	8
Created	5:53:07 AM Friday, May 6, 2022
Last Modified	9:19:52 PM Saturday, May 14, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
P/C	DayCode	[dString].[AbbreviationString]	10	NOT NULL	
. 	DayName	[dString].[DayName]	32	NOT NULL	
F	UserAuthorizationKey	[sdKeyNumeric].[SurrogateKeyInt]	4	NOT NULL	
	DateAdded	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())
	DateOfLastUpdate	[dDateTime].[DateYYYYMMDD- HH:MM:SS-7Prec]	8	NOT NULL	(sysdateti me())

Indexes

Key	Name	Key Columns	Unique
PKP C	PK_Day	DayCode	True
	AK_DayName	DayName	True

Check Constraints

Name	On Column	Constraint
CK_Day_DayValidity	DayCode	([DayCode]=N'TBD' OR [DayCode]=N'SU' OR [DayCode]=N'S' OR [DayCode]=N'F' OR [DayCode]=N'TH' OR [DayCode]=N'W' OR [DayCode]=N'T' OR [DayCode]=N'M')

Foreign Keys

Name Columns	
--------------	--

FK Day UserAuthorization

UserAuthorizationKey->[DbSecurity].[UserAuthorization].[UserAuthorizationKey]

SQL Script

```
CREATE TABLE [Temporal].[Day]
[DayCode] [dString].[AbbreviationString] NOT NULL,
[DayName] [dString].[DayName] NOT NULL,
[UserAuthorizationKey] [sdKeyNumeric].[SurrogateKeyInt] NOT NULL,
[DateAdded] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF Day Date-
Added] DEFAULT (sysdatetime()),
[DateOfLastUpdate] [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] NOT NULL CONSTRAINT [DF -
Day DateOfLastUpdate] DEFAULT (sysdatetime())
ON [PRIMARY]
GO
ALTER TABLE [Temporal].[Day] ADD CONSTRAINT [CK Day DayValidity] CHECK (([Day-
Code]=N'TBD' OR [DayCode]=N'SU' OR [DayCode]=N'S' OR [DayCode]=N'F' OR [DayCode]=N'TH' OR [DayCode]=N'W' OR [DayCode]=N'T' OR [DayCode]=N'M'))
ALTER TABLE [Temporal].[Day] ADD CONSTRAINT [PK Day] PRIMARY KEY CLUSTERED ([DayCode])
ON [PRIMARY]
ALTER TABLE [Temporal].[Day] ADD CONSTRAINT [AK DayName] UNIQUE NONCLUSTERED ([Day-
Name]) ON [PRIMARY]
ALTER TABLE [Temporal].[Day] ADD CONSTRAINT [FK Day UserAuthorization] FOREIGN KEY
([UserAuthorizationKey]) REFERENCES [DbSecurity].[UserAuthorization] ([User-
AuthorizationKey])
```

Uses

[DbSecurity].[UserAuthorization]
[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]
[dString].[AbbreviationString]
[dString].[DayName]
[sdKeyNumeric].[SurrogateKeyInt]
Temporal

Used By

[Class].[ClassDay]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp_LoadDay]

[Uploadfile].[CleanedCurrentSemesterCourseOfferings]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Неар	True
Row Count (~)	5958
Created	9:19:51 PM Saturday, May 14, 2022
Last Modified	9:19:51 PM Saturday, May 14, 2022

Columns

Name	Data Type	Max Length (Bytes)	Nullability
Semester	varchar(50)	50	NULL allowed
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
Overtally	int	4	NULL allowed

```
CREATE TABLE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]

(
[Semester] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,

[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,
```

Project > localhost,13001 > User databases > QueensClassSchedule > Tables > Uploadfile.CleanedCurrent-SemesterCourseOfferings

```
[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,
[Overtally] [int] NULL
) ON [PRIMARY]
GO
```

Uses

Uploadfile

Used By

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[usp_CleanFileUpload]

[Project3Function].[tvf_CreateBuildingLocation]

[Project3Function].[tvf_CreateClass]

[Project3Function].[tvf_CreateClassDay]

[Project3Function].[tvf_CreateClassModeOfInstruction]

[Project3Function].[tvf_CreateClassRoomLocation]

[Project3Function].[tvf_CreateCourse]

[Project3Function].[tvf CreateDay]

[Project3Function].[tvf_CreateDepartment]

[Project3Function].[tvf_CreateDepartmentInstructor]

[Project3Function].[tvf CreateInstructor]

[Project3Function].[tvf_CreateInstructorClass]

[Project3Function].[tvf_CreateModeOfInstruction]

[Project3Function].[tvf_CreateRoomLocation]

[Uploadfile].[CurrentSemesterCourseOfferings]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Неар	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	

```
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,

[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,
```

Project > localhost,13001 > User databases > QueensClassSchedule > Tables > Uploadfile.CurrentSemester-CourseOfferings

```
[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

 $[Project 3 Procedure]. [usp_Clean File Upload] \\$

Views

Objects

Name

 $Utils.uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint$

[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

```
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
       ( SELECT TABLE_CATALOG ,
FROM
                   TABLE SCHEMA ,
                   TABLE NAME ,
                  TABLE TYPE
                  INFORMATION SCHEMA. TABLES
         FROM
         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
                                   INFORMATION SCHEMA.CONSTRAINT COLUMN USAGE
                         FROM
                                   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_ShowWorkflowStep
Process.usp_TrackWorkFlows
Project3Procedure.LoadQueensCollegeScheduleDatabase
Project3Procedure.ShowTableStatusRowCount
Project3Procedure.TruncateQueensCollegeScheduleDatabase
Project3Procedure.usp_AddForeignKeysToQueensClassScheduleDatabase
Project3Procedure.usp_CleanFileUpload
Project3Procedure.usp_DropForeignKeysFromQueensClassScheduleDatabase
Project3Procedure.usp_LoadBuildingLocation
Project3Procedure.usp_LoadClass
Project3Procedure.usp_LoadClassDay
Project3Procedure.usp_LoadClassModeOfInstruction
Project3Procedure.usp_LoadClassRoomLocation
Project3Procedure.usp_LoadCourse
Project3Procedure.usp_LoadDay
Project3Procedure.usp_LoadDepartment
Project3Procedure.usp_LoadDepartmentInstructor
Project3Procedure.usp_LoadInstructor
Project3Procedure.usp_LoadInstructorClass
Project3Procedure.usp_LoadModeOfInstruction
Project3Procedure.usp_LoadRoomLocation

[Process].[usp_ShowWorkflowStep]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Outputs all information from [Process].[WorkFlowStep]
-- -----
CREATE PROCEDURE [Process].[usp_ShowWorkflowStep]
AS
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   SELECT [WFS].[WorkFlowStepKey],
          [WFS].[WorkFlowStepDescription],
          [WFS].[WorkFlowStepTableRowCount],
          [WFS].[StartingDateTime],
          [WFS].[EndingDateTime],
          [WFS].[ClassTime],
          [WFS].[UserAuthorizationKey]
   FROM [Process].[WorkFlowStep] AS [WFS];
END;
```

Uses

[Process].[WorkFlowStep]

Process

[Process].[usp_TrackWorkFlows]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@UserAuthorizationKey	int	4
@WorkFlowDescription	nvarchar(500)	1000
@WorkFlowStepTableRowCount	int	4
@StartTime	datetime2	8
@EndTime	datetime2	8

```
-- -----
-- Author: Timothy Dakis
-- Create date: 2022-05-06
-- Description: Inputs information into [Process].[WorkFlowStep]
CREATE PROCEDURE [Process].[usp TrackWorkFlows]
   -- Add the parameters for the stored procedure here
   @UserAuthorizationKey INT,
   @WorkFlowDescription NVARCHAR (500),
   @WorkFlowStepTableRowCount INT,
   @StartTime DATETIME2,
   @EndTime DATETIME2
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   -- Insert statements for procedure here
   INSERT INTO [Process].[WorkFlowStep]
       [WorkFlowStepDescription],
       [WorkFlowStepTableRowCount],
       [StartingDateTime],
       [EndingDateTime],
```

```
[UserAuthorizationKey]
)
VALUES
(@WorkFlowDescription, @WorkFlowStepTableRowCount, @StartTime, @EndTime, @User-AuthorizationKey);
END;
GO
```

Uses

[Process].[WorkFlowStep]

Process

Used By

[Project3Procedure].[LoadQueensCollegeScheduleDatabase]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp AddForeignKeysToQueensClassScheduleDatabase]

[Project3Procedure].[usp_CleanFileUpload]

[Project3Procedure].[usp_DropForeignKeysFromQueensClassScheduleDatabase]

[Project3Procedure].[usp LoadBuildingLocation]

[Project3Procedure].[usp LoadClass]

[Project3Procedure].[usp LoadClassDay]

[Project3Procedure].[usp_LoadClassModeOfInstruction]

[Project3Procedure].[usp_LoadClassRoomLocation]

[Project3Procedure].[usp_LoadCourse]

[Project3Procedure].[usp_LoadDay]

[Project3Procedure].[usp_LoadDepartment]

 $[Project 3 Procedure]. [usp_Load Department Instructor] \\$

[Project3Procedure].[usp_LoadInstructor]

[Project3Procedure].[usp LoadInstructorClass]

[Project3Procedure].[usp_LoadModeOfInstruction]

 $[Project 3 Procedure]. [usp_Load RoomLocation] \\$

[Project3Procedure].[LoadQueensCollegeScheduleDatabase]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-08
-- Description: Loads all data into the QueensCollegeSchedule Database
CREATE PROCEDURE [Project3Procedure].[LoadQueensCollegeScheduleDatabase] @User-
AuthorizationKey INT
-- Add the parameters for the stored procedure here
AS
BEGIN
  SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
        Drop All of the foreign keys prior to truncating tables in the queens college
schedule database
   EXEC [Project3Procedure].[usp DropForeignKeysFromQueensClassScheduleDatabase] @User-
AuthorizationKey = 1;
        Check row count before truncation
   EXEC [Project3Procedure].[ShowTableStatusRowCount] @TableStatus = N'''Pre-truncate
of tables''',
                                                      @UserAuthorizationKey = 1;
         Always truncate the QueensCollegeScheduleDatabase
   EXEC [Project3Procedure].[TruncateQueensCollegeScheduleDatabase] @UserAuthorization-
Key = 1;
        create the cleaned flat table
```

```
EXEC [Project3Procedure].[usp CleanFileUpload] @UserAuthorizationKey = 1;
         Load the queens college schedule database
   EXEC [Project3Procedure].[usp LoadDepartment] @UserAuthorizationKey = 4;
   EXEC [Project3Procedure].[usp LoadCourse] @UserAuthorizationKey = 4;
   EXEC [Project3Procedure].[usp LoadClass] @UserAuthorizationKey = 1;
   EXEC [Project3Procedure].[usp_LoadInstructor] @UserAuthorizationKey = 5;
   EXEC [Project3Procedure].[usp LoadModeOfInstruction] @UserAuthorizationKey = 3;
   EXEC [Project3Procedure].[usp LoadDay] @UserAuthorizationKey = 5;
   EXEC [Project3Procedure].[usp LoadBuildingLocation] @UserAuthorizationKey = 2;
   EXEC [Project3Procedure].[usp LoadRoomLocation] @UserAuthorizationKey = 2;
   EXEC [Project3Procedure].[usp LoadClassModeOfInstruction] @UserAuthorizationKey =
3;
   EXEC [Project3Procedure].[usp LoadClassDay] @UserAuthorizationKey = 1;
   EXEC [Project3Procedure].[usp LoadDepartmentInstructor] @UserAuthorizationKey = 1;
   EXEC [Project3Procedure].[usp LoadInstructorClass] @UserAuthorizationKey = 1;
   EXEC [Project3Procedure].[usp LoadClassRoomLocation] @UserAuthorizationKey = 1;
         Recreate all of the foreign keys prior after loading the queens college
schedule database
   EXEC [Project3Procedure].[usp AddForeignKeysToQueensClassScheduleDatabase] @User-
AuthorizationKey = 1; -- int
        Check row count before truncation
   EXEC [Project3Procedure].[ShowTableStatusRowCount] @TableStatus = N'''Row Count
after loading the queens college schedule database''',
                                                    @UserAuthorizationKey = 1;
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT = 0;
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
                                      @WorkFlowDescription =
Schedule Database',
                                      @WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,
                                      @StartTime = @ProcStartTime,
                                      @EndTime = @ProcEndTime;
END:
GO
```

Uses

[Process].[usp_TrackWorkFlows]
[Project3Procedure].[ShowTableStatusRowCount]

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.LoadQueensCollegeScheduleDatabase

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

[Project3Procedure].[usp_AddForeignKeysToQueensClassScheduleDatabase]

[Project3Procedure].[usp_CleanFileUpload]

[Project3Procedure].[usp DropForeignKeysFromQueensClassScheduleDatabase]

[Project3Procedure].[usp LoadBuildingLocation]

[Project3Procedure].[usp_LoadClass]

[Project3Procedure].[usp LoadClassDay]

[Project3Procedure].[usp_LoadClassModeOfInstruction]

[Project3Procedure].[usp_LoadClassRoomLocation]

[Project3Procedure].[usp_LoadCourse]

[Project3Procedure].[usp_LoadDay]

[Project3Procedure].[usp_LoadDepartment]

[Project3Procedure].[usp_LoadDepartmentInstructor]

[Project3Procedure].[usp_LoadInstructor]

[Project3Procedure].[usp LoadInstructorClass]

[Project3Procedure].[usp_LoadModeOfInstruction]

[Project3Procedure].[usp_LoadRoomLocation]

Project3Procedure

[Project3Procedure].[ShowTableStatusRowCount]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Creates a table showing number of rows in each table of the Queens-
CollegeSchedule Database
CREATE PROCEDURE [Project3Procedure].[ShowTableStatusRowCount]
   @TableStatus VARCHAR(64),
   @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
    -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   -- UNION ALL between each select so only 1 output is generated
   SELECT [TableStatus] = @TableStatus,
           [TableName] = '[Uploadfile].[CleanedCurrentSemesterCourseOfferings]',
           [NumberOfRows] = COUNT(*)
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
   UNION ALL
   SELECT [TableStatus] = @TableStatus,
          [TableName] = '[Class].[Class]',
          COUNT(*)
   FROM [Class].[Class]
   UNION ALL
   SELECT [TableStatus] = @TableStatus,
```

```
[TableName] = '[Class].[ClassDay]',
       COUNT(*)
FROM [Class].[ClassDay]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Class].[ClassModeOfInstruction]',
       COUNT(*)
FROM [Class].[ClassModeOfInstruction]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Class].[Course]',
      COUNT(*)
FROM [Class].[Course]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Class].[ModeOfInstruction]',
       COUNT(*)
FROM [Class].[ModeOfInstruction]
UNION ALL
SELECT [TableStatus] = @TableStatus,
       [TableName] = '[Department].[Department]',
       COUNT (*)
FROM [Department].[Department]
UNION ALL
SELECT [TableStatus] = @TableStatus,
       [TableName] = '[Location].[BuildingLocation]',
       COUNT(*)
FROM [Location].[BuildingLocation]
UNION ALL
SELECT [TableStatus] = @TableStatus,
       [TableName] = '[Location].[ClassRoomLocation]',
       COUNT(*)
FROM [Location].[ClassRoomLocation]
UNION ALL
SELECT [TableStatus] = @TableStatus,
       [TableName] = '[Location].[RoomLocation]',
       COUNT(*)
FROM [Location].[RoomLocation]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Staff].[DepartmentInstructor]',
       COUNT (*)
FROM [Staff].[DepartmentInstructor]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Staff].[Instructor]',
      COUNT(*)
FROM [Staff].[Instructor]
UNION ALL
SELECT [TableStatus] = @TableStatus,
      [TableName] = '[Staff].[InstructorClass]',
       COUNT(*)
FROM [Staff].[InstructorClass]
```

```
UNION ALL
   SELECT [TableStatus] = @TableStatus,
           [TableName] = '[Temporal].[Day]',
           COUNT (*)
   FROM [Temporal].[Day];
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT = 0;
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
                                        @WorkFlowDescription =
N'[Project3Procedure].[ShowTableStatusRowCount] counted rows of all tables',
                                        @WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,
                                        @StartTime = @ProcStartTime,
                                        @EndTime = @ProcEndTime;
END;
GO
```

Uses

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Class].[ModeOfInstruction]

[Department].[Department]

[Location].[BuildingLocation]

[Location].[ClassRoomLocation]

[Location].[RoomLocation]

[Staff].[DepartmentInstructor]

[Staff].[Instructor]

[Staff].[InstructorClass]

[Temporal].[Day]

[Uploadfile].[CleanedCurrentSemesterCourseOfferings]

[Process].[usp_TrackWorkFlows]

Project3Procedure

Used By

[Project 3 Procedure]. [Load Queens College Schedule Database]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

Author: timos

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Truncates the QueensCollegeSchedule Database
CREATE PROCEDURE [Project3Procedure].[TruncateQueensCollegeScheduleDatabase] @User-
AuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   -- Truncate all tables
   TRUNCATE TABLE [Class].[Class];
   TRUNCATE TABLE [Class].[ClassDay];
   TRUNCATE TABLE [Class].[ClassModeOfInstruction];
   TRUNCATE TABLE [Class].[Course];
   TRUNCATE TABLE [Class].[ModeOfInstruction];
   TRUNCATE TABLE [Department].[Department];
   TRUNCATE TABLE [Location].[BuildingLocation];
   TRUNCATE TABLE [Location].[ClassRoomLocation];
   TRUNCATE TABLE [Location].[RoomLocation];
   TRUNCATE TABLE [Staff].[DepartmentInstructor];
   TRUNCATE TABLE [Staff].[Instructor];
   TRUNCATE TABLE [Staff].[InstructorClass];
   TRUNCATE TABLE [Temporal].[Day];
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
```

Uses

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Class].[ModeOfInstruction]

[Department].[Department]

[Location].[BuildingLocation]

[Location].[ClassRoomLocation]

[Location].[RoomLocation]

[Staff].[DepartmentInstructor]

[Staff].[Instructor]

[Staff].[InstructorClass]

[Temporal].[Day]

[Process].[usp_TrackWorkFlows]

Project3Procedure

Used By

[Project 3 Procedure]. [Load Queens College Schedule Database]

[Project3Procedure].[usp_AddForeignKeysToQueensClassSchedule-Database]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- -----
-- Author: Timothy Dakis
-- Create date: 2022-05-06
-- Description: Add the Foreign Keys to the QueensClassSchedule Database
CREATE PROCEDURE [Project3Procedure].[usp AddForeignKeysToQueensClassScheduleDatabase]
@UserAuthorizationKey INT
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   -- Adding all FKs to each table
   ALTER TABLE [Class].[Class]
   ADD CONSTRAINT [FK Class UserAuthorization]
       FOREIGN KEY ([UserAuthorizationKey])
       REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
       CONSTRAINT [FK Class Course]
       FOREIGN KEY ([CourseName])
       REFERENCES [Class].[Course] ([CourseName]);
   ALTER TABLE [Class].[ClassDay]
   ADD CONSTRAINT [FK_ClassDay_UserAuthorization]
       FOREIGN KEY ([UserAuthorizationKey])
       REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
       CONSTRAINT [FK ClassDay Class]
       FOREIGN KEY ([ClassId])
```

```
REFERENCES [Class].[Class] ([ClassId]),
    CONSTRAINT [FK_ClassDay_Course]
    FOREIGN KEY ([CourseName])
    REFERENCES [Class].[Course] ([CourseName]),
    CONSTRAINT [FK ClassDay Day]
    FOREIGN KEY ([DayCode])
    REFERENCES [Temporal].[Day] ([DayCode]);
ALTER TABLE [Class].[ClassModeOfInstruction]
ADD CONSTRAINT [FK ClassModeOfInstruction UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
    CONSTRAINT [FK ClassModeOfInstruction Class]
    FOREIGN KEY ([ClassId])
    REFERENCES [Class].[Class] ([ClassId]),
    CONSTRAINT [FK ClassModeOfInstruction Course]
    FOREIGN KEY ([CourseName])
    REFERENCES [Class].[Course] ([CourseName]),
    CONSTRAINT [FK_ClassModeOfInstruction_ModeOfInstruction_1]
    FOREIGN KEY ([ModeId])
    REFERENCES [Class].[ModeOfInstruction] ([ModeId]),
    CONSTRAINT [FK ClassModeOfInstruction ModeOfInstruction 2]
    FOREIGN KEY ([ModeOfInstruction])
    REFERENCES [Class].[ModeOfInstruction] ([ModeOfInstruction]);
ALTER TABLE [Class].[Course]
ADD CONSTRAINT [FK Course UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Class].[ModeOfInstruction]
ADD CONSTRAINT [FK ModeOfInstruction UserAuthorization]
   FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Department].[Department]
ADD CONSTRAINT [FK Department UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Location].[BuildingLocation]
ADD CONSTRAINT [FK BuildingLocation UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Location].[ClassRoomLocation]
ADD CONSTRAINT [FK ClassRoomLocation UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
    CONSTRAINT [FK_ClassRoomLocation_Class]
    FOREIGN KEY ([ClassId])
    REFERENCES [Class].[Class] ([ClassId]),
    CONSTRAINT [FK ClassRoomLocation Course]
```

Author: timos

```
FOREIGN KEY ([CourseName])
    REFERENCES [Class].[Course] ([CourseName]),
    CONSTRAINT [FK ClassRoomLocation RoomLocation 1]
    FOREIGN KEY ([RoomId])
    REFERENCES [Location].[RoomLocation] ([RoomId]),
    CONSTRAINT [FK ClassRoomLocation RoomLocation 2]
    FOREIGN KEY ([Room])
    REFERENCES [Location].[RoomLocation] ([Room]),
    CONSTRAINT [FK ClassRoomLocation BuildingLocation]
    FOREIGN KEY ([Building])
    REFERENCES [Location].[BuildingLocation] ([BuildingAbbreviation]);
ALTER TABLE [Location].[RoomLocation]
ADD CONSTRAINT [FK RoomLocation UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
    CONSTRAINT [FK RoomLocation BuildingLocation]
    FOREIGN KEY ([BuildingOfRoom])
    REFERENCES [Location].[BuildingLocation] ([BuildingAbbreviation]);
ALTER TABLE [Process].[WorkFlowStep]
ADD CONSTRAINT [FK WorkFlowStep UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Staff].[DepartmentInstructor]
ADD CONSTRAINT [FK DepartmentInstructor UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
    CONSTRAINT [FK DepartmentInstructor Department 1]
    FOREIGN KEY ([DepartmentId])
    REFERENCES [Department].[Department] ([DepartmentId]),
    CONSTRAINT [FK DepartmentInstructor Department 2]
    FOREIGN KEY ([Department])
    REFERENCES [Department].[Department] ([DepartmentName]),
    CONSTRAINT [FK_DepartmentInstructor Instructor]
    FOREIGN KEY ([InstructorId])
    REFERENCES [Staff].[Instructor] ([InstructorId]);
ALTER TABLE [Staff].[Instructor]
ADD CONSTRAINT [FK Instructor UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
ALTER TABLE [Staff].[InstructorClass]
ADD CONSTRAINT [FK InstructorClass UserAuthorization]
    FOREIGN KEY ([UserAuthorizationKey])
    REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]),
    CONSTRAINT [FK InstructorClass Instructor]
    FOREIGN KEY ([InstructorId])
    REFERENCES [Staff].[Instructor] ([InstructorId]),
    CONSTRAINT [FK InstructorClass Class]
    FOREIGN KEY ([ClassId])
```

```
REFERENCES [Class].[Class] ([ClassId]),
       CONSTRAINT [FK InstructorClass Course]
        FOREIGN KEY ([CourseName])
       REFERENCES [Class].[Course] ([CourseName]);
   ALTER TABLE [Temporal].[Day]
   ADD CONSTRAINT [FK Day UserAuthorization]
       FOREIGN KEY ([UserAuthorizationKey])
       REFERENCES [DbSecurity].[UserAuthorization] ([UserAuthorizationKey]);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT = 0;
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
                                       @WorkFlowDescription = N'Adding all Foreign
Keys to the QueensClassSchedule Database',
                                        @WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,
                                        @StartTime = @ProcStartTime,
                                        @EndTime = @ProcEndTime;
END;
GO
```

Uses

[Process].[usp_TrackWorkFlows] Project3Procedure

Used By

[Project 3 Procedure]. [Load Queens College Schedule Database]

[Project3Procedure].[usp_CleanFileUpload]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-06
-- Description: Clean [Uploadfile].[CurrentSemesterCourseOfferings] by making
[{\tt Uploadfile}]. [{\tt CleanedCurrentSemesterCourseOfferings}]
-- -----
CREATE PROCEDURE [Project3Procedure].[usp CleanFileUpload] @UserAuthorizationKey INT
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   Make a duplicate of CurrentSemesterCourseOfferings to apply the changes to
   Reason for this approach:
      to make functions/procedures used to fill in database tables easier to set up,
manage, and read
       as all cleansing for source data was done prior to inserting into tables
   */
   BEGIN TRY
       BEGIN TRAN;
       DROP TABLE IF EXISTS [Uploadfile].[CleanedCurrentSemesterCourseOfferings];
       SELECT [Semester],
              [Sec],
              [Code],
              [Course (hr, crd)],
              [Description],
              [Day],
              [Time],
```

```
[Instructor],
               [Location],
               [Enrolled],
               [Limit],
               [Mode of Instruction],
               -- Adds an Overtally column
               CASE
                   WHEN CAST([Limit] AS INT) <> 0
                      AND CAST([Enrolled] AS INT) > CAST([Limit] AS INT) THEN
                      CAST([Enrolled] AS INT) - CAST([Limit] AS INT)
                   ELSE
                       0
               END AS [Overtally]
        INTO [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        FROM [Uploadfile].[CurrentSemesterCourseOfferings];
        -- If Overtallied, then cap enrolled at limit (do this so we can in future
apply a constraint where Enrolled is <= Limit
       UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Enrolled] = [Limit]
       WHERE [Overtally] <> 0;
        UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Day] = N'TBD'
        WHERE [Day] = N'';
       UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Time] = N'TBD'
        WHERE [Time] IN ( '-', '12:00 AM - 12:00 AM');
       UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Instructor] = N'TBD'
       WHERE [Instructor] = N',';
        UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Location] = N'TBD'
        WHERE [Location] = N'';
       UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Sec] = CONCAT(0, [Sec])
        WHERE LEN([Sec]) = 1;
        -- The following is splitting Day column values with 3 days into rows of 1 day
each
        INSERT INTO [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
            [Semester],
            [Sec],
            [Code],
            [Course (hr, crd)],
            [Description],
            [Day],
            [Time],
```

```
[Instructor],
            [Location],
            [Enrolled],
            [Limit],
            [Mode of Instruction],
            [Overtally]
        SELECT [CCSCO].[Semester],
              [CCSCO].[Sec],
               [CCSCO].[Code],
               [CCSCO].[Course (hr, crd)],
               [CCSCO].[Description],
               LEFT([Day], CHARINDEX(',', [Day]) - 1) AS [Day],
               [CCSCO].[Time],
               [CCSCO].[Instructor],
               [CCSCO].[Location],
               [CCSCO].[Enrolled],
               [CCSCO].[Limit],
               [CCSCO].[Mode of Instruction],
               [CCSCO].[Overtally]
        FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
        WHERE LEN([CCSCO].[Day]) - LEN(REPLACE([CCSCO].[Day], ',', '')) = 2;
        -- Convert the 3 days into the remaining 2 days \Rightarrow can deal with it as a 2 day
column
        UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Day] = SUBSTRING([Day], CHARINDEX(N',', [Day]) + 2, 100)
        WHERE LEN([Day]) - LEN(REPLACE([Day], ',', '')) = 2;
        -- The following is splitting Day column values with 2 days into rows of 1 day
each
        INSERT INTO [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
            [Semester],
            [Sec],
            [Code],
            [Course (hr, crd)],
            [Description],
            [Day],
            [Time],
            [Instructor],
            [Location],
            [Enrolled],
            [Limit],
            [Mode of Instruction],
            [Overtally]
        SELECT [CCSCO].[Semester],
               [CCSCO].[Sec],
               [CCSCO].[Code],
               [CCSCO].[Course (hr, crd)],
               [CCSCO].[Description],
               SUBSTRING([Day], CHARINDEX(N',', [Day]) + 2, 100) AS [Day],
```

```
[CCSCO].[Time],
               [CCSCO].[Instructor],
               [CCSCO].[Location],
               [CCSCO].[Enrolled],
               [CCSCO].[Limit],
               [CCSCO].[Mode of Instruction],
               [CCSCO].[Overtally]
        FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
       WHERE LEN([CCSCO].[Day]) - LEN(REPLACE([CCSCO].[Day], ',', '')) = 1;
       UPDATE [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
        SET [Day] = LEFT([Day], CHARINDEX(',', [Day]) - 1)
       WHERE LEN([Day]) - LEN(REPLACE([Day], ',', '')) = 1;
        COMMIT TRAN;
   END TRY
   BEGIN CATCH
       IF (XACT_STATE()) = -1
           ROLLBACK TRAN;
   END CATCH;
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
                SELECT COUNT(*) FROM [Uploadfile].[CleanedCurrentSemesterCourse-
Offerings]
           );
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
                                        @WorkFlowDescription = N'Created
[Uploadfile].[CleanedCurrentSemesterCourseOfferings]',
                                        @WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,
                                        @StartTime = @ProcStartTime,
                                        @EndTime = @ProcEndTime;
END;
GO
```

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings]
[Uploadfile].[CurrentSemesterCourseOfferings]
[Process].[usp_TrackWorkFlows]
Project3Procedure

Used By

[Project3Procedure].[usp_DropForeignKeysFromQueensClassSchedule-Database]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

Author: timos

```
-- -----
-- Author: Timothy Dakis
-- Create date: 2022-04-01
-- Description: Drop the Foreign Keys from the QueensClassSchedule Database
CREATE PROCEDURE [Project3Procedure].[usp DropForeignKeysFromQueensClassSchedule-
Database] @UserAuthorizationKey INT
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   -- Dropping all FKs from QueensClassSchedule Database
   ALTER TABLE [Class].[Class]
   DROP CONSTRAINT [FK Class UserAuthorization],
        CONSTRAINT [FK Class Course];
   ALTER TABLE [Class].[ClassDay]
   DROP CONSTRAINT [FK ClassDay UserAuthorization],
        CONSTRAINT [FK ClassDay Class],
        CONSTRAINT [FK ClassDay Course],
        CONSTRAINT [FK_ClassDay_Day];
   ALTER TABLE [Class].[ClassModeOfInstruction]
   DROP CONSTRAINT [FK ClassModeOfInstruction UserAuthorization],
        CONSTRAINT [FK ClassModeOfInstruction Class],
        CONSTRAINT [FK_ClassModeOfInstruction_Course],
```

```
CONSTRAINT [FK ClassModeOfInstruction ModeOfInstruction 1],
     CONSTRAINT [FK ClassModeOfInstruction ModeOfInstruction 2];
ALTER TABLE [Class].[Course]
DROP CONSTRAINT [FK Course UserAuthorization];
ALTER TABLE [Class].[ModeOfInstruction]
DROP CONSTRAINT [FK_ModeOfInstruction_UserAuthorization];
ALTER TABLE [Department].[Department]
DROP CONSTRAINT [FK Department UserAuthorization];
ALTER TABLE [Location].[BuildingLocation]
DROP CONSTRAINT [FK BuildingLocation UserAuthorization];
ALTER TABLE [Location].[ClassRoomLocation]
DROP CONSTRAINT [FK ClassRoomLocation UserAuthorization],
     CONSTRAINT [FK ClassRoomLocation Class],
     CONSTRAINT [FK ClassRoomLocation Course],
     CONSTRAINT [FK ClassRoomLocation RoomLocation 1],
     CONSTRAINT [FK ClassRoomLocation RoomLocation 2],
     CONSTRAINT [FK ClassRoomLocation BuildingLocation];
ALTER TABLE [Location].[RoomLocation]
DROP CONSTRAINT [FK RoomLocation UserAuthorization],
     CONSTRAINT [FK RoomLocation BuildingLocation];
ALTER TABLE [Process].[WorkFlowStep]
DROP CONSTRAINT [FK_WorkFlowStep_UserAuthorization];
ALTER TABLE [Staff].[DepartmentInstructor]
DROP CONSTRAINT [FK DepartmentInstructor UserAuthorization],
     CONSTRAINT [FK DepartmentInstructor Department 1],
     CONSTRAINT [FK DepartmentInstructor Department 2],
     CONSTRAINT [FK_DepartmentInstructor_Instructor];
ALTER TABLE [Staff].[Instructor]
DROP CONSTRAINT [FK Instructor UserAuthorization];
ALTER TABLE [Staff].[InstructorClass]
DROP CONSTRAINT [FK InstructorClass UserAuthorization],
     CONSTRAINT [FK InstructorClass Instructor],
     CONSTRAINT [FK InstructorClass Class],
     CONSTRAINT [FK InstructorClass Course];
ALTER TABLE [Temporal].[Day] DROP CONSTRAINT [FK Day UserAuthorization];
DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
DECLARE @ProcWorkFlowTableRowCount INT = 0;
EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_DropForeignKeysFromQueensClassScheduleDatabase

```
@WorkFlowDescription = N'Dropping all Foreign

Keys from the QueensClassSchedule Database',

@WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,

@StartTime = @ProcStartTime,

@EndTime = @ProcEndTime;

END;

GO
```

Uses

[Process].[usp_TrackWorkFlows] Project3Procedure

Used By

[Project3Procedure].[usp_LoadBuildingLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Mikhaiel Gomes
-- Create date: 2022-05-07
-- Description: Load data into [Location].[BuildingLocation]
CREATE PROCEDURE [Project3Procedure].[usp LoadBuildingLocation] @UserAuthorizationKey
INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Location].[BuildingLocation]
       [BuildingName],
       [BuildingAbbreviation],
        [UserAuthorizationKey]
   SELECT [BuildingName],
          [BuildingAbbreviation],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateBuildingLocation](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
              SELECT COUNT(*)FROM [Location].[BuildingLocation]
```

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Uses

[Location].[BuildingLocation]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateBuildingLocation]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-06
-- Description: Load data into [Class].[Class]
CREATE PROCEDURE [Project3Procedure].[usp LoadClass] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Class].[Class]
        [SemesterOfClass],
        [SectionCode],
        [ClassCode],
        [CourseName],
        [ClassTime],
        [ClassLimit],
        [EnrolledInClass],
        [ClassOvertally],
        [UserAuthorizationKey]
   SELECT [SemesterOfClass],
          [SectionCode],
           [ClassCode],
           [CourseName],
           [ClassTime],
```

```
[ClassLimit],
           [EnrolledInClass],
           [ClassOvertally],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateClass](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
                SELECT COUNT(*)FROM [Class].[Class]
           );
   EXEC [Process].[usp_TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
                                        @WorkFlowDescription = N'Loading data into
[Class].[Class]',
                                        @WorkFlowStepTableRowCount = @ProcWorkFlowTable-
RowCount,
                                        @StartTime = @ProcStartTime,
                                        @EndTime = @ProcEndTime;
END;
GO
```

Uses

[Class].[Class] [Process].[usp_TrackWorkFlows] [Project3Function].[tvf_CreateClass] Project3Procedure

Used By

[Project3Procedure].[usp_LoadClassDay]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Load data into [Class].[ClassDay]
CREATE PROCEDURE [Project3Procedure].[usp LoadClassDay] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Class].[ClassDay]
       [ClassId],
       [DayCode],
       [CourseName],
       [UserAuthorizationKey]
   SELECT [ClassId],
          [DayCode],
          [CourseName],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf_CreateClassDay](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
```

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Uses

[Class].[ClassDay] [Process].[usp_TrackWorkFlows] [Project3Function].[tvf_CreateClassDay] Project3Procedure

Used By

[Project3Procedure].[usp_LoadClassModeOfInstruction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Shivanie Kemraj
-- Create date: 2022-05-06
-- Description: Load data into [Class].[ClassModeOfInstruction]
CREATE PROCEDURE [Project3Procedure].[usp LoadClassModeOfInstruction] @User-
AuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Class].[ClassModeOfInstruction]
       [ClassId],
       [ModeId],
        [CourseName],
        [ModeOfInstruction],
       [UserAuthorizationKey]
   SELECT [ClassId],
          [ModeId],
           [CourseName],
           [ModeOfInstruction],
          [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateClassModeOfInstruction](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
```

Uses

[Class].[ClassModeOfInstruction] [Process].[usp_TrackWorkFlows] [Project3Function].[tvf_CreateClassModeOfInstruction] Project3Procedure

Used By

[Project3Procedure].[usp_LoadClassRoomLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Load data into [Location].[ClassRoomLocation]
CREATE PROCEDURE [Project3Procedure].[usp LoadClassRoomLocation] @UserAuthorizationKey
INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Location].[ClassRoomLocation]
       [ClassId],
        [RoomId],
        [CourseName],
        [Building],
        [Room],
        [UserAuthorizationKey]
   SELECT [ClassId],
           [RoomId],
           [CourseName],
           [Building],
           [Room],
           [UserAuthorizationKey]
   {\tt FROM \ [Project3Function].[tvf\_CreateClassRoomLocation] \ (@UserAuthorizationKey);}
```

Uses

[Location].[ClassRoomLocation]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateClassRoomLocation]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadCourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Konrad Rakowsky
-- Create date: 2022-05-07
-- Description: Load data into [Class].[Course]
CREATE PROCEDURE [Project3Procedure].[usp LoadCourse] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Class].[Course]
       [CourseName],
        [CourseDescription],
       [CourseHour],
       [CourseCredit],
       [UserAuthorizationKey]
   SELECT [CourseName],
          [CourseDescription],
           CAST([CourseHour] AS NUMERIC(5, 2)),
          CAST([CourseCredit] AS NUMERIC(5, 2)),
          [UserAuthorizationKey]
   FROM [Project3Function].[tvf_CreateCourse](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
```

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Uses

[Class].[Course] [Process].[usp_TrackWorkFlows] [Project3Function].[tvf_CreateCourse] Project3Procedure

Used By

[Project3Procedure].[usp_LoadDay]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Kevin Tang
-- Create date: 2022-05-07
-- Description: Load data into [Temporal].[Day]
Create PROCEDURE [Project3Procedure].[usp LoadDay] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Temporal].[Day]
       [DayCode],
       [DayName],
       [UserAuthorizationKey]
   SELECT [Day],
          [DayName],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf_CreateDay](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
               SELECT COUNT(*)FROM [Temporal].[Day]
           );
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_LoadDay

Uses

[Temporal].[Day] [Process].[usp_TrackWorkFlows] [Project3Function].[tvf_CreateDay] Project3Procedure

Used By

[Project3Procedure].[usp_LoadDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Konrad Rakowski
-- Create date: 2022-05-07
-- Description: Load data into [Department].[Department]
CREATE PROCEDURE [Project3Procedure].[usp LoadDepartment] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Department].[Department]
       [DepartmentName],
       [UserAuthorizationKey]
   SELECT [DepartmentName],
          [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateDepartment](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
           (
               SELECT COUNT(*)FROM [Department].[Department]
           );
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_LoadDepartment

```
[Department].[Department]',

RowCount,

@WorkFlowDescription = N'Loading data into

@WorkFlowStepTableRowCount = @ProcWorkFlowTable-

@StartTime = @ProcStartTime,

@EndTime = @ProcEndTime;

END;

GO
```

Uses

[Department].[Department]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateDepartment]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadDepartmentInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Load data into [Staff].[DepartmentInstructor]
CREATE PROCEDURE [Project3Procedure].[usp LoadDepartmentInstructor] @UserAuthorization-
Key INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Staff].[DepartmentInstructor]
       [DepartmentId],
       [InstructorId],
        [Department],
       [InstructorFullName],
       [UserAuthorizationKey]
   SELECT [DepartmentId],
          [InstructorId],
          [Department],
           [InstructorFullName],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateDepartmentInstructor](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
```

Uses

[Staff].[DepartmentInstructor]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateDepartmentInstructor]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Kevin Tang
-- Create date: 2022-05-07
-- Description: Load data into [Staff].[Instructor]
CREATE PROCEDURE [Project3Procedure].[usp LoadInstructor] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Staff].[Instructor]
       [InstructorLastName],
        [InstructorFirstName],
       [UserAuthorizationKey]
   SELECT [InstructorLastName],
          [InstructorFirstName],
           [UserAuthorizationKey]
   FROM [Project3Function].[tvf_CreateInstructor](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
               SELECT COUNT(*)FROM [Staff].[Instructor]
           );
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_LoadInstructor

Uses

[Staff].[Instructor]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateInstructor]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadInstructorClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Load data into [Staff].[InstructorClass]
CREATE PROCEDURE [Project3Procedure].[usp LoadInstructorClass] @UserAuthorizationKey
INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Staff].[InstructorClass]
       [InstructorId],
       [ClassId],
        [InstructorFullName],
       [CourseName],
       [UserAuthorizationKey]
   SELECT [InstructorId],
          [ClassId],
          [InstructorFullName],
           [CourseName],
          [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateInstructorClass](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
```

Uses

[Staff].[InstructorClass]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateInstructorClass]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadModeOfInstruction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Shivanie Kemraj
-- Create date: 2022-05-06
-- Description: Load data into [Class].[ModeOfInstruction]
CREATE PROCEDURE [Project3Procedure].[usp LoadModeOfInstruction] @UserAuthorizationKey
INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Class].[ModeOfInstruction]
       [ModeOfInstruction],
       [UserAuthorizationKey]
   SELECT [ModeOfInstruction],
         [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateModeOfInstruction](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
               SELECT COUNT(*)FROM [Class].[ModeOfInstruction]
           );
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_LoadModeOfInstruction

Uses

[Class].[ModeOfInstruction]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateModeOfInstruction]
Project3Procedure

Used By

[Project3Procedure].[usp_LoadRoomLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Mikhaiel Gomes
-- Create date: 2022-05-07
-- Description: Load data into [Location].[RoomLocation]
CREATE PROCEDURE [Project3Procedure].[usp LoadRoomLocation] @UserAuthorizationKey INT
AS
BEGIN
   -- SET NOCOUNT ON added to prevent extra result sets from
   -- interfering with SELECT statements.
   SET NOCOUNT ON;
   DECLARE @ProcStartTime DATETIME2 = SYSDATETIME();
   INSERT INTO [Location].[RoomLocation]
       [Room],
       [UserAuthorizationKey]
   SELECT [Room],
          [UserAuthorizationKey]
   FROM [Project3Function].[tvf CreateRoomLocation](@UserAuthorizationKey);
   DECLARE @ProcEndTime DATETIME2 = SYSDATETIME();
   DECLARE @ProcWorkFlowTableRowCount INT =
           (
               SELECT COUNT(*)FROM [Location].[RoomLocation]
           );
   EXEC [Process].[usp TrackWorkFlows] @UserAuthorizationKey = @UserAuthorizationKey,
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Stored Procedures > Project3Procedure.usp_LoadRoomLocation

```
[Location].[RoomLocation]',

[Location].[RoomLocation]',

@WorkFlowDescription = N'Loading data into

@WorkFlowStepTableRowCount = @ProcWorkFlowTable-

@StartTime = @ProcStartTime,

@EndTime = @ProcEndTime;

END;

GO
```

Uses

[Location].[RoomLocation]
[Process].[usp_TrackWorkFlows]
[Project3Function].[tvf_CreateRoomLocation]
Project3Procedure

Used By

■ Table-valued Functions

Objects

Name
dbo.DatabaseObjects
dbo.JSONHierarchy
Project3Function.tvf_CreateBuildingLocation
Project3Function.tvf_CreateClass
Project3Function.tvf_CreateClassDay
Project3Function.tvf_CreateClassModeOfInstruction
Project3Function.tvf_CreateClassRoomLocation
Project3Function.tvf_CreateCourse
Project3Function.tvf_CreateDay
Project3Function.tvf_CreateDepartment
Project3Function.tvf_CreateDepartmentInstructor
Project3Function.tvf_CreateInstructor
Project3Function.tvf_CreateInstructorClass
Project3Function.tvf_CreateModeOfInstruction
Project3Function.tvf_CreateRoomLocation

🗔 [dbo].[DatabaseObjects]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
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

```
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-
slotal&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 */
                                            /* if the element has a parent then it is
  , Parent ID int
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*/
```

```
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
                    int
         , @ii
         , @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 ( '[', '{' )
       insert into @ReturnTable
```

```
SequenceNo
          , Parent ID
          , Object_ID
          , Name
          , StringValue
          , ValueType
        select 1
           , null
            , 1
            , 1=1
             , "
             , case @firstchar
                  when '[' then
                      'array'
                  else
                      'object'
              end;
                               = case @firstchar
       select @type
                                      when '[' then
                                          @array
                                      else
                                          @object
            , @Parent_object_ID = 1
             , @MaxObject id = coalesce(@MaxObject id, 1) + 1;
   end;
   while (@ii <= @iiMax)</pre>
   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
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > dbo. JSON Hierarchy$

[Project3Function].[tvf_CreateBuildingLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Mikhaiel Gomes
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Location].[BuildingLocation]
CREATE FUNCTION [Project3Function].[tvf CreateBuildingLocation]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   WITH [BuildingAbbreviations]
   AS (SELECT DISTINCT
             LEFT([CCSCO1].[Location], 2) AS [BuildingAbbreviation]
       FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO1]
       WHERE [Location] <> N'TBD'
       UNION
       SELECT DISTINCT
              [Location]
       FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO2]
       WHERE [CCSCO2].[Location] = N'TBD')
   SELECT [BA].[BuildingAbbreviation],
          CASE [BA].[BuildingAbbreviation]
              WHEN N'AR' THEN
                  'No Corresponding Name #1' -- Could not find corresponding name
              WHEN N'CD' THEN
                  'No Corresponding Name #2' -- Could not find corresponding name
              WHEN N'CH' THEN
                  'Colwin Hall'
```

```
WHEN N'DY' THEN
                 'Delany Hall'
               WHEN N'FG' THEN
                  'FitzGerald Gym'
              WHEN N'GB' THEN
                  'G Building'
               WHEN N'GC' THEN
                  'Gertz Center'
               WHEN N'GT' THEN
                  'Goldstein Theatre'
               WHEN N'HH' THEN
                  'Honors Hall'
               WHEN N'IB' THEN
                 'I Building'
               WHEN N'JH' THEN
                  'Jefferson Hall'
               WHEN N'KG' THEN
                  'King Hall'
              WHEN N'KY' THEN
                  'Kiely Hall'
               WHEN N'KP' THEN
                  'Klapper Hall'
               WHEN N'MU' THEN
                  'Music Building'
               WHEN N'PH' THEN
                  'Powdermaker Hall'
              WHEN N'QH' THEN
                  'Queens Hall'
               WHEN N'RA' THEN
                  'Rathaus Hall'
               WHEN N'RE' THEN
                  'Remsen Hall'
              WHEN N'RO' THEN
                  'Rosenthal Library'
               WHEN N'RZ' THEN
                  'Razran Hall'
               WHEN N'SB' THEN
                  'Science Building'
               WHEN N'SU' THEN
                  'Student Union'
              ELSE
                  'To Be Determined'
           END AS [BuildingName],
           @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [BuildingAbbreviations] AS [BA]
);
GO
```

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings]

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Functions > Table-valued Functions > Project3Function.tvf_CreateBuildingLocation
Project3Function
Used By

[Project3Procedure].[usp_LoadBuildingLocation]

Ex [Project3Function].[tvf_CreateClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-06
-- Description: Generates a table to be used in loading [Class].[Class]
CREATE FUNCTION [Project3Function].[tvf CreateClass]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
         [Semester] AS [SemesterOfClass],
          [Sec] AS [SectionCode],
          [Code] AS [ClassCode],
          LEFT([Course (hr, crd)], CHARINDEX('(', [Course (hr, crd)]) - 1) AS [Course-
Name],
          [Time] AS [ClassTime],
          [Limit] AS [ClassLimit],
          [Enrolled] AS [EnrolledInClass],
           [Overtally] AS [ClassOvertally],
           @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings]
);
GO
```

 $\label{local-project} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programmability > Functions > Table-valued Functions > Project 3 Function.tvf_Create Class$

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadClass]

[Project3Function].[tvf_CreateClassDay]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Class].[ClassDay]
CREATE FUNCTION [Project3Function].[tvf CreateClassDay]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
         [C].[ClassId],
          [CCSCO].[Day] AS [DayCode],
          [C].[CourseName],
          @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
       INNER JOIN [Class].[Class] AS [C]
           ON [CCSCO].[Sec] = [C].[SectionCode]
              AND [CCSCO].[Code] = [C].[ClassCode]
              AND [CCSCO].[Time] = [C].[ClassTime]
);
GO
```

Uses

[Class].[Class]

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function. \\ tvf_Create Class Day$

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] [sdClassString].[CourseName] [sdKeyNumeric].[SurrogateKeyInt] Project3Function

Used By

Author: timos

[Project3Procedure].[usp_LoadClassDay]

[Project3Function].[tvf_CreateClassModeOfInstruction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Shivanie Kemraj
-- Create date: 2022-05-06
-- Description: Generates a table to be used in loading [Class].[ClassModeOf-
Instruction]
CREATE FUNCTION [Project3Function].[tvf CreateClassModeOfInstruction]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
          [C].[ClassId] AS [ClassId],
          [CM].[ModeId] AS [ModeId],
           [C].[CourseName] AS [CourseName],
          [CO].[Mode of Instruction] AS [ModeOfInstruction],
           @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CO]
       INNER JOIN [Class].[Class] AS [C]
           ON [C].[ClassCode] = [CO].[Code]
              AND [C].[ClassTime] = [CO].[Time]
              AND [C].[SectionCode] = [CO].[Sec]
       INNER JOIN [Class].[ModeOfInstruction] AS [CM]
           ON [CO].[Mode of Instruction] = [CM].[ModeOfInstruction]
);
GO
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function. \\tvf_Create Class Mode Of Instruction$

Uses

[Class].[Class]
[Class].[ModeOfInstruction]
[Uploadfile].[CleanedCurrentSemesterCourseOfferings]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
Project3Function

Used By

 $[Project 3 Procedure]. [usp_Load Class Mode Of Instruction] \\$

[Project3Function].[tvf_CreateClassRoomLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Location].[ClassRoomLocation]
CREATE FUNCTION [Project3Function].[tvf CreateClassRoomLocation]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
      [C].[ClassId],
      [RL].[RoomId],
      [C].[CourseName],
      [RL].[BuildingOfRoom] AS [Building],
      [RL].[Room],
      @UserAuthorizationKey AS [UserAuthorizationKey]
FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
   INNER JOIN [Class].[Class] AS [C]
      ON [CCSCO].[Sec] = [C].[SectionCode]
         AND [CCSCO].[Code] = [C].[ClassCode]
          AND [CCSCO].[Time] = [C].[ClassTime]
   INNER JOIN [Location].[RoomLocation] AS [RL]
      ON [CCSCO].[Location] = [RL].[Room]
);
GO
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function. \\ tvf_Create Class RoomLocation$

Uses

[Class].[Class]
[Location].[RoomLocation]
[Uploadfile].[CleanedCurrentSemesterCourseOfferings]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
[sdLocationString].[RoomString]
Project3Function

Used By

[Project3Procedure].[usp_LoadClassRoomLocation]

[Project3Function].[tvf_CreateCourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Konrad Rakowski
-- Create date: 2022-05-07
-- Description : Generates a table to be used in loading [Class].[Course]
CREATE FUNCTION [Project3Function].[tvf CreateCourse]
   @UserAuthorizationKey INT
RETURNS TABLE
RETURN
   SELECT DISTINCT
          LEFT([Offer].[Course (hr, crd)], CHARINDEX(' (', [Offer].[Course (hr, crd)])
- 1) AS [CourseName],
          [Offer].[Description] AS [CourseDescription],
          SUBSTRING (
                      LEFT([Offer].[Course (hr, crd)], CHARINDEX(',', [Offer].[Course
(hr, crd)]) - 1),
                       CHARINDEX('(', [Offer].[Course (hr, crd)]) + 1,
                       LEN(LEFT([Offer].[Course (hr, crd)], CHARINDEX(',',
[Offer].[Course (hr, crd)]) - 1)) - 1
                  ) AS [CourseHour],
          SUBSTRING (
                       LEFT([Offer].[Course (hr, crd)], CHARINDEX(')', [Offer].[Course
(hr, crd)]) - 1),
                       CHARINDEX(', ', [Offer].[Course (hr, crd)]) + 2,
                       LEN(LEFT([Offer].[Course (hr, crd)], CHARINDEX(')',
[Offer].[Course (hr, crd)]) - 1)) - 1
                  ) AS [CourseCredit],
          @UserAuthorizationKey AS [UserAuthorizationKey]
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function.tvf_Create Course$

```
FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [Offer]
);
GO
```

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadCourse]

[Project3Function].[tvf_CreateDay]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Kevin Tang
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Temporal].[Day]
CREATE FUNCTION [Project3Function].[tvf CreateDay]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
          [Day],
          CASE [Day]
              WHEN N'M' THEN
                  N'Monday'
              WHEN N'T' THEN
                  N'Tuesday'
              WHEN N'W' THEN
                 N'Wednesday'
              WHEN N'TH' THEN
                  N'Thursday'
              WHEN N'F' THEN
                 N'Friday'
              WHEN N'S' THEN
                  N'Saturday'
              WHEN N'SU' THEN
                  N'Sunday'
```

Project > localhost,13001 > User databases > QueensClassSchedule > Programmability > Functions > Tablevalued Functions > Project3Function.tvf_CreateDay

```
ELSE

N'To Be Determined'

END AS [DayName],

@UserAuthorizationKey AS [UserAuthorizationKey]

FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
);

GO
```

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadDay]

[Project3Function].[tvf_CreateDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadDepartment]

Author: timos

[Project3Function].[tvf_CreateDepartmentInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Staff].[DepartmentInstructor]
CREATE FUNCTION [Project3Function].[tvf CreateDepartmentInstructor]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
         [D].[DepartmentId],
          [I].[InstructorId],
          [D].[DepartmentName] AS [Department],
           [I].[InstructorFullName],
          @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
       INNER JOIN [Department].[Department] AS [D]
           ON LEFT([CCSCO].[Course (hr, crd)], CHARINDEX(' ', [CCSCO].[Course (hr,
crd)]) - 1) = [D].[DepartmentName]
       INNER JOIN [Staff].[Instructor] AS [I]
           ON [CCSCO].[Instructor] = [I].[InstructorFullName]
);
GO
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function.tvf_Create Department Instructor$

Uses

[Department].[Department]
[Staff].[Instructor]
[Uploadfile].[CleanedCurrentSemesterCourseOfferings]
[sdClassString].[DepartmentName]
[sdKeyNumeric].[SurrogateKeyInt]
Project3Function

Used By

[Project3Procedure].[usp_LoadDepartmentInstructor]

[Project3Function].[tvf_CreateInstructor]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Kevin Tang
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Staff].[Instructor]
CREATE FUNCTION [Project3Function].[tvf CreateInstructor]
   @UserAuthorizationKey INT
RETURNS TABLE
RETURN
   SELECT DISTINCT
         [Instructor] AS [InstructorFullName],
          LEFT([CCSCO].[Instructor], CHARINDEX(', ', [CCSCO].[Instructor]) - 1) AS
[InstructorLastName],
         RIGHT([CCSCO].[Instructor], LEN([CCSCO].[Instructor]) - CHARINDEX(', ',
[CCSCO].[Instructor]) - 1) AS [InstructorFirstName],
          @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
   WHERE [Instructor] <> 'TBD'
   UNION
   SELECT DISTINCT
          [Instructor],
          N'TBD',
          N'TBD',
          @UserAuthorizationKey
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
   WHERE [Instructor] = N'TBD'
);
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function. \\ tvf_Create Instructor$

Uses
[Uploadfile]:[CleanedCurrentSemesterCourseOfferings]
Project3Function
Used By

[Project3Procedure].[usp_LoadInstructor]

[Project3Function].[tvf_CreateInstructorClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

```
-- Author: Timothy Dakis
-- Create date: 2022-05-07
-- Description: Generates a table to be used in loading [Staff].[InstructorClass]
CREATE FUNCTION [Project3Function].[tvf CreateInstructorClass]
   @UserAuthorizationKey INT
RETURNS TABLE
AS
RETURN
   SELECT DISTINCT
         [I].[InstructorId],
          [C].[ClassId],
          [I].[InstructorFullName],
           [C].[CourseName],
          @UserAuthorizationKey AS [UserAuthorizationKey]
   FROM [Uploadfile].[CleanedCurrentSemesterCourseOfferings] AS [CCSCO]
       INNER JOIN [Class].[Class] AS [C]
           ON [CCSCO].[Sec] = [C].[SectionCode]
              AND [CCSCO].[Code] = [C].[ClassCode]
              AND [CCSCO].[Time] = [C].[ClassTime]
        INNER JOIN [Staff].[Instructor] AS [I]
           ON [CCSCO].[Instructor] = [I].[InstructorFullName]
);
GO
```

 $\label{localhost} Project > localhost, 13001 > User \ databases > Queens Class Schedule > Programma bility > Functions > Table-valued Functions > Project 3 Function. tvf_CreateInstructor Class$

Uses

[Class].[Class]
[Staff].[Instructor]
[Uploadfile].[CleanedCurrentSemesterCourseOfferings]
[sdClassString].[CourseName]
[sdKeyNumeric].[SurrogateKeyInt]
Project3Function

Used By

[Project3Procedure].[usp_LoadInstructorClass]

[Project3Function].[tvf_CreateModeOfInstruction]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadModeOfInstruction]

[Project3Function].[tvf_CreateRoomLocation]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

Uses

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] Project3Function

Used By

[Project3Procedure].[usp_LoadRoomLocation]

iii User-Defined Data Types

Objects

Name
dDateTime.DateYYYYMMDD-HH:MM:SS-7Prec
dNumeric.RowCount
dString.AbbreviationString
dString.ClassTimeNchar5
dString.DayName
dString.PersonName
dString.ProjectDescription
dString.WorkFlowDescription
sdClassNumeric.ClassStatistic
sdClassNumeric.ClassStatisticDecimal
sdClassString.ClassTimeInterval
sdClassString.CourseDescriptionString
sdClassString.CourseName
sdClassString.DepartmentName
sdClassString.EncodingString
sdClassString.ModeType
sdClassString.SemesterString
sdKeyNumeric.SurrogateKeyInt
sdLocationString.BuildingName
sdLocationString.RoomString

[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	datetime2
Length	8

SQL Script

CREATE TYPE [dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec] FROM datetime2 NOT NULL GO

Uses

dDateTime

Used By

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Class].[ModeOfInstruction]

[DbSecurity].[UserAuthorization]

[Department].[Department]

[Location].[BuildingLocation]

[Location].[ClassRoomLocation]

[Location].[RoomLocation]

[Process].[WorkFlowStep]

[Staff].[DepartmentInstructor]

[Staff].[Instructor]

[Staff].[InstructorClass]

[Temporal].[Day]

[dNumeric].[RowCount]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	int
Length	4

SQL Script

CREATE TYPE [dNumeric].[RowCount] FROM int NOT NULL
GO

Uses

dNumeric

Used By

[Process].[WorkFlowStep]

[dString].[AbbreviationString]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	5

SQL Script

CREATE TYPE [dString].[AbbreviationString] FROM nvarchar (5) NOT NULL
GO

Uses

dString

Used By

[Class].[ClassDay]
[DbSecurity].[UserAuthorization]
[Location].[BuildingLocation]
[Location].[ClassRoomLocation]
[Temporal].[Day]

[dString].[ClassTimeNchar5]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nchar
Length	5

SQL Script

CREATE TYPE [dString].[ClassTimeNchar5] FROM nchar (5) NOT NULL
GO

Uses

dString

Used By

[DbSecurity].[UserAuthorization] [Process].[WorkFlowStep]

[dString].[DayName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	16

SQL Script

CREATE TYPE [dString].[DayName] FROM nvarchar (16) NOT NULL
GO

Uses

dString

Used By

[Temporal].[Day]

[dString].[PersonName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	50

SQL Script

CREATE TYPE [dString].[PersonName] FROM nvarchar (50) NOT NULL
GO

Uses

dString

Used By

[DbSecurity].[UserAuthorization] [Staff].[DepartmentInstructor] [Staff].[Instructor] [Staff].[InstructorClass]

[dString].[ProjectDescription]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	100

SQL Script

CREATE TYPE [dString].[ProjectDescription] FROM nvarchar (100) NOT NULL
GO

Uses

dString

Used By

[DbSecurity].[UserAuthorization]

[dString].[WorkFlowDescription]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	500

SQL Script

CREATE TYPE [dString].[WorkFlowDescription] FROM nvarchar (500) NOT NULL
GO

Uses

dString

Used By

[Process].[WorkFlowStep]

[sdClassNumeric].[ClassStatistic]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	smallint
Length	2

SQL Script

CREATE TYPE [sdClassNumeric].[ClassStatistic] FROM smallint NOT NULL
GO

Uses

sdClassNumeric

Used By

[Class].[Class]

[sdClassNumeric].[ClassStatisticDecimal]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	decimal
Length	5

SQL Script

CREATE TYPE [sdClassNumeric].[ClassStatisticDecimal] FROM decimal (5, 2) NOT NULL GO

Uses

sdClassNumeric

Used By

[Class].[Course]

[sdClassString].[ClassTimeInterval]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	20

SQL Script

CREATE TYPE [sdClassString].[ClassTimeInterval] FROM nvarchar (20) NOT NULL
GO

Uses

sdClassString

Used By

[Class].[Class]

[sdClassString].[CourseDescriptionString]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	40

SQL Script

CREATE TYPE [sdClassString].[CourseDescriptionString] FROM nvarchar (40) NOT NULL GO

Uses

sdClassString

Used By

[Class].[Course]

[sdClassString].[CourseName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	14

SQL Script

CREATE TYPE [sdClassString].[CourseName] FROM nvarchar (14) NOT NULL
GO

Uses

sdClassString

Used By

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Location].[ClassRoomLocation]

[Staff].[InstructorClass]

[Project3Function].[tvf_CreateClassDay]

[Project3Function].[tvf_CreateClassModeOfInstruction]

[Project3Function].[tvf_CreateClassRoomLocation]

[Project3Function].[tvf_CreateInstructorClass]

iii [sdClassString].[DepartmentName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	6

SQL Script

CREATE TYPE [sdClassString].[DepartmentName] FROM nvarchar (6) NOT NULL
GO

Uses

sdClassString

Used By

[Department].[Department]

[Staff].[DepartmentInstructor]

 $[Project 3 Function]. [tvf_Create Department Instructor] \\$

[sdClassString].[EncodingString]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	5

SQL Script

CREATE TYPE [sdClassString].[EncodingString] FROM nvarchar (5) NOT NULL
GO

Uses

sdClassString

Used By

[Class].[Class]

[sdClassString].[ModeType]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	12

SQL Script

CREATE TYPE [sdClassString].[ModeType] FROM nvarchar (12) NOT NULL
GO

Uses

sdClassString

Used By

[Class].[ClassModeOfInstruction] [Class].[ModeOfInstruction]

iii [sdClassString].[SemesterString]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nchar
Length	16

SQL Script

CREATE TYPE [sdClassString].[SemesterString] FROM nchar (16) NOT NULL
GO

Uses

sdClassString

Used By

[Class].[Class]

🛅 [sdKeyNumeric].[SurrogateKeyInt]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [sdKeyNumeric].[SurrogateKeyInt] FROM int NOT NULL
GO
```

Uses

sdKeyNumeric

Used By

[Class].[Class]

[Class].[ClassDay]

[Class].[ClassModeOfInstruction]

[Class].[Course]

[Class].[ModeOfInstruction]

[DbSecurity].[UserAuthorization]

[Department].[Department]

[Location].[BuildingLocation]

[Location].[ClassRoomLocation]

[Location].[RoomLocation]

[Process].[WorkFlowStep]

[Staff].[DepartmentInstructor]

[Staff].[Instructor]

[Staff].[InstructorClass]

[Temporal].[Day]

[Project3Function].[tvf_CreateClassDay]

[Project3Function].[tvf CreateClassModeOfInstruction]

[Project3Function].[tvf_CreateClassRoomLocation]

[Project3Function].[tvf_CreateDepartmentInstructor]

[Project3Function].[tvf_CreateInstructorClass]

[sdLocationString].[BuildingName]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	25

SQL Script

CREATE TYPE [sdLocationString].[BuildingName] FROM nvarchar (25) NOT NULL GO

Uses

sdLocationString

Used By

[Location].[BuildingLocation]

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Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	9

SQL Script

CREATE TYPE [sdLocationString].[RoomString] FROM nvarchar (9) NOT NULL
GO

Uses

sdLocationString

Used By

[Location].[ClassRoomLocation]
[Location].[RoomLocation]
[Project3Function].[tvf_CreateClassRoomLocation]



Objects

Name
BiStudent
lbo
EC3\thehitman
guest
student



Property	Value
Туре	SqlUser
Default Schema	dbo

Database Level Permissions

Туре	Action
CONNECT	Grant

SQL Script

CREATE USER [BiStudent] WITHOUT LOGIN GO



Property	Value
Туре	SqlUser
Login Name	sa
Default Schema	dbo

Database Level Permissions

Туре	Action
CONNECT	Grant

SQL Script

GO



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

Database Level Permissions

Туре	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
```



Property	Value
Туре	SqlUser
Default Schema	guest

SQL Script

GO			



Property	Value
Туре	SqlUser
Default Schema	dbo

Database Level Permissions

Туре	Action
CONNECT	Grant

SQL Script

CREATE USER [student] WITHOUT LOGIN
GO

La Database Roles

Objects

Name
db_accessadmin
db_backupoperator
db_datareader
db_datawriter
db_ddladmin
db_denydatareader
db_denydatawriter
db_owner
db_securityadmin
public

♣ db_accessadmin

Properties

Property	Value
Owner	dbo

db_backupoperator

Properties

Property	Value
Owner	dbo

db_datareader

Properties

Property	Value
Owner	dbo

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

Project > localhost,13001 > User databases > QueensClassSchedule > Security > Roles > Database Roles > db_ddladmin

db_ddladmin

Properties

Property	Value
Owner	dbo

db_denydatareader

Properties

Property	Value
Owner	dbo

db_denydatawriter

Properties

Property	Value
Owner	dbo

db_owner

Project > localhost,13001 > User databases > QueensClassSchedule > Security > Roles > Database Roles > 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

nublic 🕰

Properties

Property	Value
Owner	dbo

△ Schemas

Objects

Name
Class
DbSecurity
dDateTime
Department
dNumeric
dString
GroupNameProject3
Location
Process
Project3Function
Project3Procedure
sdClassNumeric
sdClassString
sdKeyNumeric
sdLocationString
Staff
Temporal
Uploadfile
Utils
YourLastName

⚠ Class

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Class].[ClassDay]
[Class].[ClassModeOfInstruction]
[Class].[Course]
[Class].[ModeOfInstruction]

♣ DbSecurity

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[DbSecurity].[UserAuthorization]

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[dDateTime].[DateYYYYMMDD-HH:MM:SS-7Prec]

△ Department

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Department].[Department]

△ dNumeric

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[dNumeric].[RowCount]

△ dString

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[dString].[AbbreviationString]
[dString].[ClassTimeNchar5]
[dString].[DayName]
[dString].[PersonName]
[dString].[ProjectDescription]
[dString].[WorkFlowDescription]

Properties

Property	Value
Owner	dbo

SQL Script

CREATE SCHEMA [GroupNameProject3]
AUTHORIZATION [dbo]
GO

⚠ Location

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Location].[BuildingLocation]
[Location].[ClassRoomLocation]
[Location].[RoomLocation]

⚠ Process

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Process].[WorkFlowStep]
[Process].[usp_ShowWorkflowStep]
[Process].[usp_TrackWorkFlows]

♣ Project3Function

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [Project3Function]
AUTHORIZATION [dbo]
GO
```

Used By

[Project3Function].[tvf_CreateBuildingLocation]

[Project3Function].[tvf CreateClass]

[Project3Function].[tvf_CreateClassDay]

[Project3Function].[tvf_CreateClassModeOfInstruction]

[Project3Function].[tvf_CreateClassRoomLocation]

[Project3Function].[tvf_CreateCourse]

[Project3Function].[tvf_CreateDay]

[Project3Function].[tvf_CreateDepartment]

 $[Project 3 Function]. [tvf_Create Department Instructor] \\$

[Project3Function].[tvf_CreateInstructor]

[Project3Function].[tvf_CreateInstructorClass]

 $[Project 3 Function]. [tvf_CreateModeOfInstruction] \\$

 $[Project 3 Function]. [tvf_CreateRoomLocation] \\$

⚠ Project3Procedure

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [Project3Procedure]
AUTHORIZATION [dbo]
GO
```

Used By

[Project3Procedure].[LoadQueensCollegeScheduleDatabase]

[Project3Procedure].[ShowTableStatusRowCount]

[Project3Procedure].[TruncateQueensCollegeScheduleDatabase]

 $[Project 3 Procedure]. [usp_AddForeign Keys ToQueens Class Schedule Database] \\$

[Project3Procedure].[usp_CleanFileUpload]

[Project3Procedure].[usp_DropForeignKeysFromQueensClassScheduleDatabase]

[Project3Procedure].[usp_LoadBuildingLocation]

[Project3Procedure].[usp_LoadClass]

[Project3Procedure].[usp_LoadClassDay]

 $[Project 3 Procedure]. [usp_Load Class Mode Of Instruction] \\$

 $[Project 3 Procedure]. [usp_Load Class RoomLocation] \\$

[Project3Procedure].[usp_LoadCourse]

 $[Project 3 Procedure]. [usp_Load Day] \\$

 $[Project 3 Procedure]. [usp_Load Department] \\$

[Project3Procedure].[usp_LoadDepartmentInstructor]

[Project3Procedure].[usp LoadInstructor]

[Project3Procedure].[usp_LoadInstructorClass]

[Project3Procedure].[usp_LoadModeOfInstruction]

 $[Project 3 Procedure]. [usp_Load RoomLocation] \\$

△ sdClassNumeric

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[sdClassNumeric].[ClassStatistic] [sdClassNumeric].[ClassStatisticDecimal]

△ sdClassString

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[sdClassString].[ClassTimeInterval]
[sdClassString].[CourseDescriptionString]
[sdClassString].[CourseName]
[sdClassString].[DepartmentName]
[sdClassString].[EncodingString]
[sdClassString].[ModeType]
[sdClassString].[SemesterString]

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[sdKeyNumeric].[SurrogateKeyInt]

♣ sdLocationString

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[sdLocationString].[BuildingName] [sdLocationString].[RoomString]



Property	Value
Owner	dbo

SQL Script

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

Used By

[Staff].[DepartmentInstructor] [Staff].[Instructor] [Staff].[InstructorClass]

△ Temporal

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Temporal].[Day]

♣ Uploadfile

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Uploadfile].[CleanedCurrentSemesterCourseOfferings] [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