

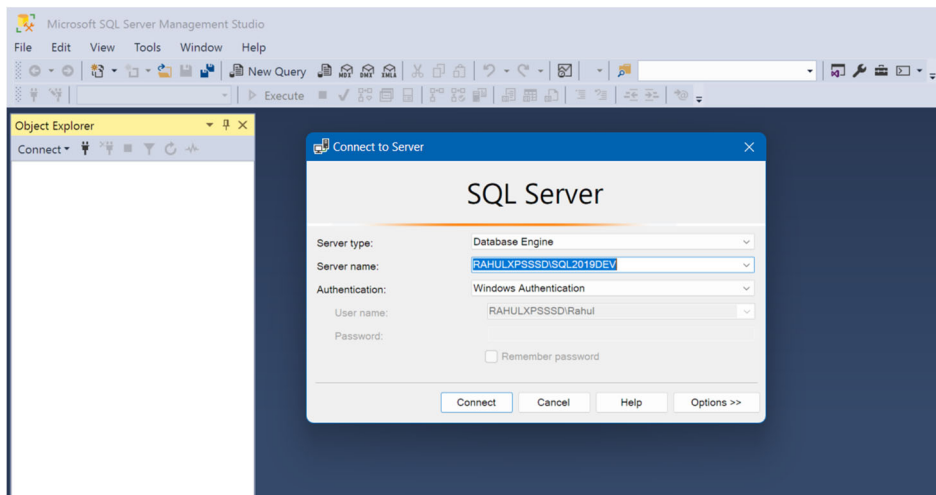
Pre-Requisite:

It is critical for this process that you have installed SQL Server as shown in the directions for downloading and installing SQL Server on canvas. SQL Server is the database engine and SSMS on your machine and data management cannot occur without the database engine.

Also, we will need SQL Server Management Studio (SSMS) for this step. SSMS is simply a way to view and manage your database.

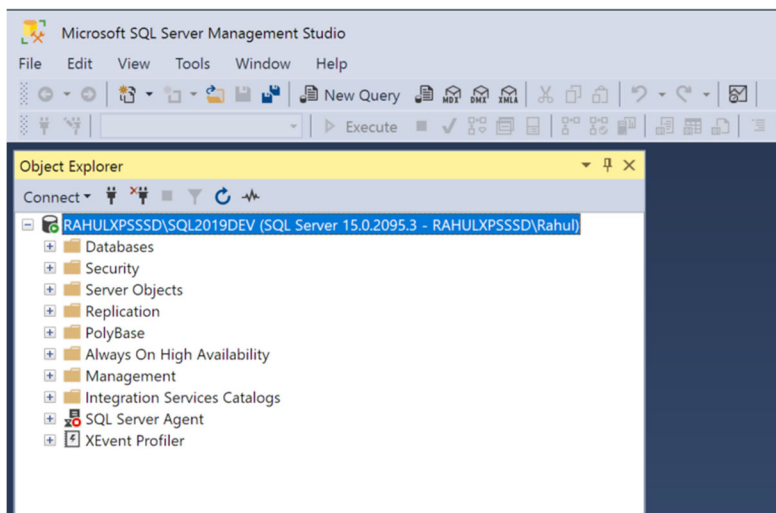
Please make sure you have these tools (SQL Server Express AND SSMS) installed on your machine before you attach the Northwind database.

To double check, when you open SSMS, you should see a screen like this:



Your server name and User name will be different. If you installed the software as shown in the directions, then your Authentication method should be windows authentication and the user name should be selected – this is the preferred method since windows will log you in with your windows user name on your machine.

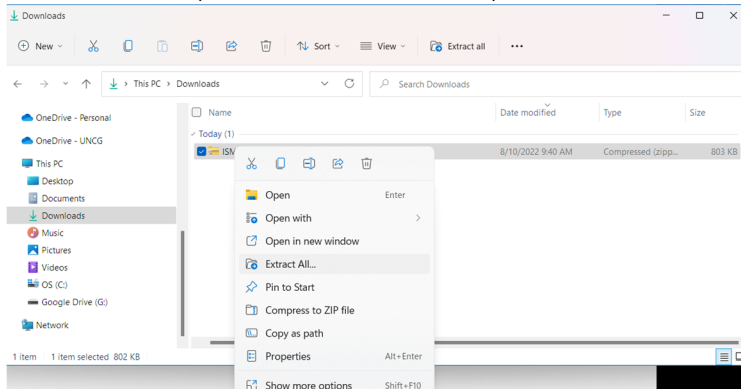
Once you click connect, the software connects to your SQL Server Database Engine and you will get a screen similar to this:



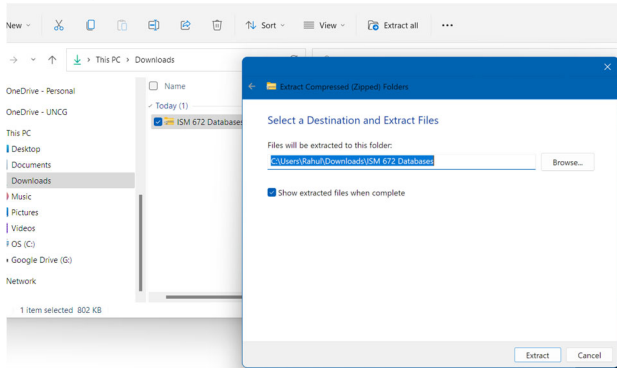
Now you are ready to “Attach” a data base to your instance of SQL Server.

To Attach (or restore) a Database:

1. Download the zip file ISM 672 databases provided and extract the folder.

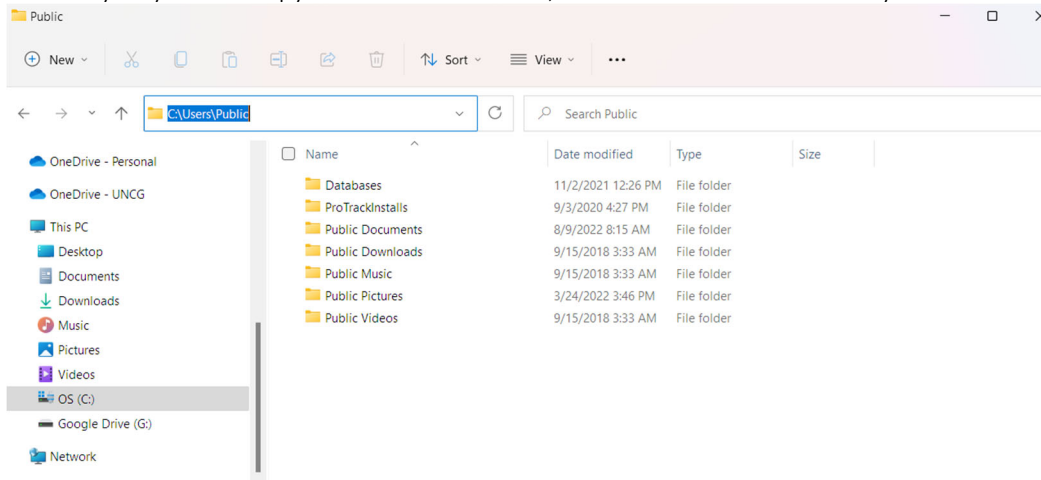


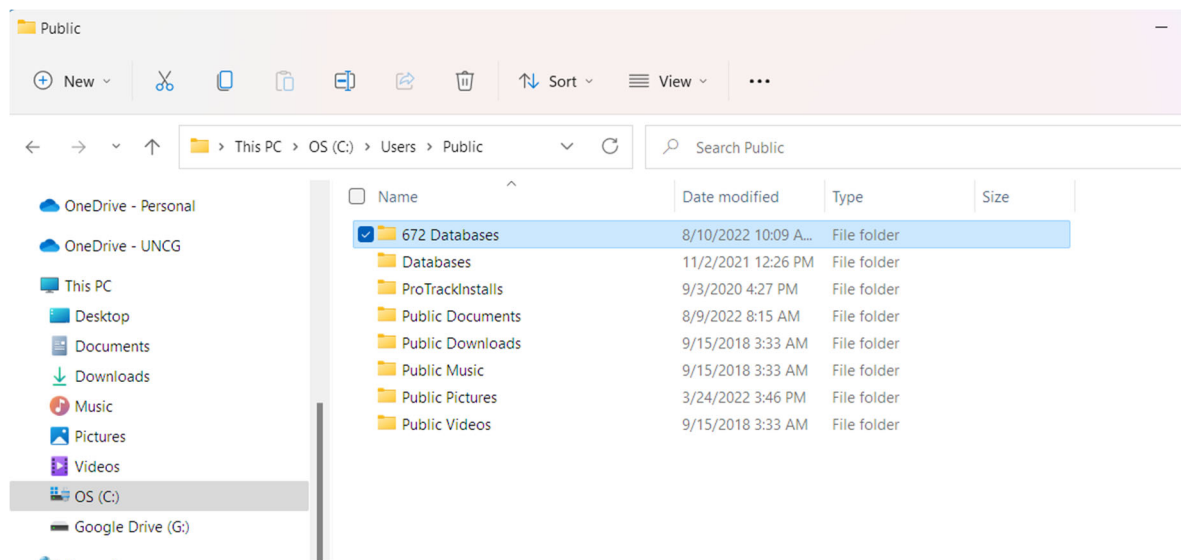
2. Extract the files by clicking extract all. A folder is created with the same name as the zip file (by default) and all files are extracted there. You can accept the default directory or create your own:



In this folder, you should have a file called NorthwindFall2022.bak. This is a full back up of the Northwind database, with some minor changes I have made. The backup file can be used to restore your database, in case your DB is corrupted, or you have to restore it for some reason.

3. On your C Drive you have a folder called Users\Public. Copy or move the backup file to that directory or you can copy the extracted folder, with the file to the directory.





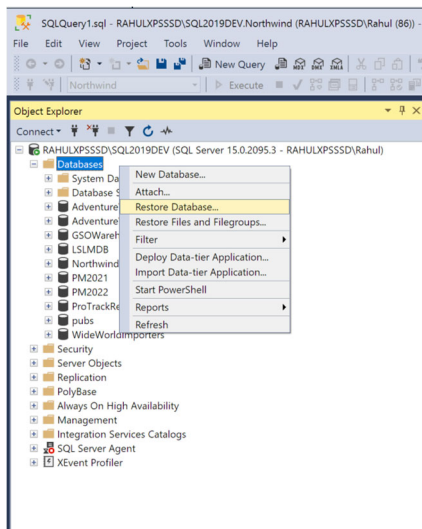
At the end of this step, you should have a directory with the Northwind backup file in your C:\Users\Public Folder.

Important - Please Note:

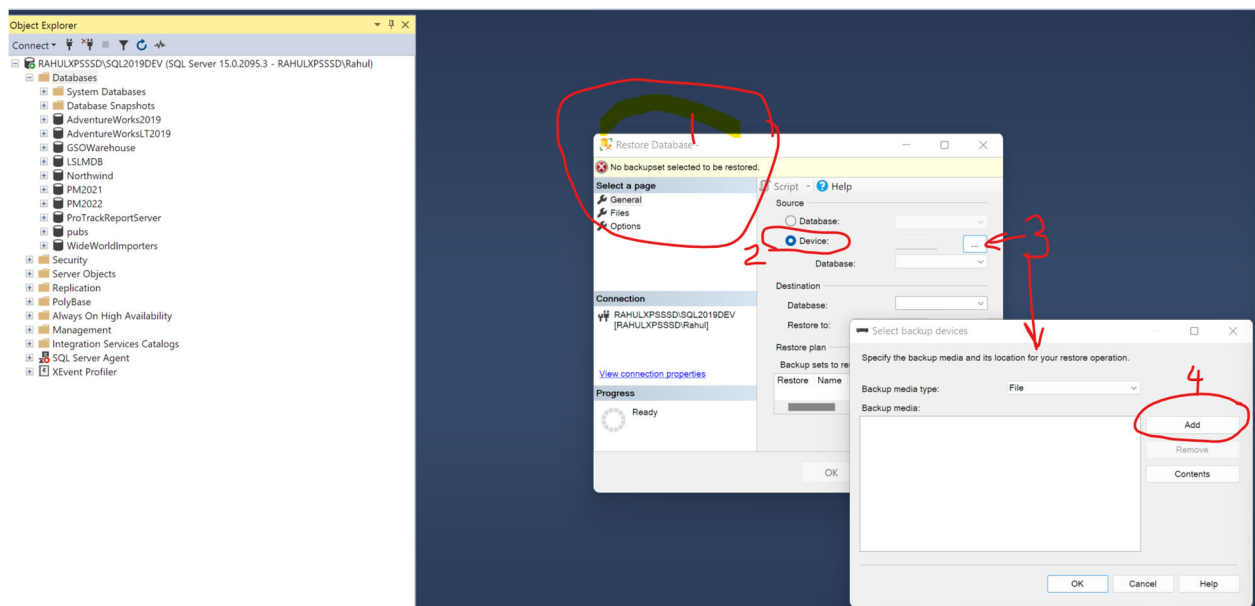
- a. Make sure the folder is in your C:\Users\Public folder. As the name suggests, this is a public folder that all users and processes running on your machine, including SQL Server, can see. SQL Server, like most servers, runs as a separate *Service* on your machine and does not have access to your folders. Placing the backup in the public folder allows SQL Server access to the folder and the backup file inside.
 - b. Make sure you do not put any of these files, or any files for this class, in your ONE DRIVE. Its availability is not reliable, and processes are not able to access it. **You could lose your work if the file is on your ONE DRIVE, and not on your hard drive!!**
4. Once your file is extracted to your Public folder, as shown in step 3, you are ready to attach your database to your running instance of MS SQL Server.

Again, at this point, you need to have SQL Server up and running on your machine and have connected to the instance of SQL Server on your machine using SQL Server Management Studio. If you do not, or have not tested that you can connect to your SQL Server, as shown above, please go back to the directions for installing SQL Server and SSMS on your machines and follow the steps to install and test the connectivity of both of these on your computer.

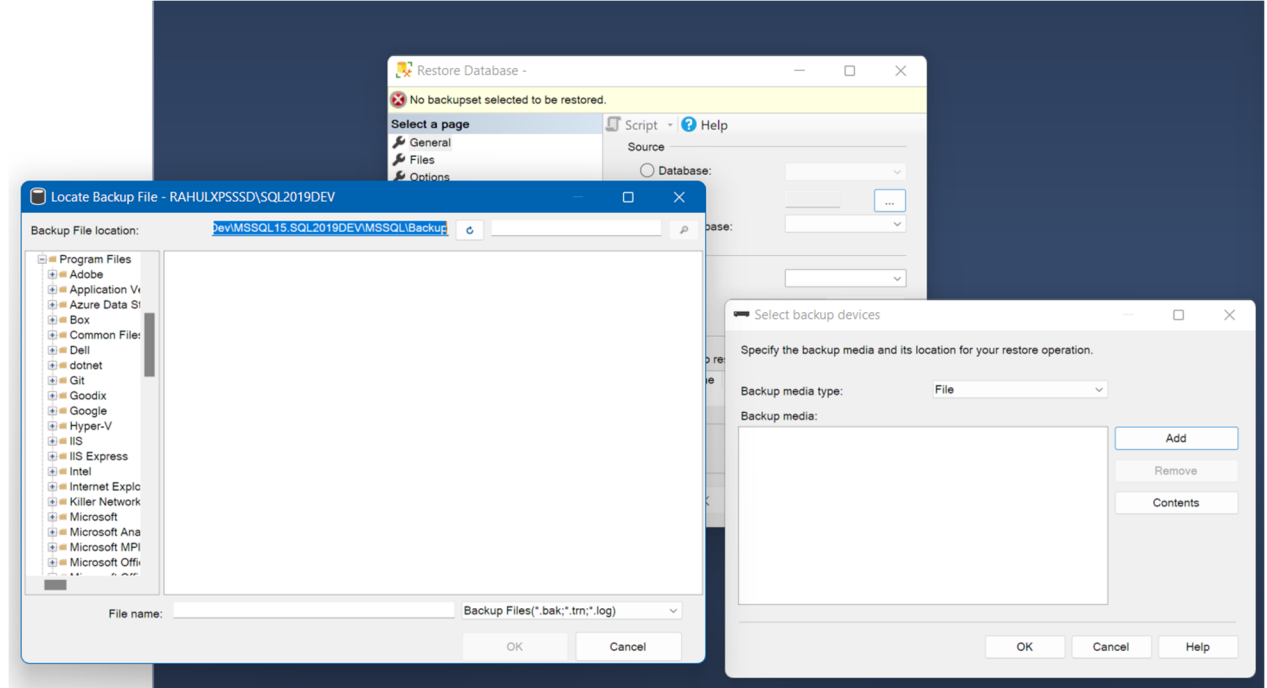
5. Right click the databases and click on restore Database. (Make sure that “Databases” is selected here ... otherwise you will not see the option to restore the database backup that you downloaded).



6. Clicking “Restore Database” will open a window where you can select the location of the file.
- Make sure your dialog says “Restore Database” – see 1 below.
 - Click on Device to find the file from your machine (the Device) – see 2 below.
 - Click on the ellipsis on Device to open the “Select backup devices” dialog – see 3 below.
 - Click on Add (see 4 below) to tell SQL Server where to find your back up file – the you downloaded and put in your “C:\Users\Public” folder.

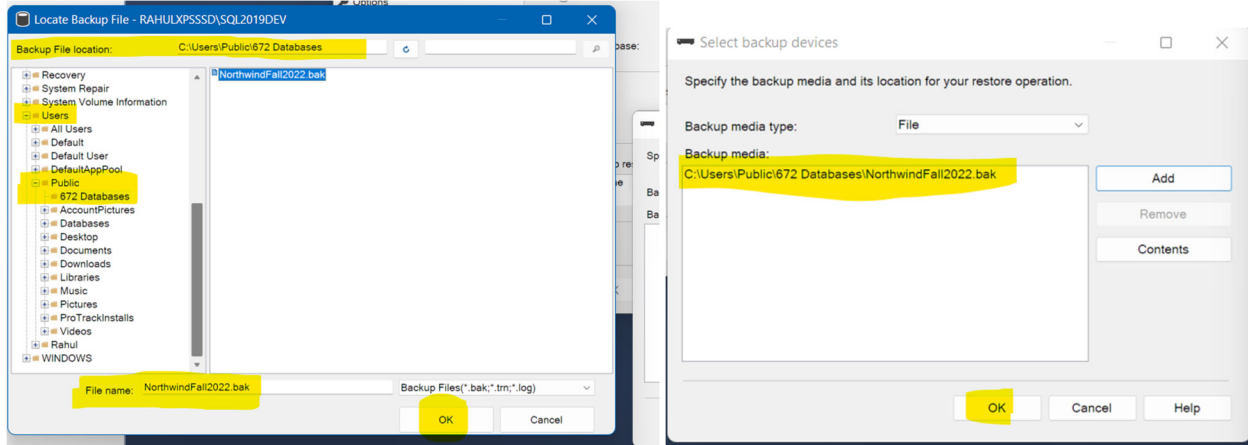


- Click on Add to open the Locate Backup File dialog and show SQL Server where your file is located.

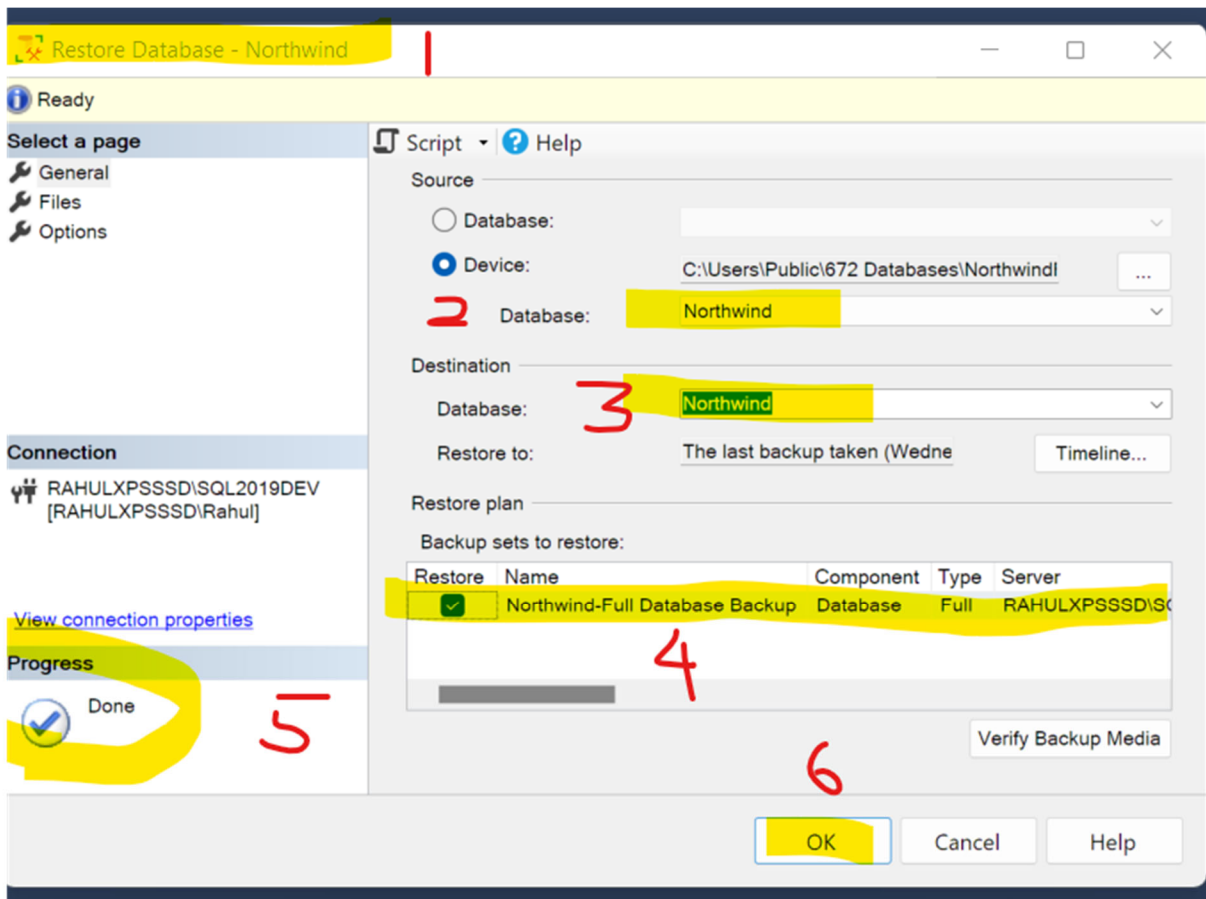


- Select the "C:\Users\Public" Folder where you copied the database to (as shown in earlier steps). Then Select the file and click "OK". Note: OK will not be available till you click on (Select) the NorthwindFall2022.bak file.

Once you click OK, the file will be selected and you are ready to restore (see below)

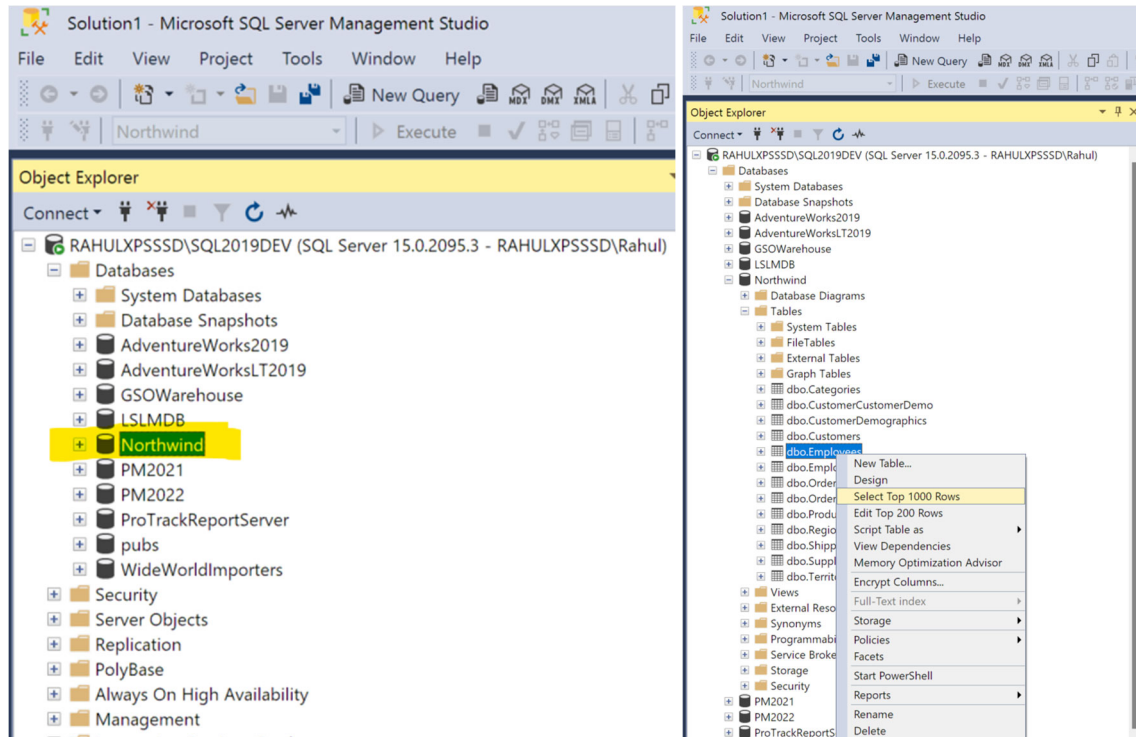



9. Click OK to restore the file.
 - a. You will be taken back to the restore Database window (See 1)
 - b. The name of the DB will be selected (See 2).
 - c. The name of the DB on your machine will be specified here. You can change the name if you like – you don't have to and I would not really recommend it for class, but it is good to know that you can (See 3).
 - d. The Restore should show Full DB Back up (See 4).
 - e. The progress window should show "Done" or Complete. If any errors occur, they will be shown here ... you should not have any errors if you have carefully followed the previous steps. (See 5).
 - f. After you have verified 1 through 5, click OK (See 6) to complete the database backup restoration.



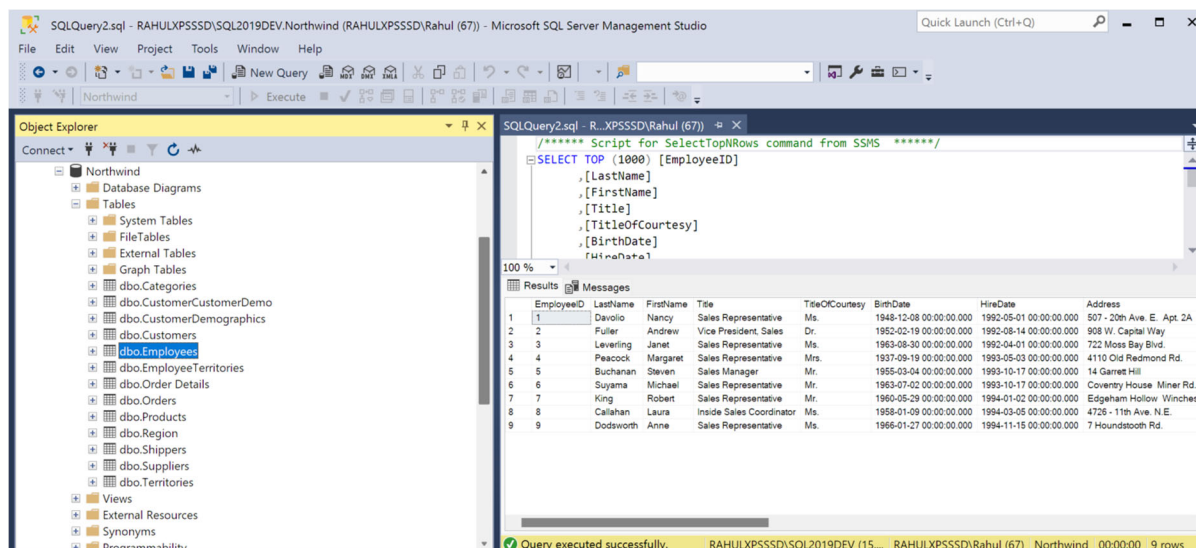
Clicking OK completes the backup restore process and your database is now attached to your SQL Server Instance.

You can view the database in your list of databases. You will likely not have the other databases you see in my screenshot, but you should see your Northwind database that you just restored.



Click the  next to Northwind to see the Tables in the database. Select any table and right-click to “Select” data to view – as a final verification. Make sure you have a table selected, otherwise you will not get this context specific command on your menu.

When you click the “Select Top 1000 Rows” on the Employees table for example, you can see the data in the table. This is the final verification that your restoration is complete and successful. Now we are ready to build our programs with this data.



For more information, see <https://docs.microsoft.com/en-us/sql/relational-databases/backups/restore/restore-a-database-backup-using-ssms?view=sql-server-ver15>