localhost, 13001 Documentation

QueensClassSchedule

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localhost, 13001

Databases (1)

- QueensClassSchedule

Server Properties

Property	Value
Product	Microsoft SQL Server
Version	15.0.4198.2
Language	English
Platform	NT x64
Edition	Developer Edition (64-bit)
Engine Edition	3 (Enterprise)
Processors	4
OS Version	6.2 (9200)
Physical Memory	10201
Is Clustered	False
Root Directory	C:\
Collation	SQL_Latin1_General_CP1_CI_AS

Server Settings

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

Advanced Server Settings

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

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

User databases

Databases (1)

- ⊟ QueensClassSchedule

☷ QueensClassSchedule Database

Database Properties

Property	Value
SQL Server Version	Max
Compatibility Level	SQL Server 2016
Last backup time	05/13/2022
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	63.89 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	NOTHING
Date correlation	False
CDC enabled	False
Encrypted	False
Honor broker priority	False
Default language	English
Default fulltext language LCID	1033
Nested triggers enabled	True
Transform noise words	False
Two-digit year cutoff	2049
Containment	NONE
Target recovery time	60
Database owner	sa

Files

Name	Type	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
Data.BuildingName
Data.Classes
Data.Course
Data.Departments
Data.InstructorCourses
Data.Instructors
Data.ModeOfInstruction
Data.RoomNumber
DbSecurity.UserAuthorization
G9_4.TempGoodData
Mode.BadData
Mode.GoodData
Process.WorkFlowSteps
Uploadfile.CurrentSemesterCourseOfferings

🖽 [Data].[BuildingName]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	23
Created	4:31:05 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	BuildingNameID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	BuildingName	[CHAR].[BuildingName]	2	NOT NULL		(N'N\A')
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_BuildingName_BuildingNameID	BuildingNameID	True

SQL Script

```
CREATE TABLE [Data].[BuildingName]
(
[BuildingNameID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[BuildingName] [CHAR].[BuildingName] NOT NULL CONSTRAINT [DF_BuildingName_BuildingName]
DEFAULT (N'N\A'),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_BuildingName_-
UserAuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_BuildingName_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_BuildingName_DateOf-
LastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
```

```
GO
ALTER TABLE [Data].[BuildingName] ADD CONSTRAINT [PK_BuildingName_BuildingNameID]
PRIMARY KEY CLUSTERED ([BuildingNameID]) ON [PRIMARY]
GO
```

Uses

[CHAR].[BuildingName]
[INT].[SurrogateKeyInt]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[Classes]
[Project3].[CreateBldingName]
[Project3].[CreateClass]

🖽 [Data].[Classes]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4565
Created	4:31:05 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	ClassID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
FK	CourseID	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	CourseName	[STRING].[CourseName]	10	NOT NULL		(N'N/A')
	CourseNumber	[STRING].[CourseNumber]	10	NOT NULL		(N'N/A')
	Description	[STRING].[Description]	50	NOT NULL		(N'N/A')
	Day	[TIME].[Day]	50	NOT NULL		((-1))
	StartTime	[TIME].[ClassStartTime]	10	NOT NULL		((-1))
	EndTime	[TIME].[ClassEndTime]	10	NOT NULL		((-1))
	Hour	[TIME].[Hour]	10	NOT NULL		((-1))
	Credit	[INT].[Credit]	8	NOT NULL		((-1))
FK	InstructorID	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
FK	BuildingID	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
FK	RoomNumber	[CHAR].[RoomNumber]	5	NOT NULL		((-1))
	Enrolled	[INT].[Enrolled]	4	NOT NULL		((-1))
	Limit	[INT].[Limit]	4	NOT NULL		((-1))
FK	ModeOfInstructionID	[INT].[SurrogateKeyInt]	4	NOT		((-1))

				NULL		
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_Class_ClassID	ClassID	True

Foreign Keys

Name	Columns
FK_Classes_BuildingNameID	BuildingID->[Data].[BuildingName].[BuildingNameID]
FK_Classes_CourseID	CourseID->[Data].[Course].[CourseID]
FK_Classes_InstructorID	InstructorID->[Data].[Instructors].[InstructorID]
FK_Classes_ModeOfInstructionID	ModeOfInstructionID->[Data].[ModeOfInstruction].[ModeOfInstructionID]
FK_Classes_RoomNumber	RoomNumber->[Data].[RoomNumber].[RoomNumber]

SQL Script

```
CREATE TABLE [Data].[Classes]
(
[ClassID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[CourseID] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Classes_CourseID] DEFAULT
((-1)),
[CourseName] [STRING].[CourseName] NOT NULL CONSTRAINT [DF_Classes_CourseName] DEFAULT
(N'N/A'),
[CourseNumber] [STRING].[CourseNumber] NOT NULL CONSTRAINT [DF_Classes_CourseNumber]
DEFAULT (N'N/A'),
[Description] [STRING].[Description] NOT NULL CONSTRAINT [DF_Classes_Description]
DEFAULT (N'N/A'),
[Day] [TIME].[Day] NOT NULL CONSTRAINT [DF_Classes_Day] DEFAULT ((-1)),
[StartTime] [TIME].[ClassStartTime] NOT NULL CONSTRAINT [DF_Classes_ClassStartTime]
DEFAULT ((-1)),
[EndTime] [TIME].[ClassEndTime] NOT NULL CONSTRAINT [DF_Classes_ClassEndTIme] DEFAULT
((-1)),
[Hour] [TIME].[Hour] NOT NULL CONSTRAINT [DF_Classes_Hour] DEFAULT ((-1)),
[Credit] [INT].[Credit] NOT NULL CONSTRAINT [DF_Classes_Credit] DEFAULT ((-1)),
[InstructorID] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Classes_InstructorID]
DEFAULT ((-1)),
[BuildingID] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Classes_BuildingID]
DEFAULT ((-1)),
[RoomNumber] [CHAR].[RoomNumber] NOT NULL CONSTRAINT [DF_Classes_RoomNumber] DEFAULT
((-1)),
[Enrolled] [INT].[Enrolled] NOT NULL CONSTRAINT [DF_Classes_Enrolled] DEFAULT ((-1)),
```

```
[Limit] [INT].[Limit] NOT NULL CONSTRAINT [DF_Classes_Limit] DEFAULT ((-1)),
[ModeOfInstructionID] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Classes_ModeOf-
InstructionID] DEFAULT ((-1)),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Classes_User-
AuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_Classes_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_Classes_DateOfLast-
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [PK_Class_ClassID] PRIMARY KEY CLUSTERED
([ClassID]) ON [PRIMARY]
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [FK_Classes_BuildingNameID] FOREIGN KEY
([BuildingID]) REFERENCES [Data].[BuildingName] ([BuildingNameID])
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [FK_Classes_CourseID] FOREIGN KEY ([Course-
ID]) REFERENCES [Data].[Course] ([CourseID])
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [FK_Classes_InstructorID] FOREIGN KEY
([InstructorID]) REFERENCES [Data].[Instructors] ([InstructorID])
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [FK_Classes_ModeOfInstructionID] FOREIGN
KEY ([ModeOfInstructionID]) REFERENCES [Data].[ModeOfInstruction] ([ModeOfInstruction-
ID])
GO
ALTER TABLE [Data].[Classes] ADD CONSTRAINT [FK_Classes_RoomNumber] FOREIGN KEY ([Room-
Number]) REFERENCES [Data].[RoomNumber] ([RoomNumber])
GO
```

Uses

[Data].[BuildingName]
[Data].[Course]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]
[CHAR].[RoomNumber]
[INT].[Credit]
[INT].[Enrolled]
[INT].[Limit]
[INT].[SurrogateKeyInt]
[STRING].[CourseName]
[STRING].[CourseNumber]
[STRING].[Description]
[TIME].[ClassEndTime]
[TIME].[ClassStartTime]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
[TIME].[Day]
[TIME].[Hour]
Data

Used By

[Project3].[CreateClass]

▦ [Data].[Course]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	2853
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	CourseID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	Code	[INT].[Code]	4	NOT NULL		((-1))
	Sec	[CHAR].[Section]	10	NOT NULL		(N'N/A')
	CourseName	[STRING].[CourseName]	10	NOT NULL		(N'N/A')
	CourseNumber	[STRING].[CourseNumber]	10	NOT NULL		(N'N/A')
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_CourseID	CourseID	True

SQL Script

```
CREATE TABLE [Data].[Course]
(
[CourseID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[Code] [INT].[Code] NOT NULL CONSTRAINT [DF_Couse_Code] DEFAULT ((-1)),
[Sec] [CHAR].[Section] NOT NULL CONSTRAINT [DF_Course_Section] DEFAULT (N'N/A'),
```

```
[CourseName] [STRING].[CourseName] NOT NULL CONSTRAINT [DF_Course_CourseName] DEFAULT
(N'N/A'),
[CourseNumber] [STRING].[CourseNumber] NOT NULL CONSTRAINT [DF_Course_CourseNumber]
DEFAULT (N'N/A'),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Course_User-
AuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_Course_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_Course_DateOfLast-
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Data].[Course] ADD CONSTRAINT [PK_CourseID] PRIMARY KEY CLUSTERED ([Course-
ID]) ON [PRIMARY]
GO
```

Uses

[CHAR].[Section]
[INT].[Code]
[INT].[SurrogateKeyInt]
[STRING].[CourseName]
[STRING].[CourseNumber]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[Classes]
[Project3].[CreateClass]
[Project3].[CreateCourse]

🖼 [Data].[Departments]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	77
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK🔑C	DepartmentID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
⛓	CourseName	[STRING].[CourseName]	10	NOT NULL		
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK🔑C	PK_DepartmentId	DepartmentID	True
	UQ__Departme__9526E2773E586F1D	CourseName	True

SQL Script

```
CREATE TABLE [Data].[Departments]
(
[DepartmentID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[CourseName] [STRING].[CourseName] NOT NULL,
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Departments_User-
AuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_Departments_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_Departments_DateOfLast-
Update] DEFAULT (sysdatetime())
```

```
) ON [PRIMARY]
GO
ALTER TABLE [Data].[Departments] ADD CONSTRAINT [PK_DepartmentId] PRIMARY KEY CLUSTERED
([DepartmentID]) ON [PRIMARY]
GO
ALTER TABLE [Data].[Departments] ADD CONSTRAINT [UQ__Departme__9526E2773E586F1D] UNIQUE
NONCLUSTERED ([CourseName]) ON [PRIMARY]
GO
```

Uses

[INT].[SurrogateKeyInt]
[STRING].[CourseName]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[InstructorCourses]
[Project3].[CreateDepartment]

🖼 [Data].[InstructorCourses]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1519
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK 🔑 C	AssignmentID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
FK 🔑	InstructorID	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
FK 🔑	TeachingCourse	[STRING].[CourseName]	10	NOT NULL		(N'N\A')
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK 🔑 C	PK_AssignmentID	AssignmentID	True

Foreign Keys

Name	Columns
FK_InstructorCourses_InstructorID	InstructorID->[Data].[Instructors].[InstructorID]
FK_InstructorCourses_TeachingCourse	TeachingCourse->[Data].[Departments].[CourseName]

SQL Script

```
CREATE TABLE [Data].[InstructorCourses]
```

```
(
[AssignmentID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[InstructorID] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_InstructorCourse_-
InstructorID] DEFAULT ((-1)),
[TeachingCourse] [STRING].[CourseName] NOT NULL CONSTRAINT [DF_InstructorCourse_Course-
Name] DEFAULT (N'N\A'),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Instructor-
Course_UserAuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_InstructorCourse_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_InstructorCourse_Date-
OfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Data].[InstructorCourses] ADD CONSTRAINT [PK_AssignmentID] PRIMARY KEY
CLUSTERED ([AssignmentID]) ON [PRIMARY]
GO
ALTER TABLE [Data].[InstructorCourses] ADD CONSTRAINT [FK_InstructorCourses_Instructor-
ID] FOREIGN KEY ([InstructorID]) REFERENCES [Data].[Instructors] ([InstructorID])
GO
ALTER TABLE [Data].[InstructorCourses] ADD CONSTRAINT [FK_InstructorCourses_Teaching-
Course] FOREIGN KEY ([TeachingCourse]) REFERENCES [Data].[Departments] ([CourseName])
GO
```

Uses

[Data].[Departments]
[Data].[Instructors]
[INT].[SurrogateKeyInt]
[STRING].[CourseName]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Project3].[CreateInstructorCourses]

📧 [Data].[Instructors]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	1441
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	InstructorID	[INT].[SurrogateKeyInt]	4	NOT NULL	1101 - 1	
	FirstName	[STRING].[FirstName]	50	NOT NULL		(N'N/A')
	LastName	[STRING].[LastName]	50	NOT NULL		(N'N/A')
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_InstructorId	InstructorID	True

SQL Script

```
CREATE TABLE [Data].[Instructors]
(
[InstructorID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1101, 1),
[FirstName] [STRING].[FirstName] NOT NULL CONSTRAINT [DF_Instructors_FirstName] DEFAULT
(N'N/A'),
[LastName] [STRING].[LastName] NOT NULL CONSTRAINT [DF_Instructors_LastName] DEFAULT
(N'N/A'),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_Instructor_User-
AuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_Instructor_DateAdded] DEFAULT
```

```
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_Instructor_DateOfLast-
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Data].[Instructors] ADD CONSTRAINT [PK_InstructorId] PRIMARY KEY CLUSTERED
([InstructorID]) ON [PRIMARY]
GO
```

Uses

[INT].[SurrogateKeyInt]
[STRING].[FirstName]
[STRING].[LastName]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[Classes]
[Data].[InstructorCourses]
[Project3].[CreateClass]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]

⊞ [Data].[ModeOfInstruction]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	4
Created	4:31:05 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	ModeOfInstructionID	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	ModeOfInstructions	[STRING].[ModeOfInstruction]	20	NOT NULL		(N'N\A')
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_ModeOfInstructionID	ModeOfInstructionID	True

SQL Script

```
CREATE TABLE [Data].[ModeOfInstruction]
(
[ModeOfInstructionID] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[ModeOfInstructions] [STRING].[ModeOfInstruction] NOT NULL CONSTRAINT [DF_ModeOf-
Instruction_ModeOfInstructions] DEFAULT (N'N\A'),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_ModeOf-
Instruction_UserAuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_ModeOfInstruction_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_ModeOfInstruction_Date-
OfLastUpdate] DEFAULT (sysdatetime())
) ON [PRIMARY]
```

```
GO
ALTER TABLE [Data].[ModeOfInstruction] ADD CONSTRAINT [PK_ModeOfInstructionID] PRIMARY
KEY CLUSTERED ([ModeOfInstructionID]) ON [PRIMARY]
GO
```

Uses

[INT].[SurrogateKeyInt]
[STRING].[ModeOfInstruction]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[Classes]
[Project3].[CreateClass]
[Project3].[CreateModeOfInstructionTable]

🖽 [Data].[RoomNumber]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	247
Created	4:31:05 AM Friday, May 13, 2022
Last Modified	4:31:06 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Default
PK C	RoomNumber	[CHAR].[RoomNumber]	5	NOT NULL	
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL	((-1))
	DateAdded	[TIME].[DateAdded]	8	NULL allowed	(sysdatetime())
	DateOfLastUpdate	[TIME].[DateOfLastUpdate]	8	NULL allowed	(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_RoomNumber_RoomNumber	RoomNumber	True

SQL Script

```
CREATE TABLE [Data].[RoomNumber]
(
[RoomNumber] [CHAR].[RoomNumber] NOT NULL,
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL CONSTRAINT [DF_RoomNumber_User-
AuthorizationKey] DEFAULT ((-1)),
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [DF_RoomNumber_DateAdded] DEFAULT
(sysdatetime()),
[DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL CONSTRAINT [DF_RoomNumber_DateOfLast-
Update] DEFAULT (sysdatetime())
) ON [PRIMARY]
GO
ALTER TABLE [Data].[RoomNumber] ADD CONSTRAINT [PK_RoomNumber_RoomNumber] PRIMARY KEY
CLUSTERED ([RoomNumber]) ON [PRIMARY]
GO
```

Uses

[CHAR].[RoomNumber]
[INT].[SurrogateKeyInt]
[TIME].[DateAdded]
[TIME].[DateOfLastUpdate]
Data

Used By

[Data].[Classes]
[Project3].[CreateClass]
[Project3].[CreateRoomNumber]

▦ [DbSecurity].[UserAuthorization]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	5
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:04 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	ClassTime	[CHAR].[ClassTime]	10	NULL allowed		('9:15')
	IndivisualProject	[STRING].[IndivisualProject]	120	NULL allowed		('PROJECT 3 NORMALIZE Queens-Class-Schedule DATABASE')
	GroupMemberFirstName	[STRING].[GroupMemberFirst-Name]	70	NOT NULL		
	GroupMemberLastName	[STRING].[GroupMemberLast-Name]	50	NOT NULL		
	DateAdded	[TIME].[DateAdded]	8	NULL allowed		(sysdatetime())

Indexes

Key	Name	Key Columns	Unique
PK C	PK_UserAuthorizationKey	UserAuthorizationKey	True

SQL Script

```
CREATE TABLE [DbSecurity].[UserAuthorization]
(
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
```

```
[ClassTime] [CHAR].[ClassTime] NULL CONSTRAINT [def_ClassTime] DEFAULT ('9:15'),
[IndivisualProject] [STRING].[IndivisualProject] NULL CONSTRAINT [def_Indivisual-
Project] DEFAULT ('PROJECT 3 NORMALIZE QueensClassSchedule DATABASE'),
[GroupMemberFirstName] [STRING].[GroupMemberFirstName] NOT NULL,
[GroupMemberLastName] [STRING].[GroupMemberLastName] NOT NULL,
[DateAdded] [TIME].[DateAdded] NULL CONSTRAINT [def_DateAdded] DEFAULT (sysdatetime()),
) ON [PRIMARY]
GO
ALTER TABLE [DbSecurity].[UserAuthorization] ADD CONSTRAINT [PK_UserAuthorizationKey]
PRIMARY KEY CLUSTERED ([UserAuthorizationKey]) ON [PRIMARY]
GO
```

Uses

[CHAR].[ClassTime]
[INT].[SurrogateKeyInt]
[STRING].[GroupMemberFirstName]
[STRING].[GroupMemberLastName]
[STRING].[IndivisualProject]
[TIME].[DateAdded]
DbSecurity

Used By

[Project3].[SettingTables]

▦ [G9_4].[TempGoodData]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Heap	True
Row Count (~)	3159
Created	11:05:43 PM Monday, May 9, 2022
Last Modified	11:05:43 PM Monday, May 9, 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

SQL Script

```
CREATE TABLE [G9_4].[TempGoodData]
(
[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,
[Enrolled] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
```

```
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
GO
```

Uses

G9_4

```
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
```

🖻 [Mode].[BadData]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Heap	True
Row Count (~)	1363
Created	6:21:32 PM Monday, May 9, 2022
Last Modified	6:21:32 PM Monday, May 9, 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

SQL Script

```
CREATE TABLE [Mode].[BadData]
(
[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,
[Enrolled] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
```

```
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
GO
```

Uses

Mode

📧 [Mode].[GoodData]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Heap	True
Row Count (~)	3159
Created	6:21:32 PM Monday, May 9, 2022
Last Modified	6:21:32 PM Monday, May 9, 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

SQL Script

```
CREATE TABLE [Mode].[GoodData]
(
[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,
[Enrolled] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
```

```
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
GO
```

Uses

Mode

Used By

[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]

⊞ [Process].[WorkFlowSteps]

Properties

Property	Value
Collation	SQL_Latin1_General_CP1_CI_AS
Row Count (~)	11
Created	4:31:04 AM Friday, May 13, 2022
Last Modified	4:31:04 AM Friday, May 13, 2022

Columns

Key	Name	Data Type	Max Length (Bytes)	Nullability	Identity	Default
PK C	WorkFlowStepKey	[INT].[SurrogateKeyInt]	4	NOT NULL	1 - 1	
	UserAuthorizationKey	[INT].[SurrogateKeyInt]	4	NOT NULL		
	WorkFlowStepDescription	[STRING].[WorkFlowSteps-Description]	200	NOT NULL		
	WorkFlowStepTableRowCount	[INT].[WorkFlowStepTable-RowCount]	4	NULL allowed		
	StartingDateTime	[TIME].[StartTime]	8	NULL allowed		(sysdatetime())
	EndingDateTime	[TIME].[EndTime]	8	NULL allowed		(sysdatetime())
	ClassTime	[CHAR].[ClassTime]	10	NULL allowed		('9:15')

Indexes

Key	Name	Key Columns	Unique
PK C	PK_WorkFlowStepKey	WorkFlowStepKey	True

SQL Script

```
CREATE TABLE [Process].[WorkFlowSteps]
(
[WorkFlowStepKey] [INT].[SurrogateKeyInt] NOT NULL IDENTITY(1, 1),
[UserAuthorizationKey] [INT].[SurrogateKeyInt] NOT NULL,
[WorkFlowStepDescription] [STRING].[WorkFlowStepsDescription] NOT NULL,
[WorkFlowStepTableRowCount] [INT].[WorkFlowStepTableRowCount] NULL,
[StartingDateTime] [TIME].[StartTime] NULL CONSTRAINT [DF__WorkFlowS__Start__69E778DD]
```

```
DEFAULT (sysdatetime()),
[EndingDateTime] [TIME].[EndTime] NULL CONSTRAINT [DF__WorkFlowS__Endin__6ADB9D16]
DEFAULT (sysdatetime()),
[ClassTime] [CHAR].[ClassTime] NULL CONSTRAINT [DF__WorkFlowS__Class__6BCFC14F] DEFAULT
('9:15')
) ON [PRIMARY]
GO
ALTER TABLE [Process].[WorkFlowSteps] ADD CONSTRAINT [PK_WorkFlowStepKey] PRIMARY KEY
CLUSTERED ([WorkFlowStepKey]) ON [PRIMARY]
GO
```

Uses

[CHAR].[ClassTime]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[STRING].[WorkFlowStepsDescription]
[TIME].[EndTime]
[TIME].[StartTime]
Process

Used By

[Process].[ShowWorkFlowSteps]
[Process].[usp_TrackWorkFlow]

🖼 [Uploadfile].[CurrentSemesterCourseOfferings]

Properties

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

Columns

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

SQL Script

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

```
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
) ON [PRIMARY]
GO
```

Uses

Uploadfile

```
[Limit] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL,
[Mode of Instruction] [varchar] (50) COLLATE SQL_Latin1_General_CP1_CI_AS NULL
```

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

SQL Script

```
CREATE VIEW [Utils].[uvw_FindColumnDefinitionPlusDefaultAndCheckConstraint] AS
SELECT  CONCAT(tbl.TABLE_SCHEMA, '.', tbl.TABLE_NAME) AS FullyQualifiedTableName ,
        tbl.TABLE_SCHEMA AS SchemaName ,
        tbl.TABLE_NAME AS TableName ,
        col.COLUMN_NAME AS ColumnName ,
        col.ORDINAL_POSITION AS OrdinalPosition,
        CONCAT(col.DOMAIN_SCHEMA, '.', col.DOMAIN_NAME) AS FullyQualifiedDomainName ,
        col.DOMAIN_NAME AS DomainName ,
        CASE
```

```sql
                WHEN col.DATA_TYPE = 'varchar'
                THEN CONCAT('varchar(', CHARACTER_MAXIMUM_LENGTH, ')')
                WHEN col.DATA_TYPE = 'nvarchar'
                THEN CONCAT('nvarchar(', CHARACTER_MAXIMUM_LENGTH, ')')
                WHEN col.DATA_TYPE = 'nchar'
                THEN CONCAT('nchar(', CHARACTER_MAXIMUM_LENGTH, ')')
                WHEN col.DATA_TYPE = 'numeric'
                THEN CONCAT('numeric(', NUMERIC_PRECISION_RADIX, ', ',
                        NUMERIC_SCALE, ')')
                WHEN col.DATA_TYPE = 'decimal'
                THEN CONCAT('decimal(', NUMERIC_PRECISION_RADIX, ', ',
                        NUMERIC_SCALE, ')')
                ELSE col.DATA_TYPE
        END AS DataType ,
        col.IS_NULLABLE AS IsNullable,
        dcn.DefaultName ,
        col.COLUMN_DEFAULT AS DefaultNameDefinition ,
        cc.CONSTRAINT_NAME AS CheckConstraintRuleName,
        cc.CHECK_CLAUSE  AS CheckConstraintRuleNameDefinition
FROM    ( SELECT    TABLE_CATALOG ,
                    TABLE_SCHEMA ,
                    TABLE_NAME ,
                    TABLE_TYPE
          FROM      INFORMATION_SCHEMA.TABLES
          WHERE     ( TABLE_TYPE = 'BASE TABLE' )
        ) AS tbl
        INNER JOIN ( SELECT TABLE_CATALOG ,
                            TABLE_SCHEMA ,
                            TABLE_NAME ,
                            COLUMN_NAME ,
                            ORDINAL_POSITION ,
                            COLUMN_DEFAULT ,
                            IS_NULLABLE ,
                            DATA_TYPE ,
                            CHARACTER_MAXIMUM_LENGTH ,
                            CHARACTER_OCTET_LENGTH ,
                            NUMERIC_PRECISION ,
                            NUMERIC_PRECISION_RADIX ,
                            NUMERIC_SCALE ,
                            DATETIME_PRECISION ,
                            CHARACTER_SET_CATALOG ,
                            CHARACTER_SET_SCHEMA ,
                            CHARACTER_SET_NAME ,
                            COLLATION_CATALOG ,
                            COLLATION_SCHEMA ,
                            COLLATION_NAME ,
                            DOMAIN_CATALOG ,
                            DOMAIN_SCHEMA ,
                            DOMAIN_NAME
                     FROM   INFORMATION_SCHEMA.COLUMNS
                   ) AS col ON col.TABLE_CATALOG = tbl.TABLE_CATALOG
                            AND col.TABLE_SCHEMA = tbl.TABLE_SCHEMA
                            AND col.TABLE_NAME = tbl.TABLE_NAME
```

```
        LEFT OUTER JOIN ( SELECT    t.name AS TableName ,
                                    SCHEMA_NAME(s.schema_id) AS SchemaName ,
                                    ac.name AS ColumnName ,
                                    d.name AS DefaultName
                        FROM        sys.all_columns AS ac
                                    INNER JOIN sys.tables AS t ON ac.object_id =
t.object_id
                                    INNER JOIN sys.schemas AS s ON t.schema_id =
s.schema_id
                                    INNER JOIN sys.default_constraints AS d ON
ac.default_object_id = d.object_id
                        ) AS dcn ON dcn.SchemaName = tbl.TABLE_SCHEMA
                                    AND dcn.TableName = tbl.TABLE_NAME
                                    AND dcn.ColumnName = col.COLUMN_NAME
        LEFT OUTER JOIN ( SELECT    cu.TABLE_CATALOG ,
                                    cu.TABLE_SCHEMA ,
                                    cu.TABLE_NAME ,
                                    cu.COLUMN_NAME ,
                                    c.CONSTRAINT_CATALOG ,
                                    c.CONSTRAINT_SCHEMA ,
                                    c.CONSTRAINT_NAME ,
                                    c.CHECK_CLAUSE
                        FROM        INFORMATION_SCHEMA.CONSTRAINT_COLUMN_USAGE
                                    AS cu
                                    INNER JOIN INFORMATION_SCHEMA.CHECK_CONSTRAINTS
                                    AS c ON c.CONSTRAINT_NAME = cu.CONSTRAINT_NAME
                        ) AS cc ON cc.TABLE_SCHEMA = tbl.TABLE_SCHEMA
                                    AND cc.TABLE_NAME = tbl.TABLE_NAME
                                    AND cc.COLUMN_NAME = col.COLUMN_NAME


GO
```

Uses

Utils

🗒 *Stored Procedures*

Objects

Name
Process.ShowWorkFlowSteps
Process.usp_TrackWorkFlow
Project3.AddForiegnKeys
Project3.CreateBldingName
Project3.CreateClass
Project3.CreateCourse
Project3.CreateDepartment
Project3.CreateInstructorCourses
Project3.CreateInstructors
Project3.CreateModeOfInstructionTable
Project3.CreateRoomNumber
Project3.CreateUdts
Project3.DropForiegnKeys
Project3.NormalizeDatabase
Project3.SettingTables
Project3.ShowNormalizeDatabase

🗎 [Process].[ShowWorkFlowSteps]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```
CREATE PROCEDURE [Process].[ShowWorkFlowSteps]
AS
BEGIN
    SELECT *
    FROM Process.WorkFlowSteps;
END
GO
```

Uses

[Process].[WorkFlowSteps]
Process

Used By

[Project3].[ShowNormalizeDatabase]

🗒 [Process].[usp_TrackWorkFlow]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

Name	Data Type	Max Length (Bytes)
@StartTime	StartTime	8
@EndTIme	EndTime	8
@WorkFlowStepsDescription	WorkFlowStepsDescription	200
@WorkFlowStepTableRowCount	WorkFlowStepTableRowCount	4
@UserAuthorizationKey	SurrogateKeyInt	4
@ClassTime	ClassTime	10

SQL Script

```
CREATE PROCEDURE [Process].[usp_TrackWorkFlow]
@StartTime [TIME].[StartTime] NULL,
@EndTIme [TIME].[EndTIme] NULL,
@WorkFlowStepsDescription [STRING].[WorkFlowStepsDescription] NULL,
@WorkFlowStepTableRowCount [INT].[WorkFlowStepTableRowCount] NULL,
@UserAuthorizationKey [INT].SurrogateKeyInt NULL,
@ClassTime [CHAR].[ClassTime] NULL
AS
BEGIN
    INSERT INTO Process.WorkflowSteps(UserAuthorizationKey,WorkFlowStep-
Description,WorkFlowStepTableRowCount,StartingDateTime,EndingDateTime)
    VALUES (@UserAuthorizationKey,@WorkFlowStepsDescription,@workFlowStepTableRow-
Count,@StartTime,@EndTime);
END;
GO
```

Uses

[Process].[WorkFlowSteps]
[CHAR].[ClassTime]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[STRING].[WorkFlowStepsDescription]

[TIME].[EndTime]
[TIME].[StartTime]
Process

Used By

[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[DropForiegnKeys]
[Project3].[NormalizeDatabase]

🗒 [Project3].[AddForiegnKeys]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[AddForiegnKeys]  @UserAuthorizationKey [INT].SurrogateKey-
Int
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    ALTER TABLE [Data].[Classes]
    ADD CONSTRAINT FK_Classes_CourseID FOREIGN KEY (CourseID) REFERENCES
[Data].[Course](CourseID);

    ALTER TABLE [Data].[Classes]
    ADD CONSTRAINT FK_Classes_InstructorID FOREIGN KEY (InstructorID) REFERENCES
[Data].[Instructors](InstructorID);

    ALTER TABLE [Data].[Classes]
    ADD CONSTRAINT FK_Classes_BuildingNameID FOREIGN KEY (BuildingID) REFERENCES
[Data].BuildingName(BuildingNameID);

    ALTER TABLE [Data].[Classes]
    ADD CONSTRAINT FK_Classes_RoomNumber FOREIGN KEY (RoomNumber) REFERENCES
[Data].RoomNumber(RoomNumber);

    ALTER TABLE [Data].[Classes]
    ADD CONSTRAINT FK_Classes_ModeOfInstructionID FOREIGN KEY (ModeOfInstructionID)
REFERENCES [Data].ModeOfInstruction(ModeOfInstructionID);

    ALTER TABLE [Data].InstructorCourses
    ADD CONSTRAINT FK_InstructorCourses_InstructorID FOREIGN KEY (InstructorID)
REFERENCES [Data].Instructors(InstructorID);

    ALTER TABLE [Data].InstructorCourses
    ADD CONSTRAINT FK_InstructorCourses_TeachingCourse FOREIGN KEY ([TeachingCourse])
```

```
REFERENCES [Data].[Departments](CourseName);

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Add Foreign Keys',
                                    @WorkflowStepTableRowCount = 0,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=null;
END

DROP PROCEDURE IF EXISTS Project3.DropForeignKeys;
GO
```

Uses

[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[TIME].[EndTime]
[TIME].[StartTime]
Project3

Used By

[Project3].[NormalizeDatabase]

🖻 [Project3].[CreateBldingName]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[CreateBldingName] @UserAuthorizationKey [INT].SurrogateKey-
Int
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[BuildingName];
    CREATE TABLE [Data].[BuildingName]
    (
    BuildingNameID [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
        CONSTRAINT PK_BuildingName_BuildingNameID PRIMARY KEY,
    BuildingName [CHAR].BuildingName NOT NULL
        CONSTRAINT DF_BuildingName_BuildingName DEFAULT (N'N\A'),
    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_BuildingName_UserAuthorizationKey DEFAULT -1,
    [DateAdded] [TIME].[DateAdded] NULL
        CONSTRAINT DF_BuildingName_DateAdded DEFAULT SYSDATETIME(),
    [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
        CONSTRAINT DF_BuildingName_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[BuildingName]
    (
    BuildingName,
    [UserAuthorizationKey],
    [DateAdded],
    [DateOfLastUpdate]
    )
    SELECT DISTINCT
```

```
        L.BuildingName,
        @UserAuthorizationKey,
        SYSDATETIME(),
        SYSDATETIME()
    FROM Mode.GoodData AS G
    CROSS APPLY dbo.SplitLocationColumn(G.Location) AS L


    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[BuildingName]);

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                        @WorkFlowStepsDescription=N'Create BuidingName
table',
                                        @WorkflowStepTableRowCount = @RowCount,
                                        @StartTime=@StartTime,
                                        @EndTime=@EndTime,
                                        @ClassTime=null;
END
GO
```

Uses

[Data].[BuildingName]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
[dbo].[SplitLocationColumn]
Project3

Used By

[Project3].[NormalizeDatabase]

🖿 [Project3].[CreateClass]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[CreateClass] @UserAuthorizationKey [INT].SurrogateKeyInt
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[Classes];
    CREATE TABLE [Data].[Classes]
    (
    ClassID [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
        CONSTRAINT PK_Class_ClassID PRIMARY KEY,
    CourseID [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Classes_CourseID DEFAULT -1,
    CourseName [STRING].CourseName NOT NULL
        CONSTRAINT DF_Classes_CourseName DEFAULT (N'N/A'),
    CourseNumber [STRING].CourseNumber NOT NULL
        CONSTRAINT DF_Classes_CourseNumber DEFAULT (N'N/A'),
    [Description] [STRING].[Description] NOT NULL
        CONSTRAINT DF_Classes_Description DEFAULT (N'N/A'),
    [Day] [TIME].[Day] NOT NULL
        CONSTRAINT DF_Classes_Day DEFAULT -1,
    StartTime [TIME].[ClassStartTime] NOT NULL
        CONSTRAINT DF_Classes_ClassStartTime DEFAULT -1,
    EndTime [TIME].[ClassEndTIme] NOT NULL
        CONSTRAINT DF_Classes_ClassEndTIme DEFAULT -1,
    [Hour] [TIME].[Hour] NOT NULL
        CONSTRAINT DF_Classes_Hour DEFAULT -1,
    Credit [INT].[Credit] NOT NULL
        CONSTRAINT DF_Classes_Credit DEFAULT -1,
```

```
    InstructorID [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Classes_InstructorID DEFAULT -1,
    BuildingID [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Classes_BuildingID DEFAULT -1,
    RoomNumber [CHAR].RoomNumber NOT NULL
        CONSTRAINT DF_Classes_RoomNumber DEFAULT -1,
    Enrolled [INT].[Enrolled] NOT NULL
        CONSTRAINT DF_Classes_Enrolled DEFAULT -1,
    Limit [INT].[Limit] NOT NULL
        CONSTRAINT DF_Classes_Limit DEFAULT -1,
    ModeOfInstructionID [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Classes_ModeOfInstructionID DEFAULT -1,
    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Classes_UserAuthorizationKey DEFAULT -1,
    [DateAdded] [TIME].[DateAdded] NULL
        CONSTRAINT DF_Classes_DateAdded DEFAULT SYSDATETIME(),
    [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
        CONSTRAINT DF_Classes_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[Classes]
    (
    CourseID,
    CourseName,
    CourseNumber,
    [Description],
    [Day],
    StartTime,
    EndTime,
    [Hour],
    Credit,
    InstructorID,
    BuildingID,
    RoomNumber,
    Enrolled,
    Limit,
    ModeOfInstructionID,
    UserAuthorizationKey,
    DateAdded,
    DateOfLastUpdate
    )
    SELECT DISTINCT C2.CourseID,
        C2.CourseName,
        C2.CourseNumber,
        G.[Description],
        D.[Day],
        T.StartTime,
        T.EndTime,
        C1.[Hour(s)],
        C1.[Credit(s)],
        I2.InstructorID,
        BN.BuildingNameID,
        RN.RoomNumber,
        G.Enrolled,
```

```
        G.Limit,
        MOI.ModeOfInstructionID,
        @UserAuthorizationKey,
        SYSDATETIME(),
        SYSDATETIME()
    FROM Mode.GoodData AS G
     CROSS APPLY dbo.SplitCourseColumn(G.[Course (hr, crd)]) AS C1
        CROSS APPLY dbo.SplitDayColumn(G.[Day]) AS D
        CROSS APPLY dbo.SplitInstructorColumn(G.Instructor) AS I1
        CROSS APPLY dbo.SplitTimeColumn(G.[Time]) AS T
        CROSS APPLY dbo.SplitLocationColumn(G.[Location]) AS L
        INNER JOIN [Data].Course AS C2 ON (C1.CourseName = C2.CourseName AND C1.Course-
Number = C2.CourseNumber AND G.Sec = C2.Sec AND G.Code = C2.Code)
        INNER JOIN [Data].Instructors as I2 ON (I1.FirstName=I2.FirstName AND I1.Last-
Name = I2.LastName)
        INNER JOIN [Data].BuildingName as BN ON (L.BuildingName=BN.BuildingName)
        INNER JOIN [Data].RoomNumber as RN ON (l.RoomNumber = RN.RoomNumber)
        INNER JOIN [Data].[ModeOfInstruction] as MOI ON (G.[Mode Of
Instruction]=MOI.ModeOfInstructions)


    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[Classes]);

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                           @WorkFlowStepsDescription=N'Create Class
table',
                                           @WorkflowStepTableRowCount = @RowCount,
                                           @StartTime=@StartTime,
                                           @EndTime=@EndTime,
                                           @ClassTime=null;
END;
GO
```

Uses

[Data].[BuildingName]
[Data].[Classes]
[Data].[Course]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
[dbo].[SplitCourseColumn]

[dbo].[SplitDayColumn]
[dbo].[SplitInstructorColumn]
[dbo].[SplitLocationColumn]
[dbo].[SplitTimeColumn]
Project3

Used By

[Project3].[NormalizeDatabase]

📄 [Project3].[CreateCourse]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE PROCEDURE [Project3].[CreateCourse] @UserAuthorizationKey [INT].SurrogateKeyInt
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[Course];
    CREATE TABLE [Data].[Course]
    (
    CourseID [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
        CONSTRAINT PK_CourseID PRIMARY KEY,
    Code [INT].Code NOT NULL
        CONSTRAINT DF_Couse_Code DEFAULT -1,
    Sec [CHAR].Section NOT NULL
        CONSTRAINT DF_Course_Section DEFAULT (N'N/A'),
    CourseName [STRING].CourseName NOT NULL
        CONSTRAINT DF_Course_CourseName DEFAULT (N'N/A'),
    CourseNumber [STRING].CourseNumber NOT NULL
        CONSTRAINT DF_Course_CourseNumber DEFAULT (N'N/A'),
    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_Course_UserAuthorizationKey DEFAULT -1,
    [DateAdded] [TIME].[DateAdded] NULL
        CONSTRAINT DF_Course_DateAdded DEFAULT SYSDATETIME(),
    [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
        CONSTRAINT DF_Course_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[Course]
    (
    Code,
    Sec,
    CourseName,
```

```
    CourseNumber,
    UserAuthorizationKey,
    DateAdded,
    DateOfLastUpdate
    )
    SELECT DISTINCT
    G.Code,
    G.Sec,
    S.CourseName,
    S.CourseNumber,
    @UserAuthorizationKey,
    SYSDATETIME(),
    SYSDATETIME()
    FROM  Mode.GoodData AS G
    CROSS APPLY dbo.SplitCourseColumn(G.[Course (hr, crd)]) AS S
    ORDER BY S.CourseName, S.CourseNumber, G.Sec, G.Code

    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[Course]);

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                  @WorkFlowStepsDescription=N'Create Course
table',
                                  @WorkflowStepTableRowCount = @RowCount,
                                  @StartTime=@StartTime,
                                  @EndTime=@EndTime,
                                  @ClassTime=null;



END
GO
```

Uses

[Data].[Course]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
[dbo].[SplitCourseColumn]
Project3

Used By

[Project3].[NormalizeDatabase]

📄 [Project3].[CreateDepartment]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[CreateDepartment] @UserAuthorizationKey [INT].SurrogateKey-
Int
AS
BEGIN

    SET NOCOUNT ON;

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[Departments];
    CREATE TABLE [Data].[Departments]
    (
        [DepartmentID] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT PK_DepartmentId PRIMARY KEY CLUSTERED ([DepartmentID])
IDENTITY(1,1),
        [CourseName] [STRING].[CourseName] NOT NULL UNIQUE,
        [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT DF_Departments_UserAuthorizationKey DEFAULT -1,
        [DateAdded] [TIME].[DateAdded] NULL
            CONSTRAINT DF_Departments_DateAdded DEFAULT SYSDATETIME(),
        [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
            CONSTRAINT DF_Departments_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[Departments]
    (
        [CourseName],
        [UserAuthorizationKey],
        [DateAdded],
```

```
            [DateOfLastUpdate]
    )
    SELECT DISTINCT
        [CourseName],
        @UserAuthorizationKey,
        SYSDATETIME(),
        SYSDATETIME()
    FROM Mode.GoodData AS G
    CROSS APPLY dbo.SplitCourseColumn(G.[Course (hr, crd)])

    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[Departments]);

        DECLARE @EndTime [TIME].[EndTime] =SYSDATETIME();

        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Created Department
table',
                                    @WorkflowStepTableRowCount = @RowCount,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=null;



END
GO
```

Uses

[Data].[Departments]

[Mode].[GoodData]

[Process].[usp_TrackWorkFlow]

[INT].[SurrogateKeyInt]

[INT].[WorkFlowStepTableRowCount]

[TIME].[EndTime]

[TIME].[StartTime]

[dbo].[SplitCourseColumn]

Project3

Used By

[Project3].[NormalizeDatabase]

🖼 [Project3].[CreateInstructorCourses]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE PROCEDURE [Project3].[CreateInstructorCourses] @UserAuthorizationKey
[INT].SurrogateKeyInt
AS
BEGIN

    SET NOCOUNT ON;

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[InstructorCourses];
    CREATE TABLE [Data].[InstructorCourses]
    (
        [AssignmentID] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT PK_AssignmentID PRIMARY KEY CLUSTERED ([AssignmentID])
IDENTITY(1,1),
        [InstructorID] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT DF_InstructorCourse_InstructorID DEFAULT -1,
        [TeachingCourse] [String].[CourseName] NOT NULL
            CONSTRAINT DF_InstructorCourse_CourseName DEFAULT (N'N\A'),
        [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT DF_InstructorCourse_UserAuthorizationKey DEFAULT -1,
        [DateAdded] [TIME].[DateAdded] NULL
            CONSTRAINT DF_InstructorCourse_DateAdded DEFAULT SYSDATETIME(),
        [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
            CONSTRAINT DF_InstructorCourse_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[InstructorCourses]
    (
```

```sql
        [InstructorID],
        [TeachingCourse],
        [UserAuthorizationKey],
        [DateAdded],
        [DateOfLastUpdate]
    )
        SELECT DISTINCT
            I2.InstructorID,
            C.CourseName,
            @UserAuthorizationKey,
            SYSDATETIME(),
            SYSDATETIME()
        FROM Mode.GoodData AS G
        CROSS APPLY dbo.SplitInstructorColumn(G.Instructor) AS I
        CROSS APPLY dbo.SplitCourseColumn(G.[Course (hr, crd)]) AS C
        INNER JOIN [Data].Instructors AS I2
        ON (I.FirstName = I2.FirstName AND I.LastName = I2.LastName)

    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[InstructorCourses]);


        DECLARE @EndTime [TIME].[EndTime] =SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                      @WorkFlowStepsDescription=N'Created Instructor-
Courses Table',
                                      @WorkflowStepTableRowCount = @RowCount,
                                      @StartTime=@StartTime,
                                      @EndTime=@EndTime,
                                      @ClassTime=NULL;


END
GO
```

Uses

[Data].[InstructorCourses]

[Data].[Instructors]

[Mode].[GoodData]

[Process].[usp_TrackWorkFlow]

[INT].[SurrogateKeyInt]

[INT].[WorkFlowStepTableRowCount]

[TIME].[EndTime]

[TIME].[StartTime]

[dbo].[SplitCourseColumn]

[dbo].[SplitInstructorColumn]

Project3

Used By

[Project3].[NormalizeDatabase]

📄 [Project3].[CreateInstructors]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[CreateInstructors] @UserAuthorizationKey [INT].Surrogate-
KeyInt
AS
BEGIN

    SET NOCOUNT ON;

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[Instructors];
    CREATE TABLE [Data].[Instructors]
    (
        [InstructorID] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT PK_InstructorId PRIMARY KEY CLUSTERED ([InstructorID])
IDENTITY(1101,1),
        [FirstName] [STRING].[FirstName] NOT NULL
            CONSTRAINT DF_Instructors_FirstName DEFAULT(N'N/A'),
        [LastName] [STRING].[LastName] NOT NULL
            CONSTRAINT DF_Instructors_LastName DEFAULT(N'N/A'),
        [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
            CONSTRAINT DF_Instructor_UserAuthorizationKey DEFAULT -1,
        [DateAdded] [TIME].[DateAdded] NULL
            CONSTRAINT DF_Instructor_DateAdded DEFAULT SYSDATETIME(),
        [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
            CONSTRAINT DF_Instructor_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[Instructors]
    (
        [FirstName],
```

```sql
        [LastName],
        [UserAuthorizationKey],
        [DateAdded],
        [DateOfLastUpdate]
    )
    SELECT DISTINCT
        I.[FirstName],
        I.[LastName],
        @UserAuthorizationKey,
        SYSDATETIME(),
        SYSDATETIME()
    FROM Mode.GoodData AS G
    CROSS APPLY dbo.SplitInstructorColumn(G.Instructor) AS I

    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[Instructors]);

        DECLARE @EndTime [TIME].[EndTime] =SYSDATETIME();

        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Created Instructors
table',
                                    @WorkflowStepTableRowCount = @RowCount,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=NULL;


END
GO
```

Uses

[Data].[Instructors]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
[dbo].[SplitInstructorColumn]
Project3

Used By

[Project3].[NormalizeDatabase]

📖 [Project3].[CreateModeOfInstructionTable]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE PROCEDURE [Project3].[CreateModeOfInstructionTable] @UserAuthorizationKey
[INT].SurrogateKeyInt
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[ModeOfInstruction];
    CREATE TABLE [Data].[ModeOfInstruction]
    (
    ModeOfInstructionID [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
        CONSTRAINT PK_ModeOfInstructionID PRIMARY KEY,
    ModeOfInstructions [STRING].ModeOfInstruction NOT NULL
        CONSTRAINT DF_ModeOfInstruction_ModeOfInstructions DEFAULT (N'N\A'),
    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_ModeOfInstruction_UserAuthorizationKey DEFAULT -1,
    [DateAdded] [TIME].[DateAdded] NULL
        CONSTRAINT DF_ModeOfInstruction_DateAdded DEFAULT SYSDATETIME(),
    [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
        CONSTRAINT DF_ModeOfInstruction_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[ModeOfInstruction]
    (
    ModeOfInstructions,
    [UserAuthorizationKey],
    [DateAdded],
    [DateOfLastUpdate]
    )
    SELECT DISTINCT
    G.[Mode of Instruction],
```

```
    @UserAuthorizationKey,
    SYSDATETIME(),
    SYSDATETIME()
    FROM Mode.GoodData AS G

    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[ModeOfInstruction]);

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Create ModeOf-
Instruction table',
                                    @WorkflowStepTableRowCount = @RowCount,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=null;
END
GO
```

Uses

[Data].[ModeOfInstruction]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
Project3

Used By

[Project3].[NormalizeDatabase]

📄 [Project3].[CreateRoomNumber]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[CreateRoomNumber] @UserAuthorizationKey [INT].SurrogateKey-
Int
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    DROP TABLE IF EXISTS [Data].[RoomNumber];
    CREATE TABLE [Data].[RoomNumber]
    (
    [RoomNumber] [CHAR].RoomNumber NOT NULL
        CONSTRAINT PK_RoomNumber_RoomNumber PRIMARY KEY,
    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL
        CONSTRAINT DF_RoomNumber_UserAuthorizationKey DEFAULT -1,
    [DateAdded] [TIME].[DateAdded] NULL
        CONSTRAINT DF_RoomNumber_DateAdded DEFAULT SYSDATETIME(),
    [DateOfLastUpdate] [TIME].[DateOfLastUpdate] NULL
        CONSTRAINT DF_RoomNumber_DateOfLastUpdate DEFAULT SYSDATETIME()
    )
    INSERT INTO [Data].[RoomNumber]
    (
    RoomNumber,
    [UserAuthorizationKey],
    [DateAdded],
    [DateOfLastUpdate]
    )
    SELECT DISTINCT
    L.RoomNumber,
    @UserAuthorizationKey,
```

```
    SYSDATETIME(),
    SYSDATETIME()
    FROM Mode.GoodData AS G
    CROSS APPLY dbo.SplitLocationColumn(G.Location) AS L


    DECLARE @RowCount [INT].[WorkFlowStepTableRowCount] = (SELECT COUNT(*) FROM
[Data].[RoomNumber]);


    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();


        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Create RoomNumber
table',
                                    @WorkflowStepTableRowCount = @RowCount,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=null;
END
GO
```

Uses

[Data].[RoomNumber]
[Mode].[GoodData]
[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]
[TIME].[EndTime]
[TIME].[StartTime]
[dbo].[SplitLocationColumn]
Project3

Used By

[Project3].[NormalizeDatabase]

🗒 [Project3].[CreateUdts]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```sql
CREATE PROCEDURE [Project3].[CreateUdts]
AS
BEGIN

    -- General
    DROP TYPE IF EXISTS [INT].SurrogateKeyInt;
    CREATE TYPE [INT].SurrogateKeyInt FROM INT;

    -- UserAuthorization
    DROP TYPE IF EXISTS [TIME].[DateAdded];
    CREATE TYPE [TIME].[DateAdded] FROM DATETIME2(7);

    DROP TYPE IF EXISTS [TIME].[DateOfLastUpdate];
    CREATE TYPE [TIME].[DateOfLastUpdate] FROM DATETIME2(7);

    DROP TYPE IF EXISTS [STRING].[IndivisualProject];
    CREATE TYPE [STRING].[IndivisualProject] FROM NVARCHAR(60);

    DROP TYPE IF EXISTS [STRING].[GroupMemberFirstName];
    CREATE TYPE [STRING].[GroupMemberFirstName] FROM NVARCHAR(35);

    DROP TYPE IF EXISTS [STRING].[GroupMemberLastName];
    CREATE TYPE [STRING].[GroupMemberLastName] FROM NVARCHAR(25);




    -- Work Flow Steps
    DROP TYPE IF EXISTS [TIME].StartTime;
    CREATE TYPE [TIME].StartTime FROM DATETIME2;

    DROP TYPE IF EXISTS [TIME].EndTime;
    CREATE TYPE [TIME].EndTime FROM DATETIME2;

    DROP TYPE IF EXISTS [STRING].[WorkFlowStepsDescription];
    CREATE TYPE [STRING].[WorkFlowStepsDescription] FROM NVARCHAR(100) NOT NULL;
```

```
    DROP TYPE IF EXISTS [INT].[WorkFlowStepTableRowCount];
    CREATE TYPE [INT].[WorkFlowStepTableRowCount] FROM INT NULL;

    DROP TYPE IF EXISTS [CHAR].[ClassTime];
    CREATE TYPE [CHAR].[ClassTime] FROM NVARCHAR(5) NULL;


    -- Course Table
    DROP TYPE IF EXISTS [INT].Code;
    CREATE TYPE [INT].Code FROM INT;

    DROP TYPE IF EXISTS [CHAR].Section;
    CREATE TYPE [CHAR].Section  FROM VARCHAR(10);

    DROP TYPE IF EXISTS [STRING].CourseName;
    CREATE TYPE [STRING].CourseName FROM VARCHAR(10);

    DROP TYPE IF EXISTS [STRING].CourseNumber;
    CREATE TYPE [STRING].CourseNumber FROM VARCHAR(10);

    -- Mode of Instruction
    DROP TYPE IF EXISTS [STRING].ModeOfInstruction;
    CREATE TYPE [STRING].ModeOfInstruction FROM VARCHAR(20);

    --Building Name
    DROP TYPE IF EXISTS [CHAR].BuildingName;
    CREATE TYPE [CHAR].BuildingName FROM VARCHAR(2);

    -- RoomNumber
    DROP TYPE IF EXISTS [CHAR].RoomNumber;
    CREATE TYPE [CHAR].RoomNumber FROM VARCHAR(5);

    -- Classes
    DROP TYPE IF EXISTS [STRING].[Description];
    CREATE TYPE [STRING].[Description] FROM VARCHAR(50);

    DROP TYPE IF EXISTS [TIME].[Day];
    CREATE TYPE [TIME].[Day] FROM VARCHAR(50)

    DROP TYPE IF EXISTS [TIME].[ClassStartTime];
    CREATE TYPE [TIME].[ClassStartTime] FROM VARCHAR(5);

    DROP TYPE IF EXISTS [TIME].[ClassEndTime];
    CREATE TYPE [TIME].[ClassEndTime] FROM VARCHAR(5);

    DROP TYPE IF EXISTS [TIME].[Hour];
    CREATE TYPE [TIME].[Hour] FROM VARCHAR(5);

    DROP TYPE IF EXISTS [INT].[Credit];
    CREATE TYPE [INT].[Credit] FROM INT;

    DROP TYPE IF EXISTS [INT].[Enrolled];
```

```
    CREATE TYPE [INT].[Enrolled] FROM INT;


    DROP TYPE IF EXISTS [INT].[Limit];
    CREATE TYPE [INT].[Limit] FROM INT;
END
GO
```

Uses

Project3

📄 [Project3].[DropForiegnKeys]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE PROCEDURE [Project3].[DropForiegnKeys] @UserAuthorizationKey [INT].SurrogateKey-
Int
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();

    ALTER TABLE [Data].[Classes]
    DROP CONSTRAINT IF EXISTS FK_Classes_CourseID;

    ALTER TABLE [Data].[Classes]
    DROP CONSTRAINT IF EXISTS FK_Classes_InstructorID;

    ALTER TABLE [Data].[Classes]
    DROP CONSTRAINT IF EXISTS FK_Classes_BuildingNameID;

    ALTER TABLE [Data].[Classes]
    DROP CONSTRAINT IF EXISTS FK_Classes_RoomNumber;

    ALTER TABLE [Data].[Classes]
    DROP CONSTRAINT IF EXISTS FK_Classes_ModeOfInstructionID;

    ALTER TABLE [Data].InstructorCourses
    DROP CONSTRAINT IF EXISTS FK_InstructorCourses_InstructorID;

    ALTER TABLE [Data].InstructorCourses
    DROP CONSTRAINT IF EXISTS FK_InstructorCourses_TeachingCourse;

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();

    EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
```

```
                                        @WorkFlowStepsDescription=N'Drop Foreign Keys',
                                        @WorkflowStepTableRowCount = 0,
                                        @StartTime=@StartTime,
                                        @EndTime=@EndTime,
                                        @ClassTime=null;


END
GO
```

Uses

[Process].[usp_TrackWorkFlow]
[INT].[SurrogateKeyInt]
[TIME].[EndTime]
[TIME].[StartTime]
Project3

Used By

[Project3].[NormalizeDatabase]

📄 [Project3].[NormalizeDatabase]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE PROCEDURE [Project3].[NormalizeDatabase] @UserAuthorizationKey [INT].Surrogate-
KeyInt
AS
BEGIN

    DECLARE @StartTime [TIME].[StartTime] = SYSDATETIME();
    EXEC Project3.SettingTables;
    EXEC Project3.DropForiegnKeys @UserAuthorizationKey = 2;
    EXEC Project3.CreateCourse @UserAuthorizationKey = 2;
    EXEC Project3.CreateDepartment @UserAuthorizationKey = 1;
    EXEC Project3.CreateInstructors @UserAuthorizationKey = 1;
    EXEC Project3.CreateInstructorCourses @UserAuthorizationKey = 1;
    EXEC Project3.CreateModeOfInstructionTable @UserAuthorizationKey = 2;
    EXEC Project3.CreateBldingName @UserAuthorizationKey = 5;
    EXEC Project3.CreateRoomNumber @UserAuthorizationKey = 2;
    EXEC Project3.CreateClass @UserAuthorizationKey = 4;
    EXEC Project3.AddForiegnKeys  @UserAuthorizationKey = 2;

    DECLARE @EndTime [TIME].[EndTIme] = SYSDATETIME();
```

```
        EXEC [Process].[usp_TrackWorkFlow] @UserAuthorizationKey=@UserAuthorizationKey,
                                    @WorkFlowStepsDescription=N'Normalize Queens-
ClassSchedule Database',
                                    @WorkflowStepTableRowCount = 0,
                                    @StartTime=@StartTime,
                                    @EndTime=@EndTime,
                                    @ClassTime=null;
END
GO
```

Uses

[Process].[usp_TrackWorkFlow]
[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[DropForiegnKeys]
[Project3].[SettingTables]
[INT].[SurrogateKeyInt]
[TIME].[EndTime]
[TIME].[StartTime]
Project3

Used By

[Project3].[ShowNormalizeDatabase]

📄 [Project3].[SettingTables]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```
CREATE PROCEDURE  [Project3].[SettingTables]
AS
BEGIN

    DROP TABLE IF EXISTS Process.WorkFlowSteps;
    CREATE TABLE Process.WorkFlowSteps
    (    [WorkFlowStepKey] [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
            CONSTRAINT PK_WorkFlowStepKey PRIMARY KEY,
        [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL,
        [WorkFlowStepDescription] [STRING].[WorkFlowStepsDescription] NOT NULL,
        [WorkFlowStepTableRowCount] [INT].[WorkFlowStepTableRowCount] NULL,
        [StartingDateTime] [TIME].StartTime NULL DEFAULT SYSDATETIME(),
        [EndingDateTime] [TIME].EndTime NULL DEFAULT SYSDATETIME(),
        [ClassTime] [CHAR].[ClassTime] NULL DEFAULT ('9:15'),
    )

    DROP TABLE IF EXISTS DbSecurity.UserAuthorization;
    CREATE TABLE DbSecurity.UserAuthorization
    (    [UserAuthorizationKey] [INT].SurrogateKeyInt NOT NULL IDENTITY(1,1)
            CONSTRAINT PK_UserAuthorizationKey PRIMARY KEY,
        [ClassTime] [CHAR].[ClassTime] NULL
            CONSTRAINT def_ClassTime DEFAULT ('9:15'),
        [IndivisualProject] [STRING].[IndivisualProject] NULL
            CONSTRAINT def_IndivisualProject DEFAULT ('PROJECT 3 NORMALIZE QueensClass-
Schedule DATABASE'),
        [GroupMemberFirstName] [STRING].[GroupMemberFirstName] NOT NULL,
        [GroupMemberLastName] [STRING].[GroupMemberLastName] NOT NULL,
        [DateAdded] [TIME].[DateAdded] NULL
            CONSTRAINT def_DateAdded DEFAULT SYSDATETIME()
    )

    INSERT INTO DbSecurity.UserAuthorization (GroupMemberLastName,GroupMemberFirstName)
        VALUES (N'Enerio',N'Edison'),
               (N'Patel',N'Meet'),
               (N'Rahman',N'Mashiur'),
               (N'Roth',N'Eliyahu'),
```

```
              (N'Singh',N'Rajveer');

END
GO
```

Uses

[DbSecurity].[UserAuthorization]
Project3

Used By

[Project3].[NormalizeDatabase]

🗎 [Project3].[ShowNormalizeDatabase]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

SQL Script

```sql
CREATE PROCEDURE [Project3].[ShowNormalizeDatabase]
AS
BEGIN
    EXEC Project3.NormalizeDatabase @UserAuthorizationKey = 2;
    EXEC Process.ShowWorkFlowSteps;
END;
GO
```

Uses

[Process].[ShowWorkFlowSteps]
[Project3].[NormalizeDatabase]
Project3

🔢 *Table-valued Functions*

Objects

Name
dbo.DatabaseObjects
dbo.JSONHierarchy
dbo.SplitCourseColumn
dbo.SplitDayColumn
dbo.SplitInstructorColumn
dbo.SplitLocationColumn
dbo.SplitTimeColumn

⚡ [dbo].[DatabaseObjects]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

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

▣ [dbo].[JSONHierarchy]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
create function [dbo].[JSONHierarchy]
(
    @JSONData varchar(max)
  , @Parent_object_ID int = null
  , @MaxObject_id int = 0
  , @type int = null
)
returns @ReturnTable table
(
    -- https://www.red-gate.com/simple-talk/blogs/consuming-hierarchical-json-
documents-sql-server-using-
openjson/?utm_source=simpletalk&utm_medium=pubemail&utm_content=20171010-
slota1&utm_term=simpletalkmain

    --
    Element_ID int identity(1, 1) primary key /* internal surrogate primary key gives
the order of parsing and the list order */
  , SequenceNo int null                       /* the sequence number in a list */
  , Parent_ID int                             /* if the element has a parent then it is
in this column. The document is the ultimate parent, so you can get the structure from
recursing from the document */
  , Object_ID int                             /* each list or object has an object id.
This ties all elements to a parent. Lists are treated as objects here */
  , Name nvarchar(2000)                       /* the name of the object */
  , StringValue nvarchar(max) not null        /*the string representation of the value
of the element. */
  , ValueType varchar(10) not null            /* the declared type of the value
represented as a string in StringValue*/
)
as
```

```
begin
    --the types of JSON
    declare @null     int = 0
          , @string   int = 1
          , @int      int = 2
          , @boolean  int = 3
          , @array    int = 4
          , @object   int = 5;

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

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

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

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

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

```sql
            , 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
```

```sql
                        'null'
                when @int then
                        'int'
                when @boolean then
                        'boolean'
                else
                        'int'
            end;

        select @ii = @ii + 1;
    end;


    return;
end;
GO
```

🖻 [dbo].[SplitCourseColumn]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE FUNCTION [dbo].[SplitCourseColumn]( @CourseColumn AS VARCHAR(50) )
RETURNS @hrAndCrd TABLE (
    CourseName VARCHAR(50),
    CourseNumber VARCHAR(50),
    [Hour(s)] VARCHAR(50),
    [Credit(s)] VARCHAR(50)
)
AS
BEGIN
    SET @CourseColumn = REPLACE(@CourseColumn, ' ', ',');
    SET @CourseColumn = REPLACE(@CourseColumn, '(', ',');
    SET @CourseColumn = REPLACE(@CourseColumn, ')', '');
    INSERT INTO @hrAndCrd
    (
        CourseName,
        CourseNumber,
        [Hour(s)],
        [Credit(s)]
    )
    VALUES
    (   (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS
[index], value AS [data] FROM STRING_SPLIT(@CourseColumn, ',')) AS T WHERE T.[index] =
1),
        (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS
[index], value AS [data] FROM STRING_SPLIT(@CourseColumn, ',')) AS T WHERE T.[index] =
2),
        (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS
[index], value AS [data] FROM STRING_SPLIT(@CourseColumn, ',')) AS T WHERE T.[index] =
4),
        (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS
[index], value AS [data] FROM STRING_SPLIT(@CourseColumn, ',')) AS T WHERE T.[index] =
6)
```

```
      )
    RETURN;
END;
GO
```

Used By

[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]

⊞ [dbo].[SplitDayColumn]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE FUNCTION [dbo].[SplitDayColumn]( @DayColumn AS VARCHAR(50) )
RETURNS @SepcificDay TABLE ([Day] VARCHAR(50))
AS
BEGIN
    SET @DayColumn = REPLACE(@DayColumn, ' ', '');
    INSERT INTO @SepcificDay
    SELECT F.value
    FROM string_split(@DayColumn, ',') AS F
RETURN
END
GO
```

Used By

[Project3].[CreateClass]

$\boxed{Ef_x}$ [dbo].[SplitInstructorColumn]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```
CREATE FUNCTION [dbo].[SplitInstructorColumn]( @InstructorColumn AS VARCHAR(50) )
RETURNS @InstructorName TABLE
    (
    FirstName VARCHAR(50),
    LastName VARCHAR(50)
    )
AS
BEGIN
    SET @InstructorColumn = REPLACE(@InstructorColumn, ' ', '');
    INSERT INTO @InstructorName
    (
    FirstName,
    LastName
    ) VALUES
    (
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@InstructorColumn, ',')) AS T WHERE T.[index] = 2),
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@InstructorColumn, ',')) AS T WHERE T.[index] = 1)
    )
RETURN
END
GO
```

Used By

[Project3].[CreateClass]

[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]

[Efx] [dbo].[SplitLocationColumn]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE FUNCTION [dbo].[SplitLocationColumn]( @LocationColumn AS VARCHAR(50) )
RETURNS @RoomLocation TABLE
    (
    BuildingName VARCHAR(50),
    RoomNumber VARCHAR(50)
    )
AS
BEGIN
    INSERT INTO @RoomLocation
    (
    BuildingName,
    RoomNumber
    ) VALUES
    (
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@LocationColumn, ' ')) AS T WHERE T.[index] = 1),
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@LocationColumn, ' ')) AS T WHERE T.[index] = 2)
    )
RETURN
END
GO
```

Used By

[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateRoomNumber]

[fx] [dbo].[SplitTimeColumn]

Properties

Property	Value
ANSI Nulls On	True
Quoted Identifier On	True

Parameters

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

SQL Script

```sql
CREATE FUNCTION [dbo].[SplitTimeColumn]( @TimeColumn AS VARCHAR(50) )
RETURNS @Time TABLE
    (
    StartTime VARCHAR(50),
    EndTime VARCHAR(50)
    )
AS
BEGIN
    INSERT INTO @Time
    (
    StartTime,
    EndTime
    ) VALUES
    (
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@TimeColumn, '-')) AS T WHERE T.[index] = 1),
    (SELECT T.[data] FROM (SELECT ROW_NUMBER() OVER (ORDER BY (SELECT 0)) AS [index],
value AS [data] FROM STRING_SPLIT(@TimeColumn, '-')) AS T WHERE T.[index] = 2)
    )
RETURN
END
GO
```

Used By

[Project3].[CreateClass]

🔢 *User-Defined Data Types*

Objects

Name
CHAR.BuildingName
CHAR.ClassTime
CHAR.RoomNumber
CHAR.Section
INT.Code
INT.Credit
INT.Enrolled
INT.Limit
INT.SurrogateKeyInt
INT.WorkFlowStepTableRowCount
STRING.CourseName
STRING.CourseNumber
STRING.Description
STRING.FirstName
STRING.GroupMemberFirstName
STRING.GroupMemberLastName
STRING.IndivisualProject
STRING.LastName
STRING.ModeOfInstruction
STRING.WorkFlowStepsDescription
TIME.ClassEndTime
TIME.ClassStartTime
TIME.DateAdded
TIME.DateOfLastUpdate
TIME.Day
TIME.EndTime
TIME.Hour
TIME.StartTime

🗔 [CHAR].[BuildingName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	2

SQL Script

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

Uses

CHAR

Used By

[Data].[BuildingName]

🔢 [CHAR].[ClassTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	5

SQL Script

```
CREATE TYPE [CHAR].[ClassTime] FROM nvarchar (5) NULL
GO
```

Uses

CHAR

Used By

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

[CHAR].[RoomNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	5

SQL Script

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

Uses

CHAR

Used By

[Data].[Classes]
[Data].[RoomNumber]

🔲 [CHAR].[Section]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [CHAR].[Section] FROM varchar (10) NULL
GO
```

Uses

CHAR

Used By

[Data].[Course]

🔲 [INT].[Code]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [INT].[Code] FROM int NULL
GO
```

Uses

INT

Used By

[Data].[Course]

[INT].[Credit]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	float
Length	8

SQL Script

```
CREATE TYPE [INT].[Credit] FROM float NULL
GO
```

Uses

INT

Used By

[Data].[Classes]

📋 [INT].[Enrolled]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [INT].[Enrolled] FROM int NULL
GO
```

Uses

INT

Used By

[Data].[Classes]

📇 [INT].[Limit]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [INT].[Limit] FROM int NULL
GO
```

Uses

INT

Used By

[Data].[Classes]

🗐 [INT].[SurrogateKeyInt]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

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

Uses

INT

Used By

[Data].[BuildingName]
[Data].[Classes]
[Data].[Course]
[Data].[Departments]
[Data].[InstructorCourses]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]
[DbSecurity].[UserAuthorization]
[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[DropForiegnKeys]
[Project3].[NormalizeDatabase]

🗄 [INT].[WorkFlowStepTableRowCount]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	int
Length	4

SQL Script

```
CREATE TYPE [INT].[WorkFlowStepTableRowCount] FROM int NULL
GO
```

Uses

INT

Used By

[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]

[STRING].[CourseName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [STRING].[CourseName] FROM varchar (10) NULL
GO
```

Uses

STRING

Used By

[Data].[Classes]
[Data].[Course]
[Data].[Departments]
[Data].[InstructorCourses]

[STRING].[CourseNumber]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [STRING].[CourseNumber] FROM varchar (10) NULL
GO
```

Uses

STRING

Used By

[Data].[Classes]
[Data].[Course]

[STRING].[Description]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	50

SQL Script

```
CREATE TYPE [STRING].[Description] FROM varchar (50) NULL
GO
```

Uses

STRING

Used By

[Data].[Classes]

▦ [STRING].[FirstName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	50

SQL Script

```
CREATE TYPE [STRING].[FirstName] FROM varchar (50) NULL
GO
```

Uses

STRING

Used By

[Data].[Instructors]

⊞ [STRING].[GroupMemberFirstName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	35

SQL Script

```
CREATE TYPE [STRING].[GroupMemberFirstName] FROM nvarchar (35) NULL
GO
```

Uses

STRING

Used By

[DbSecurity].[UserAuthorization]

[STRING].[GroupMemberLastName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	25

SQL Script

```
CREATE TYPE [STRING].[GroupMemberLastName] FROM nvarchar (25) NULL
GO
```

Uses

STRING

Used By

[DbSecurity].[UserAuthorization]

[STRING].[IndivisualProject]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	nvarchar
Length	60

SQL Script

```
CREATE TYPE [STRING].[IndivisualProject] FROM nvarchar (60) NULL
GO
```

Uses

STRING

Used By

[DbSecurity].[UserAuthorization]

[STRING].[LastName]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	50

SQL Script

```
CREATE TYPE [STRING].[LastName] FROM varchar (50) NULL
GO
```

Uses

STRING

Used By

[Data].[Instructors]

🔲 [STRING].[ModeOfInstruction]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	20

SQL Script

```
CREATE TYPE [STRING].[ModeOfInstruction] FROM varchar (20) NULL
GO
```

Uses

STRING

Used By

[Data].[ModeOfInstruction]

[STRING].[WorkFlowStepsDescription]

Properties

Property	Value
Nullability	NOT NULL
Base Type Name	nvarchar
Length	100

SQL Script

```
CREATE TYPE [STRING].[WorkFlowStepsDescription] FROM nvarchar (100) NOT NULL
GO
```

Uses

STRING

Used By

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

🖳 [TIME].[ClassEndTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [TIME].[ClassEndTime] FROM varchar (10) NULL
GO
```

Uses

TIME

Used By

[Data].[Classes]

[TIME].[ClassStartTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [TIME].[ClassStartTime] FROM varchar (10) NULL
GO
```

Uses

TIME

Used By

[Data].[Classes]

🔳 [TIME].[DateAdded]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

```sql
CREATE TYPE [TIME].[DateAdded] FROM datetime2 NULL
GO
```

Uses

TIME

Used By

[Data].[BuildingName]
[Data].[Classes]
[Data].[Course]
[Data].[Departments]
[Data].[InstructorCourses]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]
[DbSecurity].[UserAuthorization]

🖳 [TIME].[DateOfLastUpdate]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

```
CREATE TYPE [TIME].[DateOfLastUpdate] FROM datetime2 NULL
GO
```

Uses

TIME

Used By

[Data].[BuildingName]
[Data].[Classes]
[Data].[Course]
[Data].[Departments]
[Data].[InstructorCourses]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]

🗄 [TIME].[Day]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	50

SQL Script

```
CREATE TYPE [TIME].[Day] FROM varchar (50) NULL
GO
```

Uses

TIME

Used By

[Data].[Classes]

🖳 [TIME].[EndTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

```
CREATE TYPE [TIME].[EndTime] FROM datetime2 NULL
GO
```

Uses

TIME

Used By

[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[DropForiegnKeys]
[Project3].[NormalizeDatabase]

[TIME].[Hour]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	varchar
Length	10

SQL Script

```
CREATE TYPE [TIME].[Hour] FROM varchar (10) NULL
GO
```

Uses

TIME

Used By

[Data].[Classes]

🔢 [TIME].[StartTime]

Properties

Property	Value
Nullability	NULL allowed
Base Type Name	datetime2
Length	8

SQL Script

```
CREATE TYPE [TIME].[StartTime] FROM datetime2 NULL
GO
```

Uses

TIME

Used By

[Process].[WorkFlowSteps]
[Process].[usp_TrackWorkFlow]
[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[DropForiegnKeys]
[Project3].[NormalizeDatabase]

👤 *Users*

Objects

Name
BiStudent
dbo
EC3\thehitman
guest
student

👤 BiStudent

Properties

Property	Value
Type	SqlUser
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

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

Project > localhost, 13001 > User databases > QueensClassSchedule > Security > Users > dbo

👤 dbo

Properties

Property	Value
Type	SqlUser
Login Name	sa
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

```
GO
```

👤 EC3\thehitman

Properties

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

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

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

guest

Properties

Property	Value
Type	SqlUser
Default Schema	guest

SQL Script

```
GO
```

👤 **student**

Properties

Property	Value
Type	SqlUser
Default Schema	dbo

Database Level Permissions

Type	Action
CONNECT	Grant

SQL Script

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

👥 *Database Roles*

Objects

Name
db_accessadmin
db_backupoperator
db_datareader
db_datawriter
db_ddladmin
db_denydatareader
db_denydatawriter
db_owner
db_securityadmin
public

👥 db_accessadmin

Properties

Property	Value
Owner	dbo

👥 db_backupoperator

Properties

Property	Value
Owner	dbo

👥 db_datareader

Properties

Property	Value
Owner	dbo

Members

- BiStudent
- student

SQL Script

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

Uses

BiStudent
student

👥 db_datawriter

Properties

Property	Value
Owner	dbo

👥 db_ddladmin

Properties

Property	Value
Owner	dbo

👥 db_denydatareader

Properties

Property	Value
Owner	dbo

👥 db_denydatawriter

Properties

Property	Value
Owner	dbo

👥 db_owner

Properties

Property	Value
Owner	dbo

Members

- EC3\thehitman

SQL Script

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

Uses

EC3\thehitman

👥 db_securityadmin

Properties

Property	Value
Owner	dbo

👥 public

Properties

Property	Value
Owner	dbo

⋀ *Schemas*

Objects

Name
CHAR
Data
DbSecurity
G9_4
GroupNameProject3
INT
Mode
Process
Project3
STRING
TIME
Udt
Uploadfile
Utils
YourLastName

⋀ CHAR

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[CHAR].[BuildingName]
[CHAR].[ClassTime]
[CHAR].[RoomNumber]
[CHAR].[Section]

⋀ Data

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Data].[BuildingName]
[Data].[Classes]
[Data].[Course]
[Data].[Departments]
[Data].[InstructorCourses]
[Data].[Instructors]
[Data].[ModeOfInstruction]
[Data].[RoomNumber]

⋀ DbSecurity

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[DbSecurity].[UserAuthorization]

⋀ G9_4

Properties

Property	Value
Owner	dbo

SQL Script

```
CREATE SCHEMA [G9_4]
AUTHORIZATION [dbo]
GO
```

Used By

[G9_4].[TempGoodData]

⅄ GroupNameProject3

Properties

Property	Value
Owner	dbo
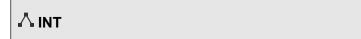
SQL Script

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

⋏ INT

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[INT].[Code]
[INT].[Credit]
[INT].[Enrolled]
[INT].[Limit]
[INT].[SurrogateKeyInt]
[INT].[WorkFlowStepTableRowCount]

⋀ Mode

Properties

Property	Value
Owner	dbo

SQL Script

```sql
CREATE SCHEMA [Mode]
AUTHORIZATION [dbo]
GO
```

Used By

[Mode].[BadData]
[Mode].[GoodData]

∧ Process

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

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

⋀ Project3

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Project3].[AddForiegnKeys]
[Project3].[CreateBldingName]
[Project3].[CreateClass]
[Project3].[CreateCourse]
[Project3].[CreateDepartment]
[Project3].[CreateInstructorCourses]
[Project3].[CreateInstructors]
[Project3].[CreateModeOfInstructionTable]
[Project3].[CreateRoomNumber]
[Project3].[CreateUdts]
[Project3].[DropForiegnKeys]
[Project3].[NormalizeDatabase]
[Project3].[SettingTables]
[Project3].[ShowNormalizeDatabase]

⋀ STRING

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[STRING].[CourseName]
[STRING].[CourseNumber]
[STRING].[Description]
[STRING].[FirstName]
[STRING].[GroupMemberFirstName]
[STRING].[GroupMemberLastName]
[STRING].[IndivisualProject]
[STRING].[LastName]
[STRING].[ModeOfInstruction]
[STRING].[WorkFlowStepsDescription]

∧ TIME

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[TIME].[ClassEndTime]
[TIME].[ClassStartTime]
[TIME].[DateAdded]
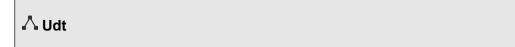[TIME].[DateOfLastUpdate]
[TIME].[Day]
[TIME].[EndTime]
[TIME].[Hour]
[TIME].[StartTime]

∧ Udt

Properties

Property	Value
Owner	dbo

SQL Script

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

⋏ Uploadfile

Properties

Property	Value
Owner	dbo

SQL Script

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

Used By

[Uploadfile].[CurrentSemesterCourseOfferings]

Λ 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

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