TRANSACTIONS

What is Transactions?

Transactions is a group of commands that change the data stored in a database. A transition, is treated as single unit. A transactions ensure that, either all of the commands succeed, or none of them. If one of the commands in the transaction fails, all of the commands fails, and data that was modified in the database is rolled back. In this way, transaction maintain the integrity of the data in a database.

Transaction processing follows these steps.

1. Begin a transition
2. Process database commands.
3. Check for errors.

   If error occurred,

   Roll back the transaction

   Else

   Commit the transaction

Begin Try

Begin Transaction

-- Command 1

-- Command 2

-- Command 3

Commit Transaction

End Try

Begin Catch

Rollback Transaction

End Catch

Note: NOT able to see the un-committed changes.

SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED

Example

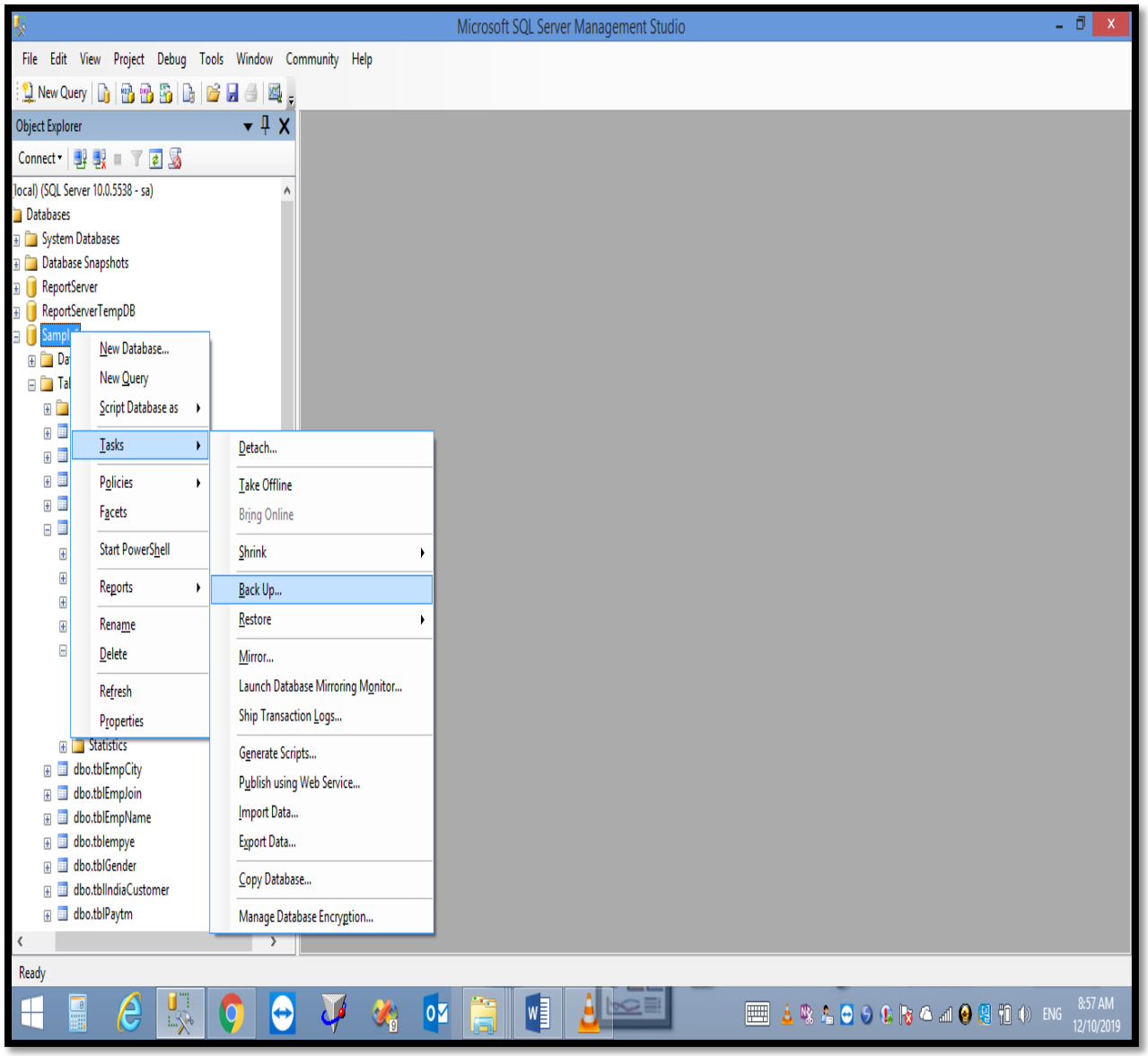
```
Select * from tblEmp

Begin Try
        Begin Transaction
                Update tblEmp set Ename='Amit' where ID=5
        Commit transaction
        Print 'Transaction Commit'
End Try

Begin Catch
                Rollback Transaction
                Print 'Transaction Roll Back '
End Catch
```

Backup & Restore Database

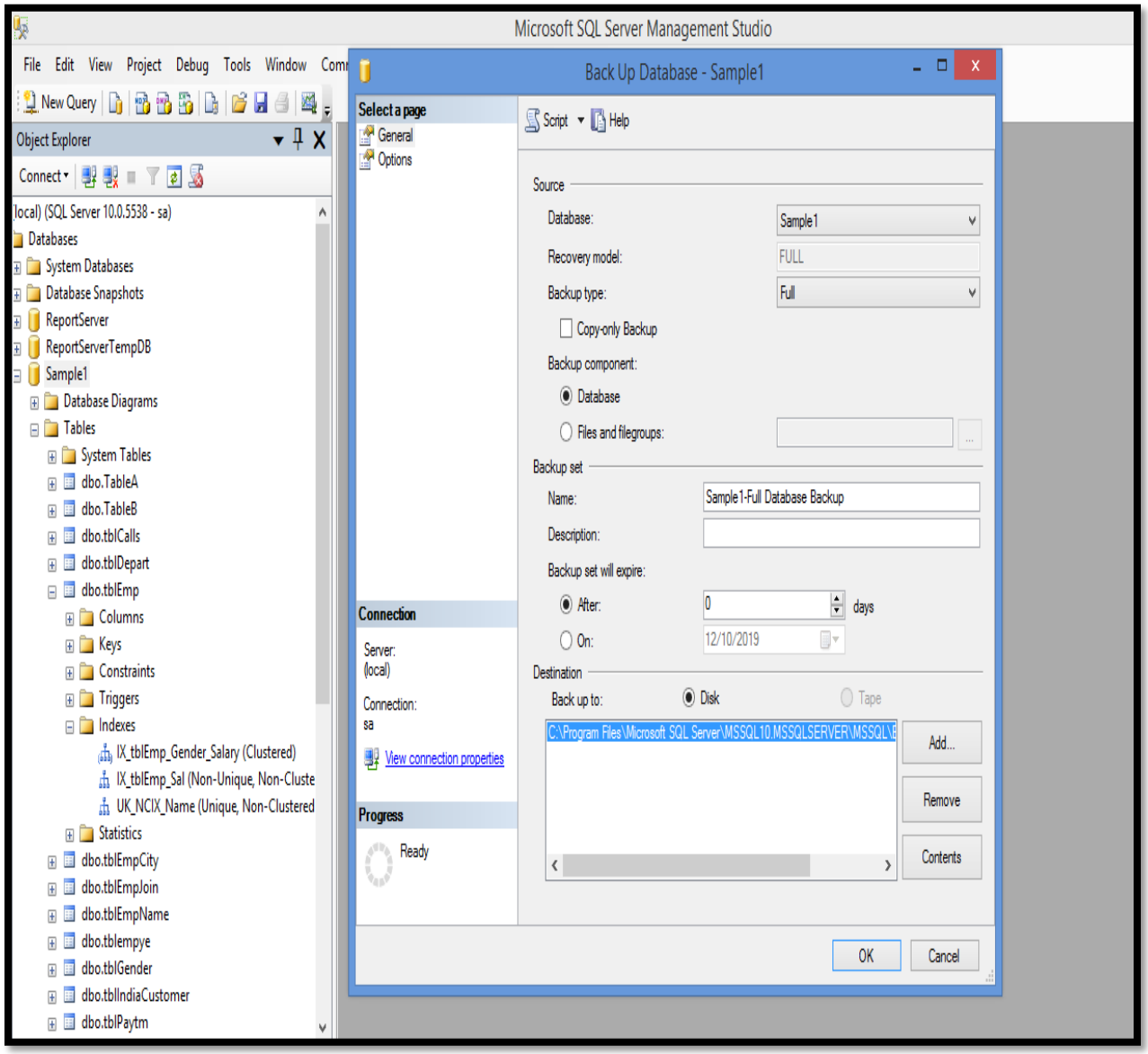
1. Using bak file
2. Using dacpac file
3. Using mdf file

Using bak file

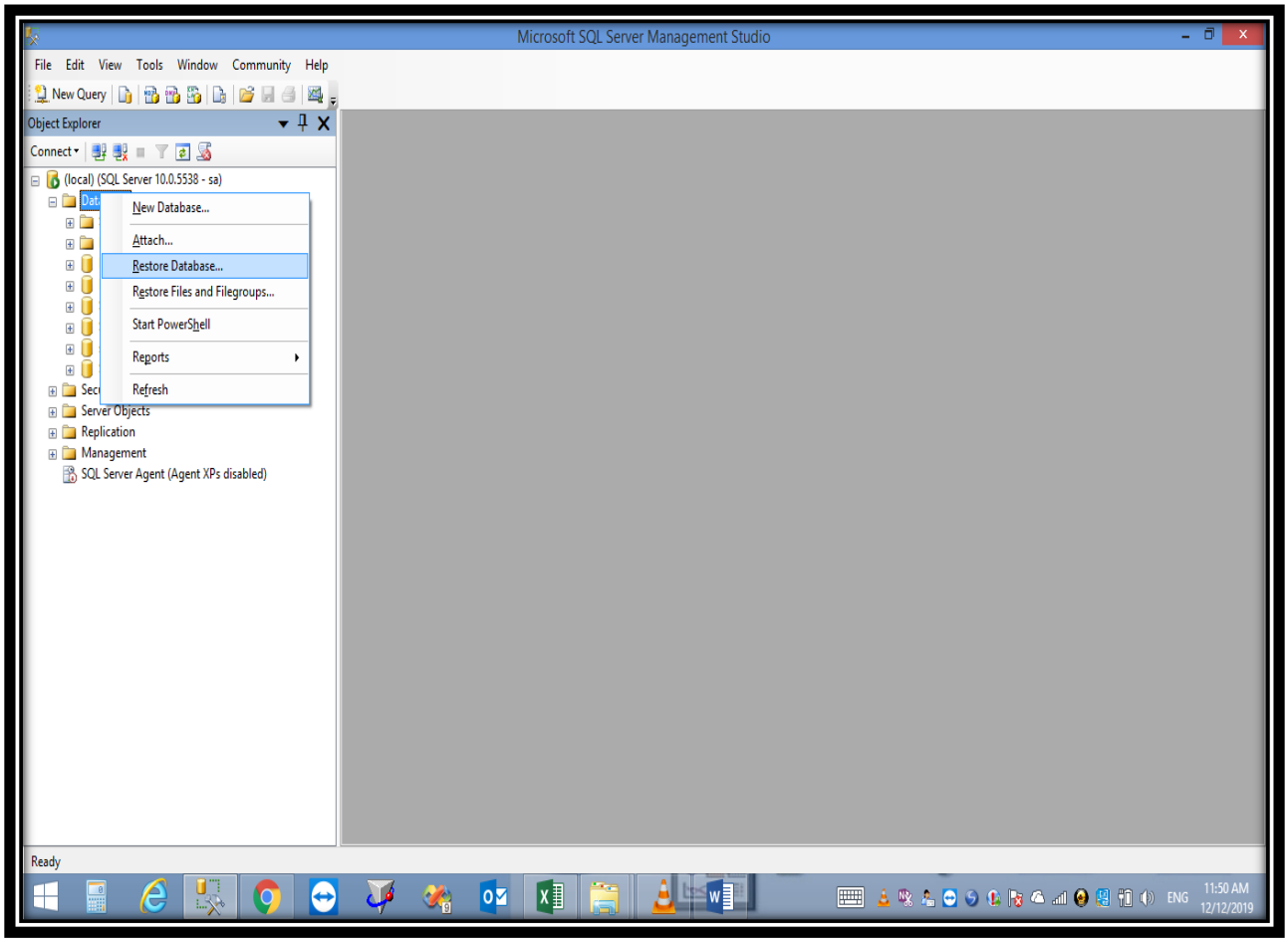
Step 1



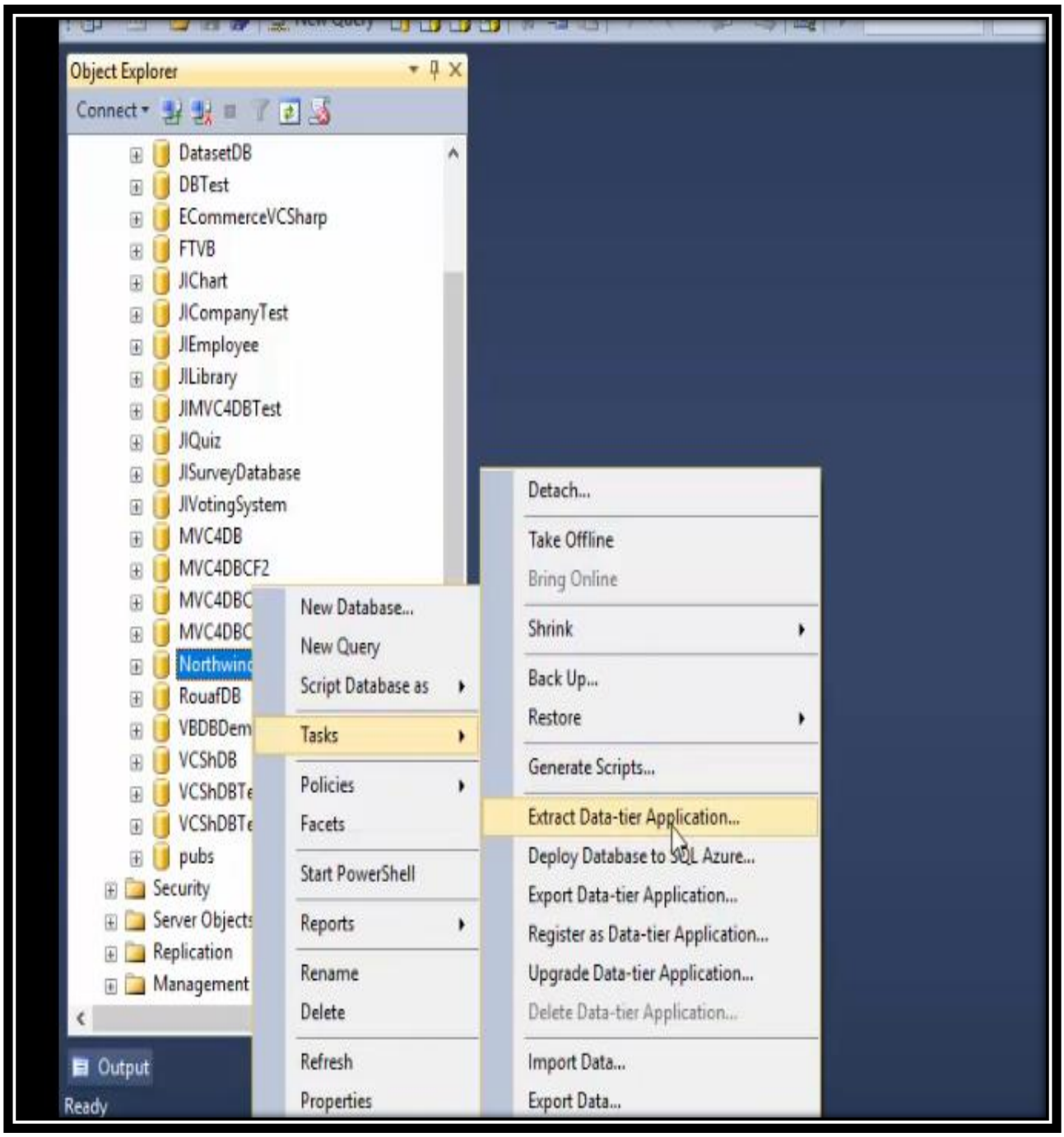
Step 2

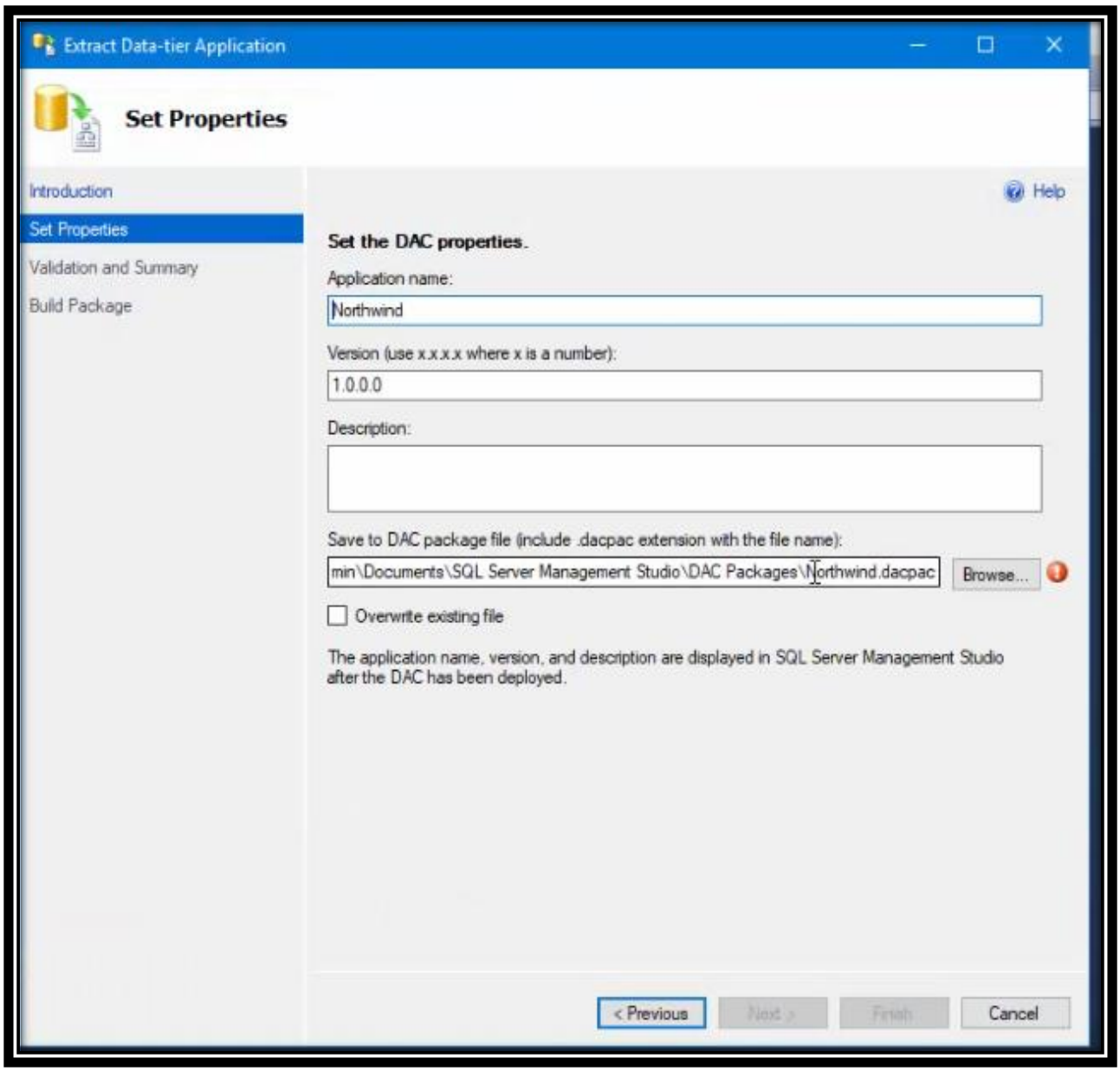

Microsoft SQL Server Management Studio
File Edit View Project Debug Tools Window
New Query
Object Explorer
Connect
(local) (SQL Server 10.0.5538 - sa)
Databases
System Databases
Database Snapshots
ReportServer
ReportServerTempDB
Sample1
Database Diagrams
Tables
System Tables
dbo.TableA
dbo.TableB
dbo.tblCalls
dbo.tblDepart
dbo.tblEmp
Columns
Keys
Constraints
Triggers
Indexes
IX_tblEmp_Gender_Salary (Clustered)
IX_tblEmp_Sal (Non-Unique, Non-Cluste
UK_NCIX_Name (Unique, Non-Clustered
Statistics
dbo.tblEmpCity
dbo.tblEmpJoin
dbo.tblEmpName
dbo.tblempye
dbo.tblGender
dbo.tblIndiaCustomer
dbo.tblPaytm
Back Up Database - Sample1
Select a page
General
Options
Script
Help
Source
Database:
Sample1
Recovery model:
FULL
Backup type:
Full
Copy-only Backup
Backup component:
Database
Files and filegroups:
Backup set
Name:
Sample1-Full Database Backup
Description:
Backup set will expire:
After:
0
days
On:
12/10/2019
Destination
Back up to:
Disk
Tape
C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\
Add...
Remove
Contents
Connection
Server:
(local)
Connection:
sa
View connection properties
Progress
Ready
OK
Cancel

Resotre

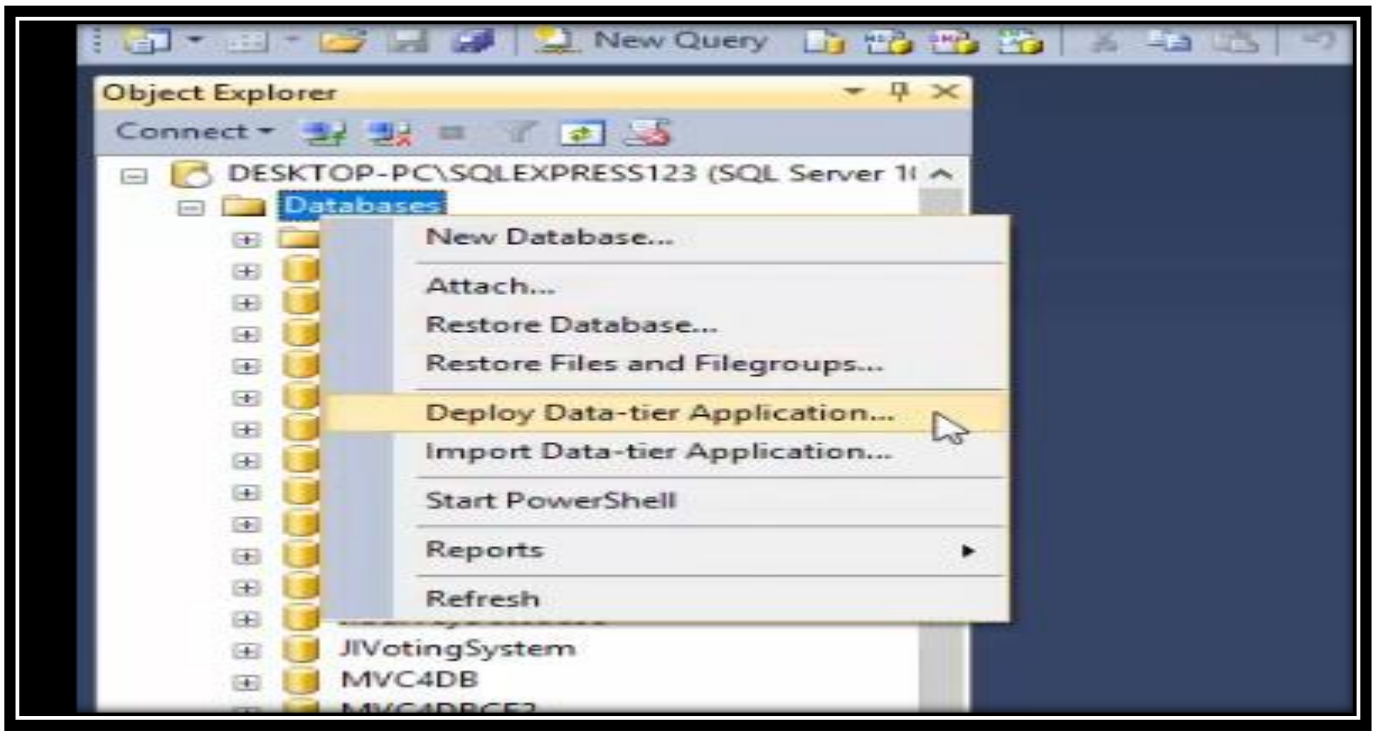

Microsoft SQL Server Management Studio
File Edit View Tools Window Community Help
New Query
Object Explorer
Connect
(local) (SQL Server 10.0.5538 - sa)
New Database...
Attach...
Restore Database...
Restore Files and Filegroups...
Start PowerShell
Reports
Refresh
Server Objects
Replication
Management
SQL Server Agent (Agent XPs disabled)
Ready
ENG
11:50 AM
12/12/2019

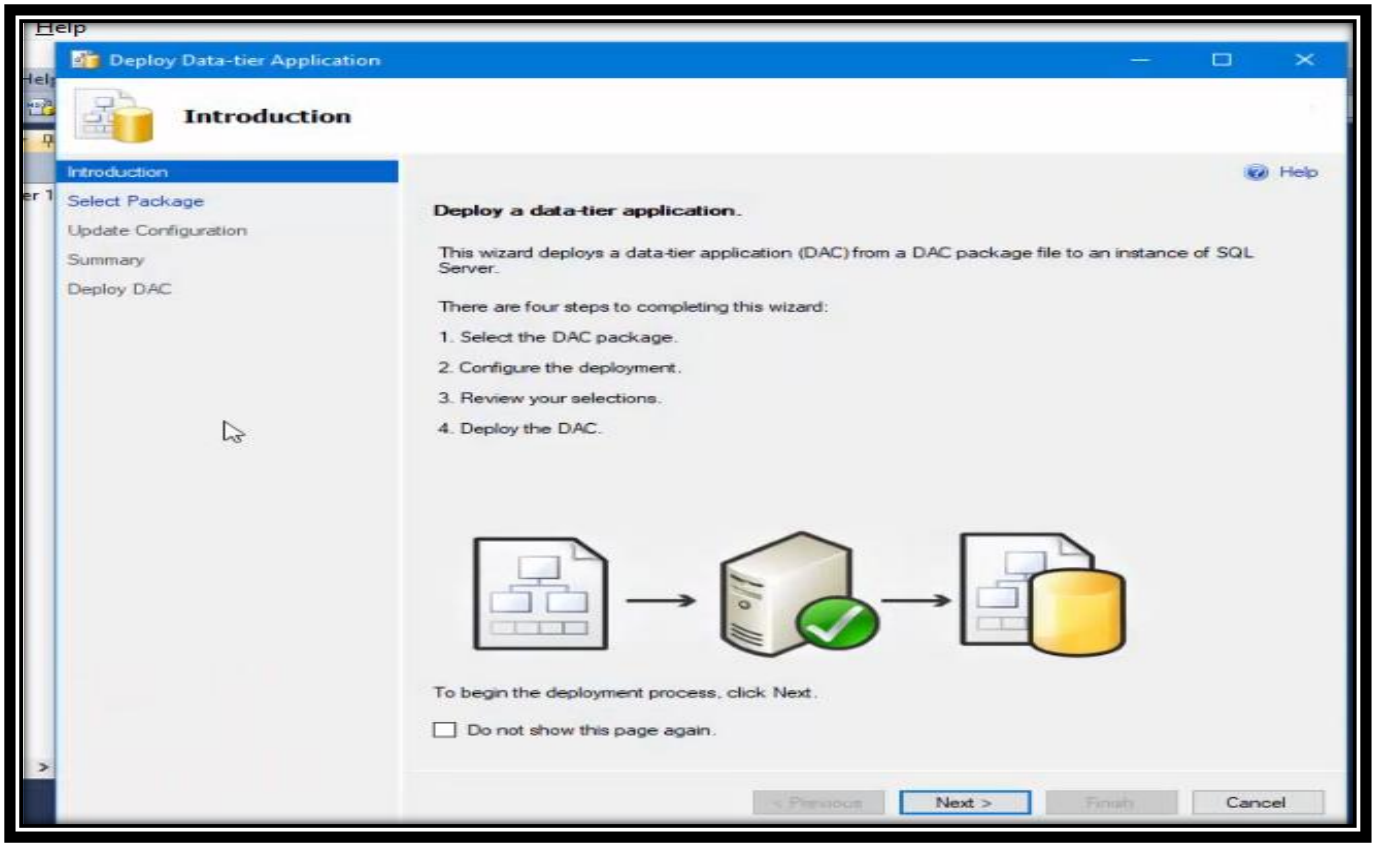
Using dacpac file

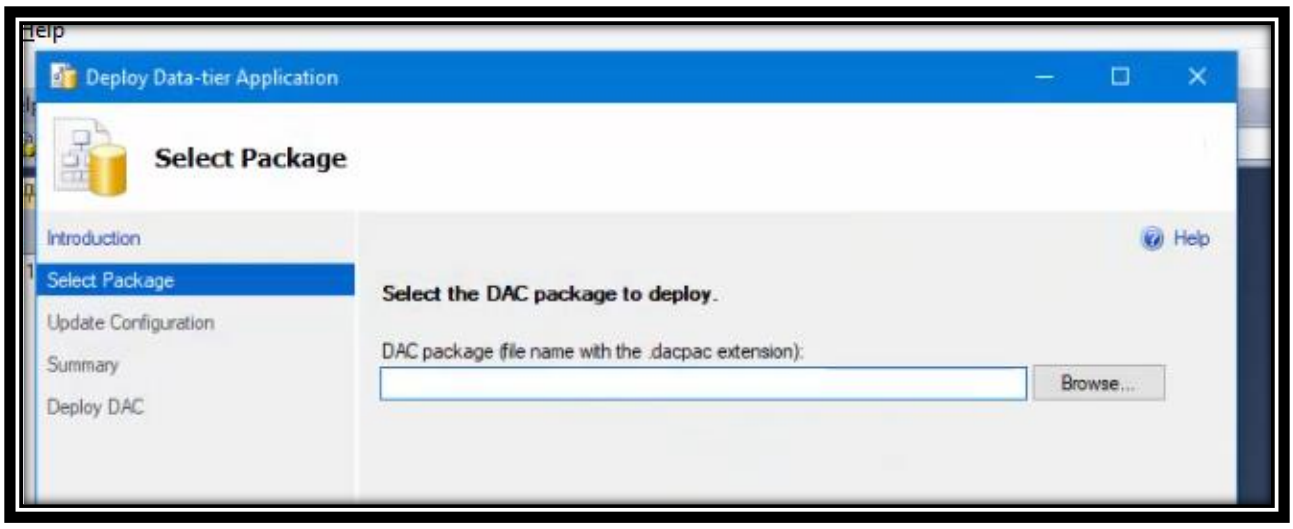


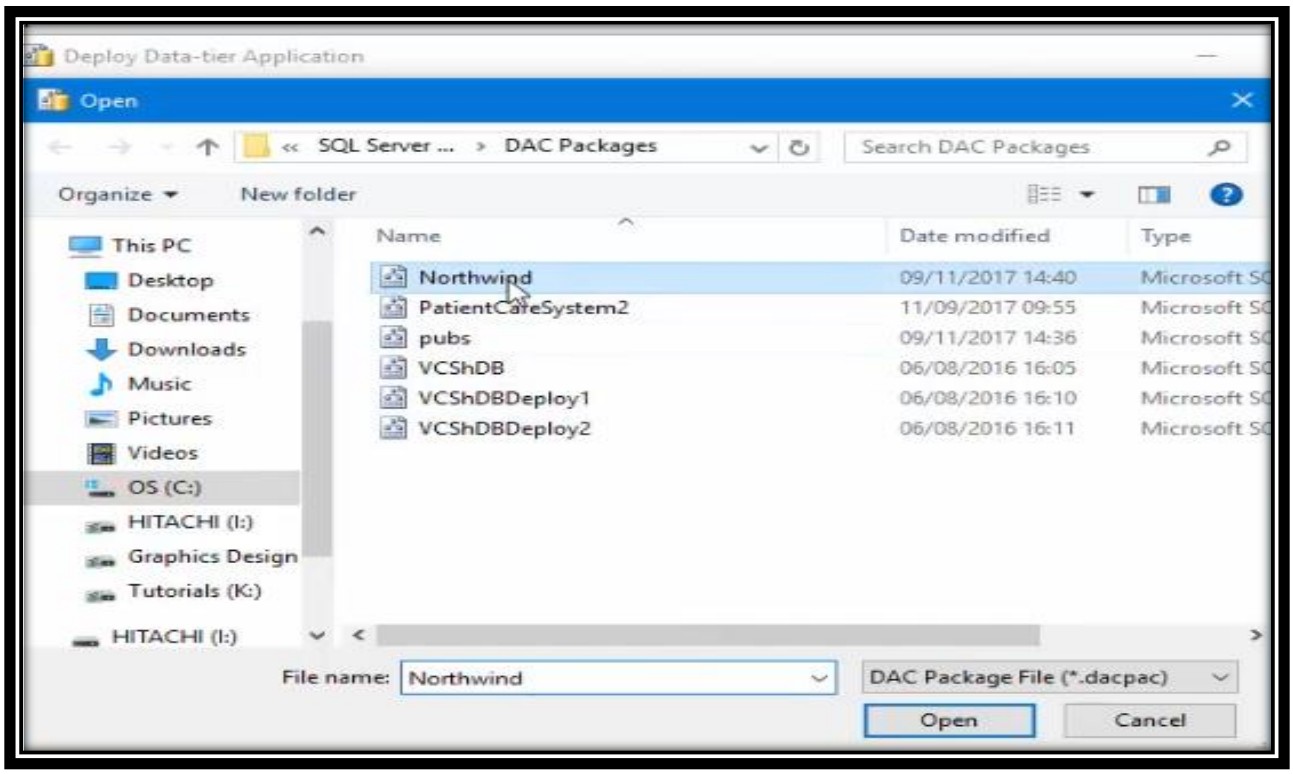

Extract Data-tier Application
Set Properties
Introduction
Set Properties
Validation and Summary
Build Package
Help
Set the DAC properties.
Application name:
Northwind
Version (use x.x.x.x where x is a number):
1.0.0.0
Description:
Save to DAC package file (include .dacpac extension with the file name):
min\Documents\SQL Server Management Studio\DAC Packages\Northwind.dacpac
Browse...
Overwrite existing file
The application name, version, and description are displayed in SQL Server Management Studio after the DAC has been deployed.
< Previous
Next >
Finish
Cancel

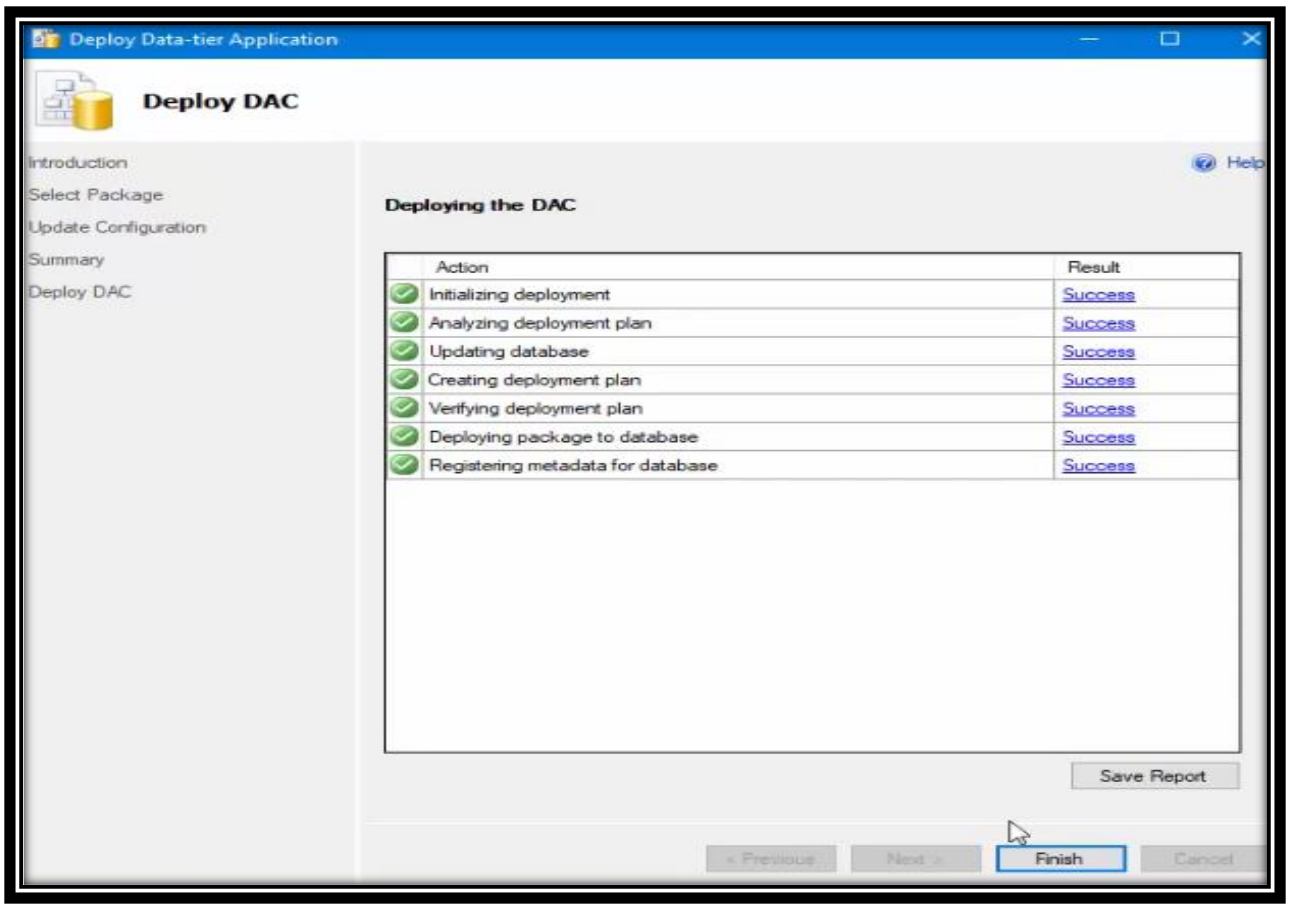
Restore Database





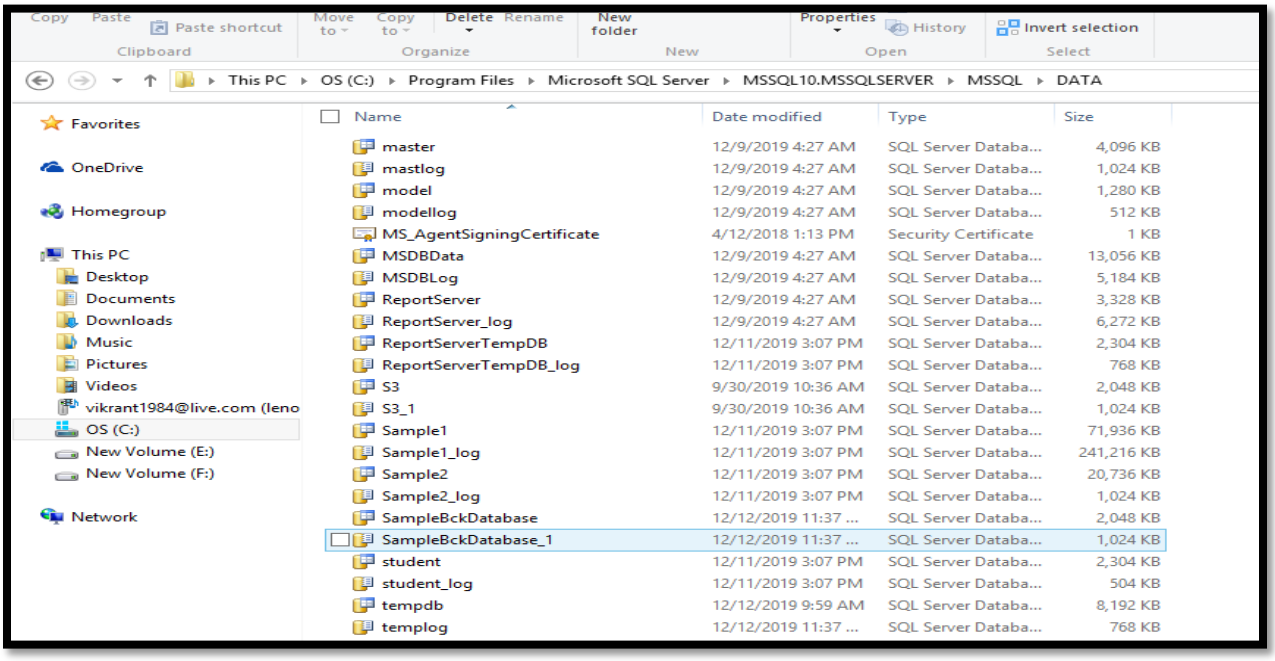

Help
Deploy Data-tier Application
Select Package
Introduction
Select Package
Update Configuration
Summary
Deploy DAC
Help
Select the DAC package to deploy.
DAC package (file name with the .dacpac extension):
Browse...


Deploy Data-tier Application
Open
« SQL Server ... › DAC Packages
Search DAC Packages
Organize
New folder
This PC
Desktop
Documents
Downloads
Music
Pictures
Videos
OS (C:)
HITACHI (I:)
Graphics Design
Tutorials (K:)
HITACHI (I:)
Name
Date modified
Type
Northwind
09/11/2017 14:40
PatientCareSystem2
11/09/2017 09:55
pubs
09/11/2017 14:36
VCShDB
06/08/2016 16:05
VCShDBDeploy1
06/08/2016 16:10
VCShDBDeploy2
06/08/2016 16:11
File name: Northwind
DAC Package File (*.dacpac)
Open
Cancel

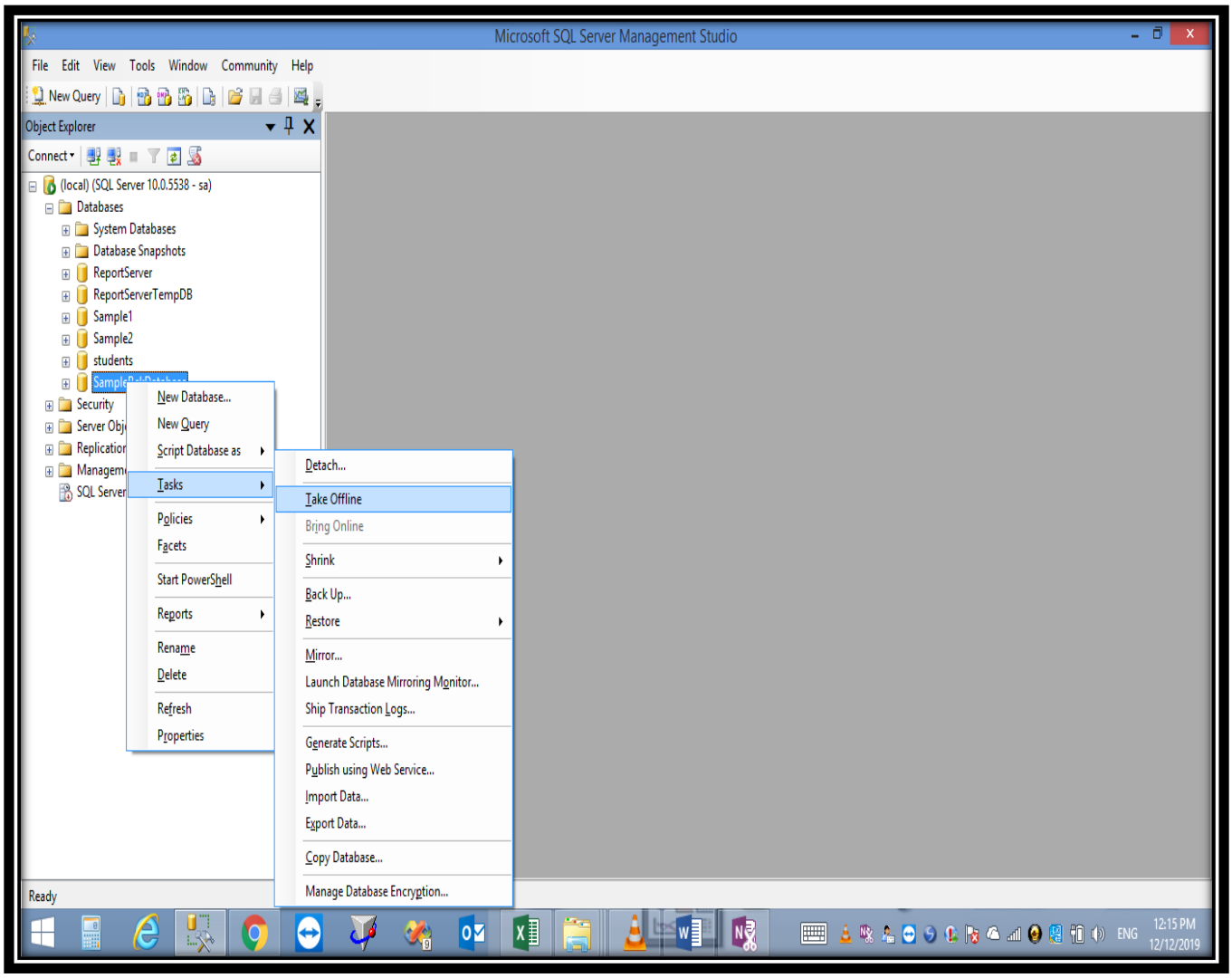


Using mdf file

Step1. Copy Database from this location.

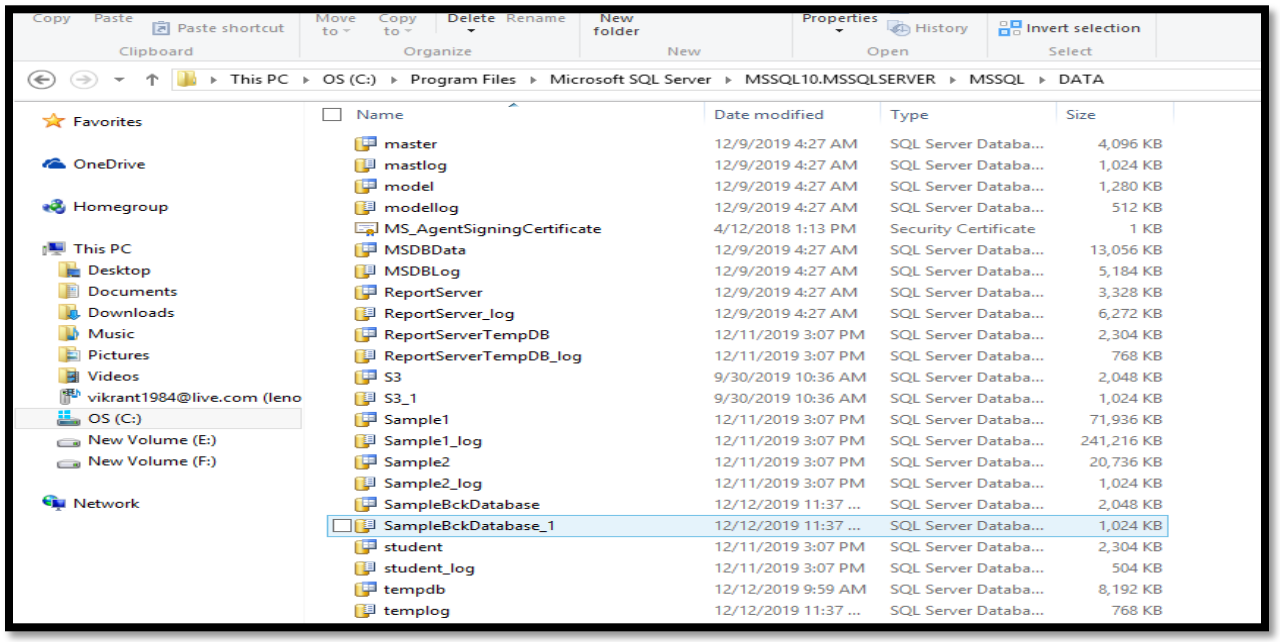


Step2: Before copy the database

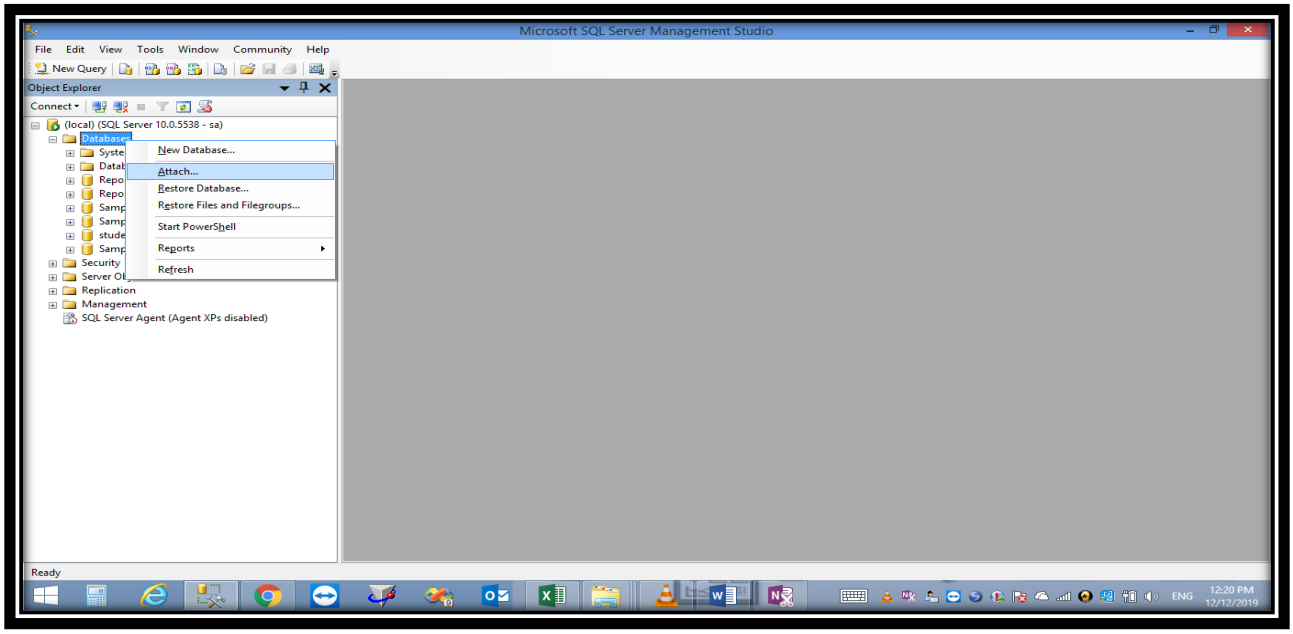


Step 3: After Copy the Database do take Online again.
Step 4: Delete the Database.

Step 5: Again Paste the Log and MDF file on this location.



Step 6: Right click on Database and right click and click to attach.



Step 7: Select the MDF file of database which you want to restore and click on OK button.