For this Milestone we will be building the actual database on the MS SQL Server you installed during milestone 2. In order to complete this milestone you will need to be able to transfer files from your local PC to your AWS instance. You should have already downloaded and install WinSCP from the directions in lvyLearn. Now you will need to configure WinSCP to connect to your server.

### **Configuring WinSCP**

First launch WinSCP and configure the Login page as indicated below

File Protocol: SCP

Host Name: Your Amazon Instance name

Username: Ubuntu

🌆 Login	- 🗆 X
RedHat Ubuntu	Session   File protocol:   SCP   Host name:   ec2-18-208-178-45.compute-1.amazonaws.com   22 ▼   User name:   Password:   ubuntul   Save   ▼   Advanced
	Login ▼ Close Help

Then you need to configure WinSCP to use your keypair to authenticate. You do this by clickin on the Advanced button and selecting Authentication under the SSH heading as shown below

Advanced Site Settings		?	×
Environment Directories Recycle bin Encryption SFTP SCP/Shell Connection Proxy Tunnel SSH Key exchange Authentication Bugs Note	□       Bypass authentication entirely         Authentication options       □         □       Attempt authentication using Pageant         □       Attempt 'keyboard-interactive' authentication         □       Attempt 'keyboard-interactive' authentication         □       Respond with password to the first prompt         □       Attempt TIS or CryptoCard authentication (SSH-1)         Authentication parameters       □         □       Allow agent forwarding         Private key file:		
Color 🔻	OK Cancel	Hel	p

From this window browse and select the private key you converted and have been using with PuTTY for your terminal connection. Once you have located that .ppk key file click OK. You are now ready to click login.

You should end up with a window that looks similar to the one below. In the right hand pane you have you local PC in the right your Linux Server in AWS.

퉒 Home - ubuntu@ec2-1	18-208-178-45	i.compute-1.amazona	ws.com - WinSCP					_		$\times$
Local Mark Files Comm	nands Sessio	n Options Remote	Help							
🖶 🚼 🚔 Synchronize	🗩 🦑 📓	🛯 💮 Queue 🕤	Transfer Settings Defa	ult	• <i>🛃</i> •					
📮 ubuntu@ec2-18-208-1	78-45.compu	te-1.amazonaws.com	× 🚅 New Session							
🟪 C: Windows 🔹 🝷 🚰	- 🔽 -	🔶 • 🔶 • 🔁 🚺	🏠 🤁 💁		📕 ubuntu 🔹 📑 👻	🔽 - 🖛	» - 🖻 🗖 🏠 🎜	🔍 Find Files	2.	
📳 Upload 👻 📝 Edit 🗸	×d	Properties 🎽 New	· • + - V		Download 👻 📝	Edit - 🗙 🚮 🛛	🔓 Properties 🛛 📑 New -	+ - 🗸		
C:\Users\Home\					/home/ubuntu/					
Name	Size	Туре	Changed		Name	Size	Changed	Rights	Owner	r
±		Parent directory	10/27/2019 8:11:01 PM		±		11/14/2019 1:38:38 PM	rwxr-xr-x	root	
.android		File folder	1/5/2019 9:30:46 AM							
oracle_jre_usage		File folder	12/13/2015 4:32:28 PM							
.VirtualBox		File folder	9/3/2015 10:12:01 PM							
3D Objects		File folder	10/17/2019 6:46:07 PM							
Contacts		File folder	10/17/2019 6:46:08 PM							
Desktop		System Folder	11/14/2019 10:31:53 PM							
Documents		System Folder	11/14/2019 9:35:46 PM							
- Downloads		System Folder	11/14/2019 10:20:40 PM							
Favorites		File folder	10/17/2019 6:46:08 PM							Í
C Links		File folder	10/17/2019 6:46:10 PM							
J) Music		System Folder	10/17/2019 6:46:08 PM							
		System Folder	10/17/2019 1:32:29 AM							
Saved Games		System Folder	10/17/2019 0:40:06 PM							
Searches		File folder	10/17/2019 6:46:08 PM							
Videos		System Folder	10/17/2019 6:46:08 PM							
		-,								
0 B of 0 B in 0 of 16 19 hidden 0 B of 0 B in 0 of 0 7 hidden										
								SCP	0:01:1	15

# Transferring the files

Once you are connected to your Linux box you will want to browse in the left hand pane to the location where you downloaded and extracted the .sql files from the Module Assignment page. Then drag the two files to the right hand pane to upload them to your Linux Instance. When the upload has completed you will see the files in the right hand pane. You can now close WinSCP.

#### **Creating the Database**

With the script files uploaded it is now time to connect via PuTTY to your AWS instance and create the database. The files you uploaded will be in your home directory which can be accessed at the path of /home/Ubuntu

In order to create the database we will use the sqlcmd utility. Use the command below to enter into the sqlcmd utility

/opt/mssql-tools/bin/sqlcmd –S localhost –U SA –P YOURPASSWORD

This should bring you to a prompt that looks like the image below



From here you are ready to build your database using the command below

#### CREATE DATABASE sample

Once you have typed the command hit enter to get a new line. Then type GO and press enter again. Include a screenshot of the result, then type Exit to leave SQLCMD



### Build the Tables in the database

In order to create the tables in the database we will need to execute the sample\_model.sql file. This file contains a series or SQL commands that will build the tables. We will again be using SQLCMD but this time we will be passing the it SQL Script file that you uploaded earlier in the lab. The command below should be executed in your PuTTY window while you are in your home directory. If you need to navigate to your home directory you can do so with the command  $cd \sim$ 

/opt/mssql-tools/bin/sqlcmd –S localhost –U SA –P YourPassword –I sample-model.sql

Once this command has completed include a screenshot below of the output.

ubuntu@ip-172-31-58-34:~\$ /opt/mssql-tools/bin/sqlcmd -S 127.0.0.1 -U SA -P Stuff1111 -i sample-model.sql ubuntu@ip-172-31-58-34:~\$ []

#### Load the Data into the Tables

Now that your database has tables in it we need to load data into the tables. The sample data we are going to use is in the sample-data.sql file that you uploaded to your server with WinSCP. In order to execute this script we will use the same command as when we built the tables and simply replace the sample-model.sql filename with the filename sample-data.sql.

Once the script has finished include a screenshot of the output here.

(1 rows affected)	^
(1 rows affected)	
(1 rows affected) ubuntu@ip-172-31-58-34:~\$ []	v

# **Test Query**

Congratulations, if all of your scripts ran as expected you now have a working database server complete with 2 populated tables. The last step for this milestone is to execute a simple query against of the tables to show that it contains data. For that you will need to log into SQLCMD again with the command below

## /opt/mssql-tools/bin/sqlcmd –S localhost –U SA –P YourPassword

Once you are at the prompt type in the following command

Select \* from product

Go

Take a screenshot of the results and paste it here. Don't forget to upload this document for your instructor to review.

💰 ubuntu@ip-172-31-58-34: ~		- 🗆 ×
0 60 Camembert Pierrot	28	34.00 15 - 300 g rounds
0 61 Sirop d'érable	29	28.50 24 - 500 ml bottles
62 Tarte au sucre	29	49.30 48 pies
63 Vegie-spread		43.90 15 - 625 g jars
64 Wimmers gute Semmelknödel	12	33.25 20 bags x 4 pieces
65 Louisiana Fiery Hot Pepper Sauce		21.05 32 - 8 oz bottles
66 Louisiana Hot Spiced Okra		17.00 24 - 8 oz jars
67 Laughing Lumberjack Lager	16	14.00 24 - 12 oz bottles
68 Scottish Longbreads		12.50 10 boxes x 8 pieces
69 Gudbrandsdalsost	15	36.00 10 kg pkg.
70 Outback Lager		15.00 24 - 355 ml bottles
71 Flotemysost	15	21.50 10 - 500 g pkgs.
72 Mozzarella di Giovanni O	14	34.80 24 - 200 g pkgs.
73 Röd Kaviar 0	17	15.00 24 - 150 g jars
74 Longlife Tofu 0	4	10.00 5 kg pkg.
75 Rhönbräu Klosterbier 0	12	7.75 24 - 0.5 1 bottles
76 Lakkalikööri 0	23	18.00 500 ml
77 Original Frankfurter grüne Soße O	12	13.00 12 boxes
78 Stroopwafels 0	22	9.75 24 pieces
(78 rows affected) 1> □		