



Thank you for participating in our SSIS database programming challenge!

Please review the requirements and respond as directed below.

Hi and welcome to the SDS Inn. As you know, we are a small inn with a prime location in a prominent city ran by a friendly innkeeper named Allison. The SDS Inn has many faithful customers, and Allison has decided to expand her business by purchasing Donny's Come-On Inn on the other side of town.

The Come-On Inn uses a system by Sleepy-Time Software to track guests and reservations, while Allison uses a custom-built solution for the SDS Inn to track her guests. Allison is thrifty and wants to move all customer data from the Come-On Inn into her custom-built application. Fortunately, Sleepy-Time software allows Allison to export a CSV file of all the current customers and their address. Allison has noticed after looking at Come-On Inn's guests' log that some of the same guests have stayed at both inns in the past. Allison wants to hire you to migrate the Come-On Inn guest information into the SDS Inn's guest database.

Assumptions:

1. The columns in the CSV data map directly to their counterpart in the database. For example, StreetAddress 2 maps to dbo.Addresses.StreetAddress2.
2. Customers are uniquely identified by their first and last name.
3. A customer can have at most one address.
4. All of the states used in the CSV data already exist in the SDSInn database.
5. All of the data in the spreadsheet has already been validated, so there is no need to validate the information in the spreadsheet before processing it.
6. The provided database data and CSV file contain a very small subset of the actual data. The actual CSV file and database are much, much larger.

Your job is as follows:

1. Build an SSIS package in Visual Studio that imports the data contained in the Come-On Inn's CSV file into the "SDSInn" database.
2. If the data already exists in the "SDSInn" database, then update the "SDSInn" data to match the Come-On Inn data.
3. If the data does not exist in the SDS Inn database, then add the data to the "SDSInn" database.



4. If you insert or update any field in the “SDSIInn” database, then use the value ‘22222222-2222-2222-2222-222222222222’ for the “inserted by” and “updated by” fields. Make this a project parameter so that the value can be easily changed in the future.
5. Create a project parameter for the “servername” and the “input file path” so that the package can be easily tested in multiple environments.
6. Make sure that the package can be run more than once.
7. You may add staging table(s) to the SDSInn database for this challenge. In production, a staging database will be located on a separate server.

Please submit all relevant DDL and files that you create.

Submit to Rick.Payne@sds.io

If you have any questions, please submit them to Rick.Payne@sds.io.

GOOD LUCK



The Come-On Inn's Customer list CSV file:

FirstName	LastName	Age	NickName	StreetAddress1	StreetAddress2	city	State	Zipcode	conversionId
Eddard	Stark	67	Ed	23 headless dr		Winterfell	Westeros	89789	3453453254
Ronald	Weasley	17	Ron	The Burrow		London	Hogwarts	11111	6745674543
Khal	Droggo	36	Aquaman	678 Khalisi dr		ESOS	Westeros	54321	2345679893
SamWise	Gamgee	45	Sam	566 shire dr		Hobbiton	Middle Earth	22222	2545567786
Bruce	Wayne	40	Batman	1007 Mountain Drive	Batcave	Gotham	California	66666	8934987348
BilBo	Baggins	89	Ring Bearer	55 shire blvd		Hobbiton	Middle Earth	44444	9067097690

The SDS Inn's Database Schema and data:

```

use [master]
go

create database [SDSInn]
Go

use [SDSInn]
Go

if exists(select 1 from INFORMATION_SCHEMA.tables where TABLE_NAME = 'CustomerAddresses')
    drop table dbo.CustomerAddresses;

if exists(select 1 from INFORMATION_SCHEMA.tables where TABLE_NAME = 'Customers')
    drop table dbo.Customers;

```



```
if exists(select 1 from INFORMATION_SCHEMA.tables where TABLE_NAME = 'States')
drop table dbo.states;
```

```
/***** Object: Table [dbo].[Customer]    Script Date: 2/26/2019 1:28:54 PM *****/
```

```
SET ANSI_NULLS ON
```

```
GO
```

```
SET QUOTED_IDENTIFIER ON
```

```
GO
```

```
CREATE TABLE [dbo].[Customers](
```

```
    [Id] [int] IDENTITY(1,1) NOT NULL,
```

```
    [FirstName] [nvarchar](50) NOT NULL,
```

```
    [LastName] [nvarchar](50) NOT NULL,
```

```
    [Age] [int] NOT NULL,
```

```
    [NickName] [nvarchar](50) NULL,
```

```
    [InsertedBy] [uniqueidentifier] NOT NULL,
```

```
    [InsertedOn] [datetime] NOT NULL,
```

```
    [UpdatedBy] [uniqueidentifier] NOT NULL,
```

```
    [UpdatedOn] [datetime] NOT NULL,
```

```
    [ActiveFlag] [bit] NOT NULL
```

```
PRIMARY KEY CLUSTERED
```

```
(
```

```
    [Id] ASC
```

```
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
```

```
) ON [PRIMARY]
```

```
GO
```

```
/***** Object: Table [dbo].[CustomerAddress]    Script Date: 2/26/2019 1:28:55 PM *****/
```

```
SET ANSI_NULLS ON
```

```
GO
```

```
SET QUOTED_IDENTIFIER ON
```

```
GO
```

```
CREATE TABLE [dbo].[CustomerAddresses](
```

```
    [Id] [int] IDENTITY(1,1) NOT NULL,
```

```
    [CustomerId] [int] NOT NULL,
```

```
    [StreetAddress1] [nvarchar](128) NOT NULL,
```

```
    [StreetAddress2] [nvarchar](128) NULL,
```

```
    [City] [nvarchar](128) NOT NULL,
```

```
    [StateId] [int] NOT NULL,
```

```
    [ZipCode] [int] NOT NULL,
```

```
    [InsertedBy] [uniqueidentifier] NOT NULL,
```

```
    [InsertedOn] [datetime] NOT NULL,
```

```
    [UpdatedBy] [uniqueidentifier] NOT NULL,
```

```
    [UpdatedOn] [datetime] NOT NULL,
```

```
    [ActiveFlag] [bit] NOT NULL
```

```
PRIMARY KEY CLUSTERED
```



```
(
    [Id] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
GO
/***** Object: Table [dbo].[States]    Script Date: 2/26/2019 1:28:55 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[States](
    [Id] [int] IDENTITY(1,1) NOT NULL,
    [StateName] [nvarchar](25) NOT NULL,
    [ActiveFlag] [bit] NOT NULL,
PRIMARY KEY CLUSTERED
(
    [Id] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[Customers] ON
GO
INSERT [dbo].[Customers] ([Id], [FirstName], [LastName], [Age], [NickName], [InsertedBy], [InsertedOn], [UpdatedBy], [UpdatedOn], [ActiveFlag])
VALUES (1, N'Jon', N'Snow', 26, N'Crow', N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25' AS DateTime), N'11111111-1111-1111-1111-
111111111111', CAST(N'2019-02-25T20:38:12.660' AS DateTime), 1)
GO
INSERT [dbo].[Customers] ([Id], [FirstName], [LastName], [Age], [NickName], [InsertedBy], [InsertedOn], [UpdatedBy], [UpdatedOn], [ActiveFlag])
VALUES (2, N'Bilbo', N'Baggins', 88, N'Ring Bearer', N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:39:10.750' AS DateTime),
N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:39:10.750' AS DateTime), 1)
GO
INSERT [dbo].[Customers] ([Id], [FirstName], [LastName], [Age], [NickName], [InsertedBy], [InsertedOn], [UpdatedBy], [UpdatedOn], [ActiveFlag])
VALUES (3, N'Tony', N'Stark', 45, N'Ironman', N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:40:09.210' AS DateTime), N'11111111-
1111-1111-1111-111111111111', CAST(N'2019-02-25T20:40:09.210' AS DateTime), 1)
GO
INSERT [dbo].[Customers] ([Id], [FirstName], [LastName], [Age], [NickName], [InsertedBy], [InsertedOn], [UpdatedBy], [UpdatedOn], [ActiveFlag])
VALUES (4, N'Khal', N'Drogo', 36, NULL, N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:41:49.397' AS DateTime), N'11111111-1111-
1111-1111-111111111111', CAST(N'2019-02-25T20:41:49.397' AS DateTime), 0)
GO
INSERT [dbo].[Customers] ([Id], [FirstName], [LastName], [Age], [NickName], [InsertedBy], [InsertedOn], [UpdatedBy], [UpdatedOn], [ActiveFlag])
VALUES (5, N'Harry', N'Potter', 17, N'Chosen One', N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:44:54.723' AS DateTime),
N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-25T20:44:54.723' AS DateTime), 1)
GO
SET IDENTITY_INSERT [dbo].[Customers] OFF
GO
```



```
SET IDENTITY_INSERT [dbo].[CustomerAddresses] ON
GO
INSERT [dbo].[CustomerAddresses] ([Id], [CustomerId], [StreetAddress1], [StreetAddress2], [City], [StateId], [ZipCode], [InsertedBy], [InsertedOn],
[UpdatedBy], [UpdatedOn], [ActiveFlag]) VALUES (1, 1, N'23 Resurrection dr', N'northtower', N'Winterfell', 2, 45044, N'11111111-1111-1111-1111-
111111111111', CAST(N'2019-02-26T13:20:22.453' AS DateTime), N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-26T13:20:22.453' AS DateTime),
1)
GO
INSERT [dbo].[CustomerAddresses] ([Id], [CustomerId], [StreetAddress1], [StreetAddress2], [City], [StateId], [ZipCode], [InsertedBy], [InsertedOn],
[UpdatedBy], [UpdatedOn], [ActiveFlag]) VALUES (2, 2, N'55 shire blvd', NULL, N'Hobbiton', 3, 33333, N'11111111-1111-1111-1111-111111111111',
CAST(N'2019-02-26T13:20:22.460' AS DateTime), N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-26T13:20:22.460' AS DateTime), 1)
GO
INSERT [dbo].[CustomerAddresses] ([Id], [CustomerId], [StreetAddress1], [StreetAddress2], [City], [StateId], [ZipCode], [InsertedBy], [InsertedOn],
[UpdatedBy], [UpdatedOn], [ActiveFlag]) VALUES (3, 5, N'4 Privit Dr', N'Little Whinging', N'Surrey', 4, 12345, N'11111111-1111-1111-1111-1111
111111111111', CAST(N'2019-02-26T13:20:22.487' AS DateTime), N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-26T13:20:22.487' AS DateTime),
1)
GO
INSERT [dbo].[CustomerAddresses] ([Id], [CustomerId], [StreetAddress1], [StreetAddress2], [City], [StateId], [ZipCode], [InsertedBy], [InsertedOn],
[UpdatedBy], [UpdatedOn], [ActiveFlag]) VALUES (4, 3, N'10880 Malibu Point', NULL, N'Malibu', 6, 12345, N'11111111-1111-1111-1111-111111111111',
CAST(N'2019-02-26T13:21:43.490' AS DateTime), N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-26T13:21:43.490' AS DateTime), 1)
GO
INSERT [dbo].[CustomerAddresses] ([Id], [CustomerId], [StreetAddress1], [StreetAddress2], [City], [StateId], [ZipCode], [InsertedBy], [InsertedOn],
[UpdatedBy], [UpdatedOn], [ActiveFlag]) VALUES (5, 4, N'678 Khalisi dr', NULL, N'ESOS', 2, 54321, N'11111111-1111-1111-1111-111111111111',
CAST(N'2019-02-26T13:23:12.340' AS DateTime), N'11111111-1111-1111-1111-111111111111', CAST(N'2019-02-26T13:23:12.340' AS DateTime), 0)
GO
SET IDENTITY_INSERT [dbo].[CustomerAddresses] OFF
GO
SET IDENTITY_INSERT [dbo].[States] ON
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (1, N'Ohio', 0)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (2, N'Westeros', 1)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (3, N'Mordor', 1)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (4, N'Hogwarts', 1)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (5, N'Wacanda', 1)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (6, N'California', 1)
GO
INSERT [dbo].[States] ([Id], [StateName], [ActiveFlag]) VALUES (7, N'Middle Earth', 1)
GO
SET IDENTITY_INSERT [dbo].[States] OFF
GO
```



```
ALTER TABLE [dbo].[Customers] ADD DEFAULT (getdate()) FOR [InsertedOn]
GO
ALTER TABLE [dbo].[Customers] ADD DEFAULT (getdate()) FOR [UpdatedOn]
GO
ALTER TABLE [dbo].[CustomerAddresses] ADD DEFAULT (getdate()) FOR [InsertedOn]
GO
ALTER TABLE [dbo].[CustomerAddresses] ADD DEFAULT (getdate()) FOR [UpdatedOn]
GO
ALTER TABLE [dbo].[CustomerAddresses] WITH CHECK ADD FOREIGN KEY([CustomerId])
REFERENCES [dbo].[Customers] ([Id])
GO
ALTER TABLE [dbo].[CustomerAddresses] WITH CHECK ADD FOREIGN KEY([StateId])
REFERENCES [dbo].[States] ([Id])
GO
```