Room Entity:

```
BEGIN TRANSACTION;

-- CREATE TABLE "Room" ----------------------------------------
CREATE TABLE [dbo].[Room] (
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [RoomNumber] INT NOT NULL,
        [Floor] INT NOT NULL,
        [Description] VARCHAR( 256 ) NULL,
        [Capacity] INT NOT NULL,
        [Height] FLOAT NULL,
        [RoomSize] FLOAT NOT NULL,
        [RoomCharge] FLOAT NOT NULL,
        PRIMARY KEY ( [BuildingName], [RoomNumber] ),
        CONSTRAINT [RoomNumber] CHECK ( ([RoomNumber]>(0)) ),
        CONSTRAINT [Capacity] CHECK ( ([Capacity]>(0)) ),
        CONSTRAINT [RoomSize] CHECK ( ([RoomSize]>(0)) ),
        CONSTRAINT [RoomCharge] CHECK ( ([RoomCharge]>(0)) ),
        CONSTRAINT [Height] CHECK ( ([Height]>(0)) ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;

BEGIN TRANSACTION;

-- CREATE LINK "fk_RoomBuilding" ------------------------------
ALTER TABLE [dbo].[Room]
        ADD CONSTRAINT [fk_RoomBuilding]
        FOREIGN KEY ([BuildingName])
        REFERENCES [dbo].[Building]( [BuildingName] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;


INSERT INTO [dbo].[Room] ( [BuildingName], [Capacity], [Description], [Floor], [Height], [RoomCharge],
[RoomNumber], [RoomSize])
VALUES ( 'ClassRoom', 40, 'Room', 1, NULL ,2 , 215, 144 ),
( 'ClassRoom', 40, 'Room', 2, NULL ,2 , 212, 144 ), ( 'CTC', 40, 'Meeting Room', 1, 10 ,5 , 215, 144 )
 ( 'Anderson', 40, NULL, 2, 10 ,6 , 212, 144 );
```

Building Entity:
BEGIN TRANSACTION;

```
-- CREATE TABLE "Building" -----------------------------------
CREATE TABLE [dbo].[Building] (
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [StreetAddress] VARCHAR( 256 ) NOT NULL,
        [City] VARCHAR( 256 ) NOT NULL,
        [State] CHAR( 2 ) NOT NULL,
        [Zipcode] INT NOT NULL,
        [GisLatitude] FLOAT NOT NULL,
        [GisLongitude] FLOAT NOT NULL,
        PRIMARY KEY ( [BuildingName] ),
        CONSTRAINT [Zipcode] CHECK ( ([Zipcode]>(0)) ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;


INSERT INTO [dbo].[Building] ( [BuildingName], [City], [GisLatitude], [GisLongitude], [State],
[StreetAddress], [Zipcode])
VALUES ( 'WPC', 'Stockton', 37.9795, -121.3130, 'CA', '3601 PacificAvenue',  95211),(
'ClassRoom', 'Stockton', 37.9795, -121.3130, 'CA', 'Mendocino Avenue',  95211),( 'Anderson',
'Stockton', 37.9795, -121.3130, 'CA', ' 840 Atchley Way',  95211);
```

OwnerInformation

BEGIN TRANSACTION;

```
-- CREATE TABLE "OwnerInformation" -----------------------------
CREATE TABLE [dbo].[OwnerInformation] (
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [RoomNumber] INT NOT NULL,
        [Owner] VARCHAR( 256 ) NOT NULL,
        [Phone] VARCHAR( 256 ) NOT NULL,
        PRIMARY KEY ( [BuildingName], [RoomNumber] ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;
```

```
BEGIN TRANSACTION;

-- CREATE LINK "fk_OwnerDepartment" ----------------------------
ALTER TABLE [dbo].[OwnerInformation]
        ADD CONSTRAINT [fk_OwnerDepartment]
        FOREIGN KEY ([Owner])
        REFERENCES [dbo].[Departments]( [Department] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;




INSERT INTO [dbo].[OwnerInformation] ( [BuildingName], [Owner], [Phone], [RoomNumber])
VALUES ( 'WPC', 'Finance','209-512-6011',214),( 'CTC', 'Engineering','209-215-6011',214),(
'CTC', 'Engineering','209-215-6011',215);
```

Employee

```
BEGIN TRANSACTION;

-- CREATE TABLE "Employee" -----------------------------------
CREATE TABLE [dbo].[Employee] (
        [EID] INT NOT NULL,
        [Email] VARCHAR( 500 ) NOT NULL,
        [Phone] VARCHAR( 256 ) NOT NULL,
        [Password] VARCHAR( 256 ) NOT NULL,
        [Department] VARCHAR( 256 ) NOT NULL,
        [Office] VARCHAR( 256 ) NOT NULL,
        [LastName] VARCHAR( 256 ) NOT NULL,
        [FirstName] VARCHAR( 256 ) NOT NULL,
        PRIMARY KEY ( [EID] ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;

BEGIN TRANSACTION;
```

```
INSERT INTO [dbo].[Employee] ( [Department], [EID], [Email], [FirstName], [LastName], [Office],
[Password], [Phone])
VALUES ( 'Administrative', '98900005', 'harry@gmail.com', 'harry', 'branson', 'office5',
'sz8JzabE', '209-789-2221' );


-- CREATE LINK "fk_EmployeeDepartment" ------------------------
ALTER TABLE [dbo].[Employee]
        ADD CONSTRAINT [fk_EmployeeDepartment]
        FOREIGN KEY ([Department])
        REFERENCES [dbo].[Departments]( [Department] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- -------------------------------------------------------------

COMMIT TRANSACTION;
```

Department

```
BEGIN TRANSACTION;

-- CREATE TABLE "Departments" ---------------------------------
CREATE TABLE [dbo].[Departments] (
        [Department] VARCHAR( 256 ) NOT NULL,
        [SuperDepartment] VARCHAR( 256 ) NULL,
        PRIMARY KEY ( [Department] ) )
GO;
-- -------------------------------------------------------------

COMMIT TRANSACTION;


INSERT INTO [dbo].[Departments] ( [Department], [SuperDepartment])
VALUES ( 'Finance', NULL ), ( 'Engineering', NULL ), ( 'Accounting', NULL )( Administrative'',
NULL) ;
```

Proxy

```
BEGIN TRANSACTION;

-- CREATE TABLE "Proxy" ---------------------------------------
CREATE TABLE [dbo].[Proxy] (
```

```sql
        [EID] INT NOT NULL,
        [Password] VARCHAR( 256 ) NOT NULL,
        [PriorityLevel] INT NOT NULL,
        PRIMARY KEY ( [EID] ),
        CONSTRAINT [PriorityLevel] CHECK ( ([PriorityLevel]>=(1) AND [PriorityLevel]<=(10)) )
)
GO;
-- ----------------------------------------------------------

COMMIT TRANSACTION;

BEGIN TRANSACTION;

-- CREATE LINK "fk_ProxyEmployee" -----------------------------
ALTER TABLE [dbo].[Proxy]
        ADD CONSTRAINT [fk_ProxyEmployee]
        FOREIGN KEY ([EID])
        REFERENCES [dbo].[Employee]( [EID] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- ----------------------------------------------------------

COMMIT TRANSACTION;

INSERT INTO [dbo].[Proxy] ( [EID], [Password], [PriorityLevel])
VALUES ( 98900005, 'Laskv@123', 5 );
```

Reservation:

```sql
BEGIN TRANSACTION;

-- CREATE TABLE "Reservation" --------------------------------
CREATE TABLE [dbo].[Reservation] (
        [ReservationID] INT IDENTITY ( 1, 1 )  NOT NULL,
        [RoomNumber] INT NOT NULL,
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [DateMade] SMALLDATETIME NOT NULL,
        [Person] VARCHAR( 256 ) NOT NULL,
        [Proxy] VARCHAR( 256 ) NULL,
        [Purpose] VARCHAR( 256 ) NOT NULL,
        [AnticipatedNumber] VARCHAR( 256 ) NOT NULL,
        [PriorityLevel] VARCHAR( 256 ) NOT NULL,
        [AccountNumber] INT NOT NULL,
```

```
        [StartDate] DATE NOT NULL,
        [StartTime] TIME NOT NULL,
        [EndDate] DATE NOT NULL,
        [EndTime] TIME NOT NULL,
        PRIMARY KEY ( [ReservationID] ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;
```

Items

```
BEGIN TRANSACTION;

-- CREATE TABLE "Items" ---------------------------------------
CREATE TABLE [dbo].[Items] (
        [ItemID] INT NOT NULL,
        [Description] VARCHAR( 256 ) NOT NULL,
        [Charge] FLOAT NOT NULL,
        PRIMARY KEY ( [ItemID] ),
        CONSTRAINT [Charge] CHECK ( ([Charge]>(0)) ) )
GO;
-- ------------------------------------------------------------

COMMIT TRANSACTION;

INSERT INTO [dbo].[Items] ( [Charge], [Description], [ItemID])
VALUES ( 50, 'Chair', 1 ), ( 100, 'Table', 2 ),(2 , 'Marker', 3 );
```

FixedItems:

```
BEGIN TRANSACTION;

-- CREATE TABLE "FixedItems" ----------------------------------
CREATE TABLE [dbo].[FixedItems] (
        [RoomNumber] INT NOT NULL,
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [ItemID] INT NOT NULL,
        [Fixed] INT NOT NULL,
        PRIMARY KEY ( [RoomNumber], [BuildingName], [ItemID] ) )
GO;
-- ------------------------------------------------------------
```

```
COMMIT TRANSACTION;

BEGIN TRANSACTION;

-- CREATE LINK "fk_ItemFixed" --------------------------------
ALTER TABLE [dbo].[FixedItems]
        ADD CONSTRAINT [fk_ItemFixed]
        FOREIGN KEY ([ItemID])
        REFERENCES [dbo].[Items]( [ItemID] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- ----------------------------------------------------------

COMMIT TRANSACTION;

INSERT INTO [dbo].[FixedItems] ( [BuildingName], [Fixed], [ItemID], [RoomNumber])
VALUES ( 'CTC', 10, 1, 214 ), ( 'CTC', 2, 2, 214 );
```

MeetingItems:

```
BEGIN TRANSACTION;

-- CREATE TABLE "MeetingItems" --------------------------------
CREATE TABLE [dbo].[MeetingItems] (
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        [RoomNumber] INT NOT NULL,
        [ItemID] INT NOT NULL,
        [Quantity] INT NOT NULL,
        PRIMARY KEY ( [BuildingName], [RoomNumber], [ItemID] ) )
GO;
-- ----------------------------------------------------------

COMMIT TRANSACTION;

BEGIN TRANSACTION;

-- CREATE LINK "fk_ItemsMeeting" -------------------------------
ALTER TABLE [dbo].[MeetingItems]
        ADD CONSTRAINT [fk_ItemsMeeting]
        FOREIGN KEY ([ItemID])
        REFERENCES [dbo].[Items]( [ItemID] )
        ON DELETE No Action
        ON UPDATE No Action
```

```
GO;
-- --------------------------------------------------------------

COMMIT TRANSACTION;


INSERT INTO [dbo].[MeetingItems] ( [BuildingName], [ItemID], [Quantity], [RoomNumber])
VALUES ( 'ClassRoom', 1, 10, 212 ), ( 'ClassRoom', 2, 2, 215 );
```

PartitionPossible:

```
BEGIN TRANSACTION;

-- CREATE TABLE "PartitionPossible" ---------------------------
CREATE TABLE [dbo].[PartitionPossible] (
        [PartitionID] INT IDENTITY ( 1, 1 )  NOT NULL,
        [RoomNumber] INT NOT NULL,
        [BuildingName] VARCHAR( 256 ) NOT NULL,
        PRIMARY KEY ( [PartitionID] ) )
GO;
-- --------------------------------------------------------------

COMMIT TRANSACTION;
```

Partitions:

```
BEGIN TRANSACTION;

-- CREATE TABLE "Partitions" ---------------------------------
CREATE TABLE [dbo].[Partitions] (
        [PartitionID] INT NOT NULL,
        [RoomID] INT IDENTITY ( 1, 1 )  NOT NULL,
        [Description] VARCHAR( 256 ) NOT NULL,
        [Capacity] INT NOT NULL,
        [RoomSize] FLOAT NOT NULL,
        PRIMARY KEY ( [PartitionID], [RoomID] ) )
GO;
-- --------------------------------------------------------------

COMMIT TRANSACTION;

BEGIN TRANSACTION;
```

```sql
-- CREATE LINK "fk_1" -----------------------------------------
ALTER TABLE [dbo].[Partitions]
        ADD CONSTRAINT [fk_1]
        FOREIGN KEY ([PartitionID])
        REFERENCES [dbo].[PartitionPossible]( [PartitionID] )
        ON DELETE No Action
        ON UPDATE No Action
GO;
-- --------------------------------------------------------------

COMMIT TRANSACTION;
```