



### Learning Objectives:

- Installation of SQL server and SSMS.
- Create a new database

## 1. Introduction.

Database system is a collection of **Database** and **DBMS**.

### Database:

Collection of *related* data.

For example, Banks have the information of their respective users.

### Database Management Systems (DBMS)

A system that provides ease to the user to access data and perform operations on it. The operations include:

- Insertion
- Update
- Deletion

**Example:** SQL Server, MySQL, Oracle etc.

In this lab, we will learn about SQL Server and do its installation.

## 2. Installation guide

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### Important Note:

- 2.1. connect your system with internet and download the developer edition using this given link: <https://www.microsoft.com/en-us/sql-server/sql-server-downloads>
- 2.2. Login on window with as Administrator

## Or, download a free specialized edition



### Developer

SQL Server 2019 Developer is a full-featured free edition, licensed for use as a development and test database in a non-production environment.

[Download now >](#)



### Express

SQL Server 2019 Express is a free edition of SQL Server, ideal for development and production for desktop, web, and small server applications.

[Download now >](#)

*Figure 1: SQL downloading version*

2.3. Once downloaded then click on the .exe file and run.

2.4. Then click on Basic version to install.

# Developer Edition

Select an installation type:

## Basic

Select Basic installation type to install the SQL Server Database Engine feature with default configuration.

## Custom

Select Custom installation type to step through the SQL Server installation wizard and choose what you want to install. This installation type is detailed and takes longer than running the Basic install.

## Download Media

Download SQL Server setup files now and install them later on a machine of your choice.

SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the [documentation](#)

Acti  
15.2002.4709.1  
to

Figure 2: Selection of basic version

- 2.5. Scroll down and then click on accept.

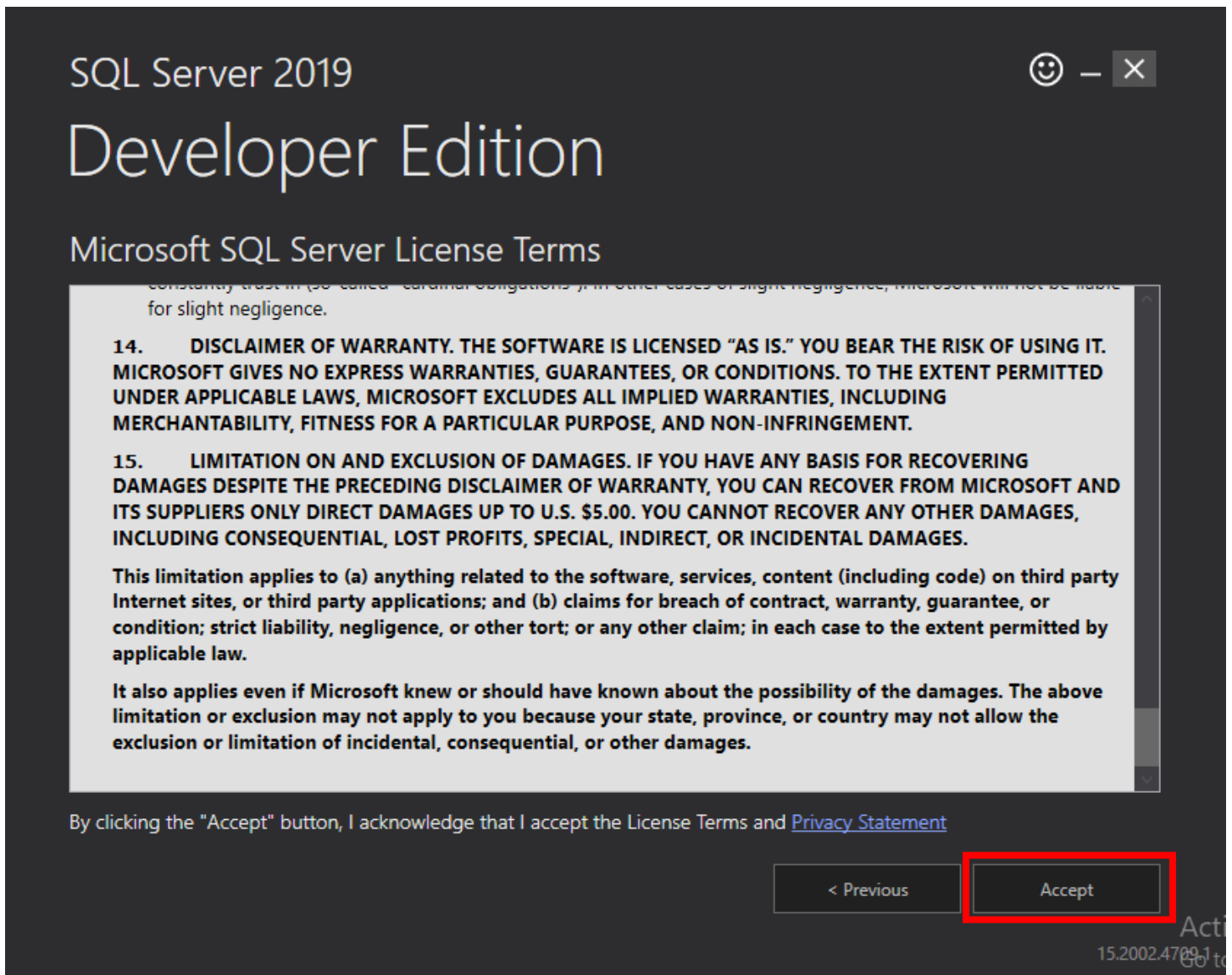


Figure 3: Terms and conditions for installing SQL Server

2.6. Click on Install and eat pop corns until installation is done. 🍿

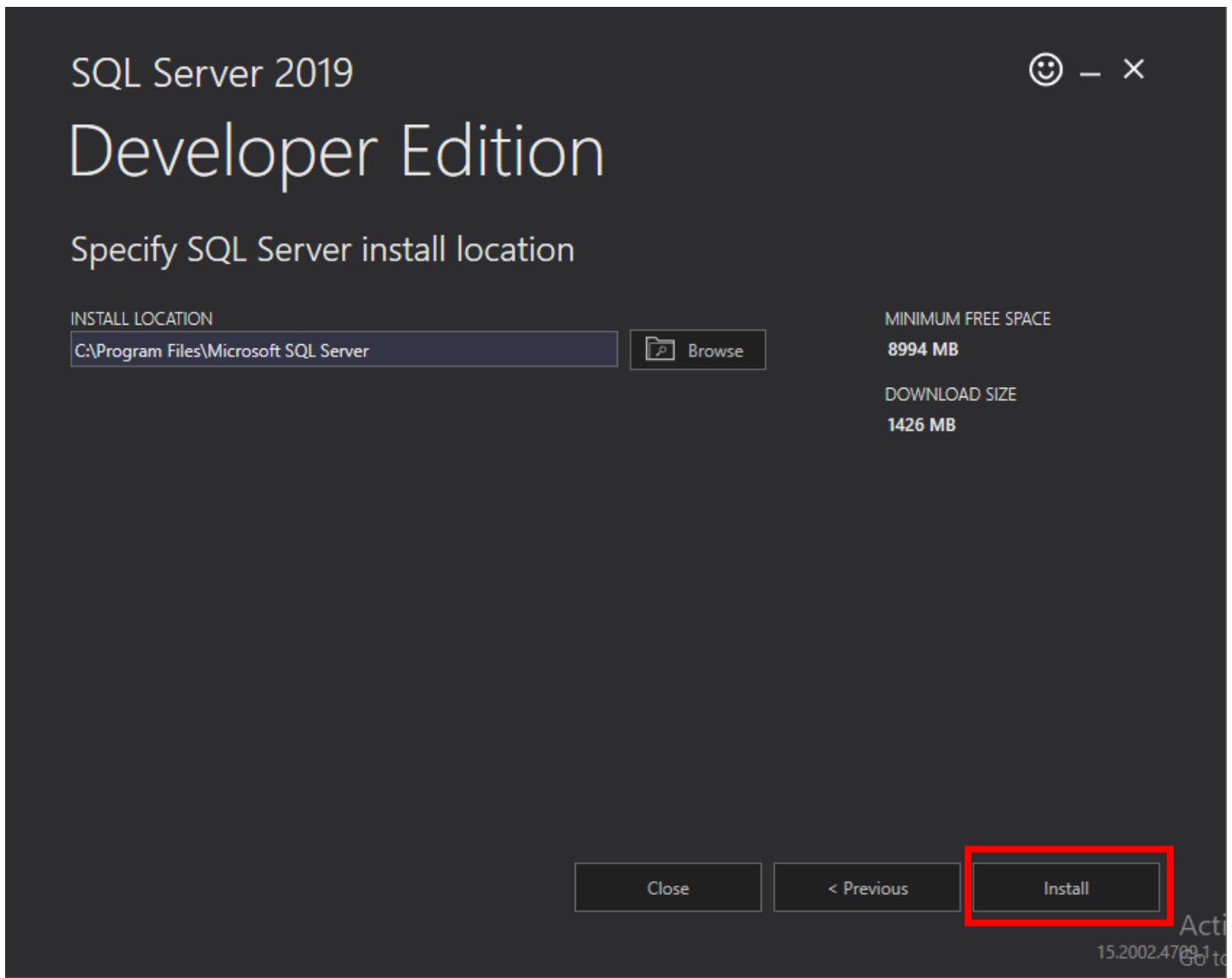


Figure 4: Starting the installation process by clicking on install button

While the installation is going on in the background let us revise a Database, we are familiar with, i.e., **File Handling**.

1- Write a C++ code to make a file having following data (using File handling)

ID	FirstName	LastName	Age	Gender
1	Ali	Akram	24	Male
2	Ahmed	Khan	22	Male
3	Ayesha	Batool	21	Female

2- Retrieve the data having firstName equals to Ali

2.7. After installation is done click on install SSMS

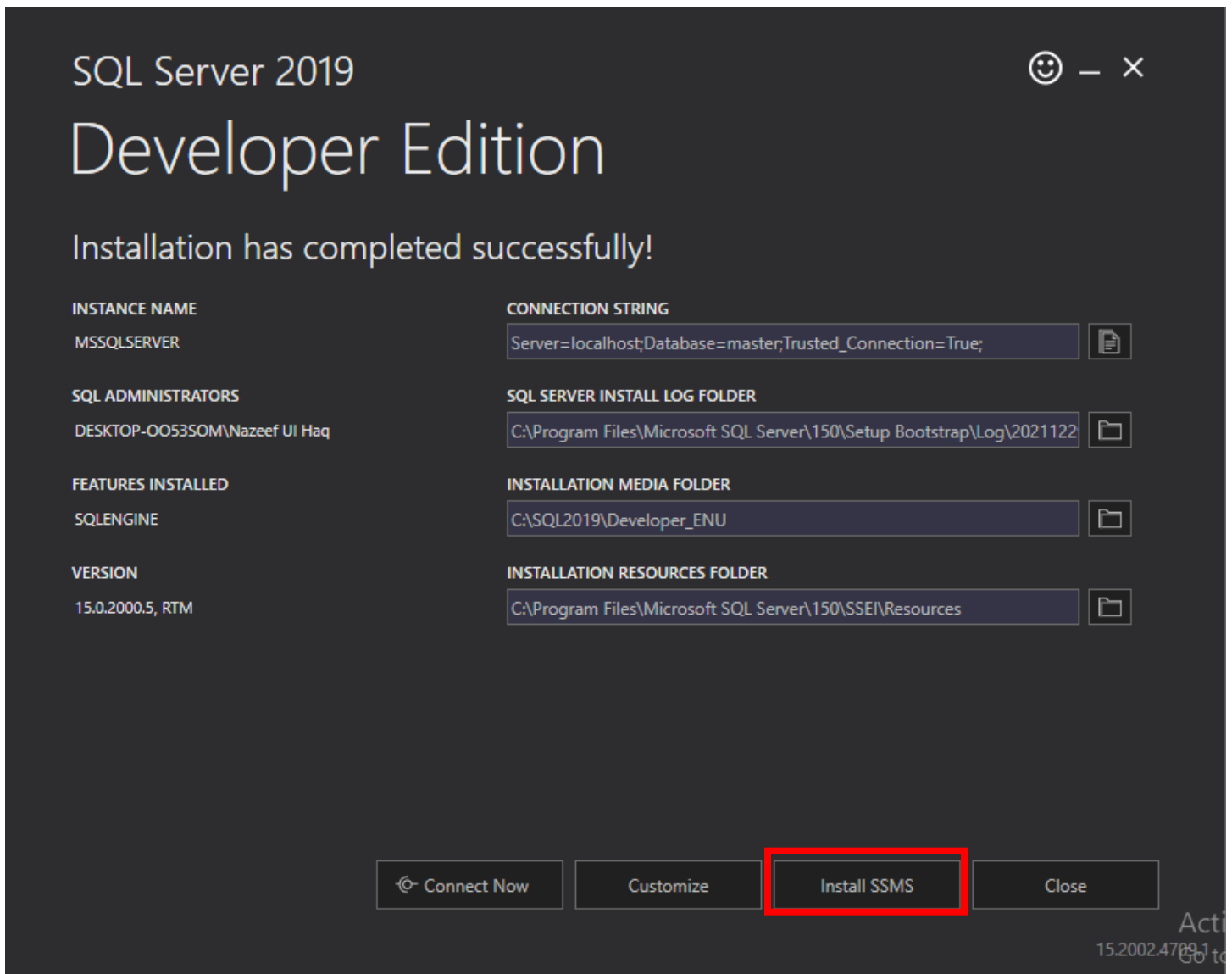







Figure 5: Installation has completed successfully

- 2.8. Click on highlighted link. It will download .exe file of SSMS. After downloading run .exe file.

# Download SQL Server Management Studio (SSMS)

Article • 12/08/2021 • 7 minutes to read •  +35

Is this page helpful?  

**Applies to:**  SQL Server (all supported versions)  Azure SQL Database  Azure SQL Managed Instance  Azure Synapse Analytics

SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure, from SQL Server to Azure SQL Database. SSMS provides tools to configure, monitor, and administer instances of SQL Server and databases. Use SSMS to deploy, monitor, and upgrade the data-tier components used by your applications, and build queries and scripts.

Use SSMS to query, design, and manage your databases and data warehouses, wherever they are - on your local computer, or in the cloud.

## Download SSMS

 [Free Download for SQL Server Management Studio \(SSMS\) 18.10](#) 

SSMS 18.10 is the latest general availability (GA) version. If you have a previous GA version of SSMS 18 installed, installing SSMS 18.10 upgrades it to 18.10.

- Release number: 18.10
- Build number: 15.0.18390.0

Figure 6: Version of SSMS for installation

2.9. Click on Install and wait until installation is done successfully.

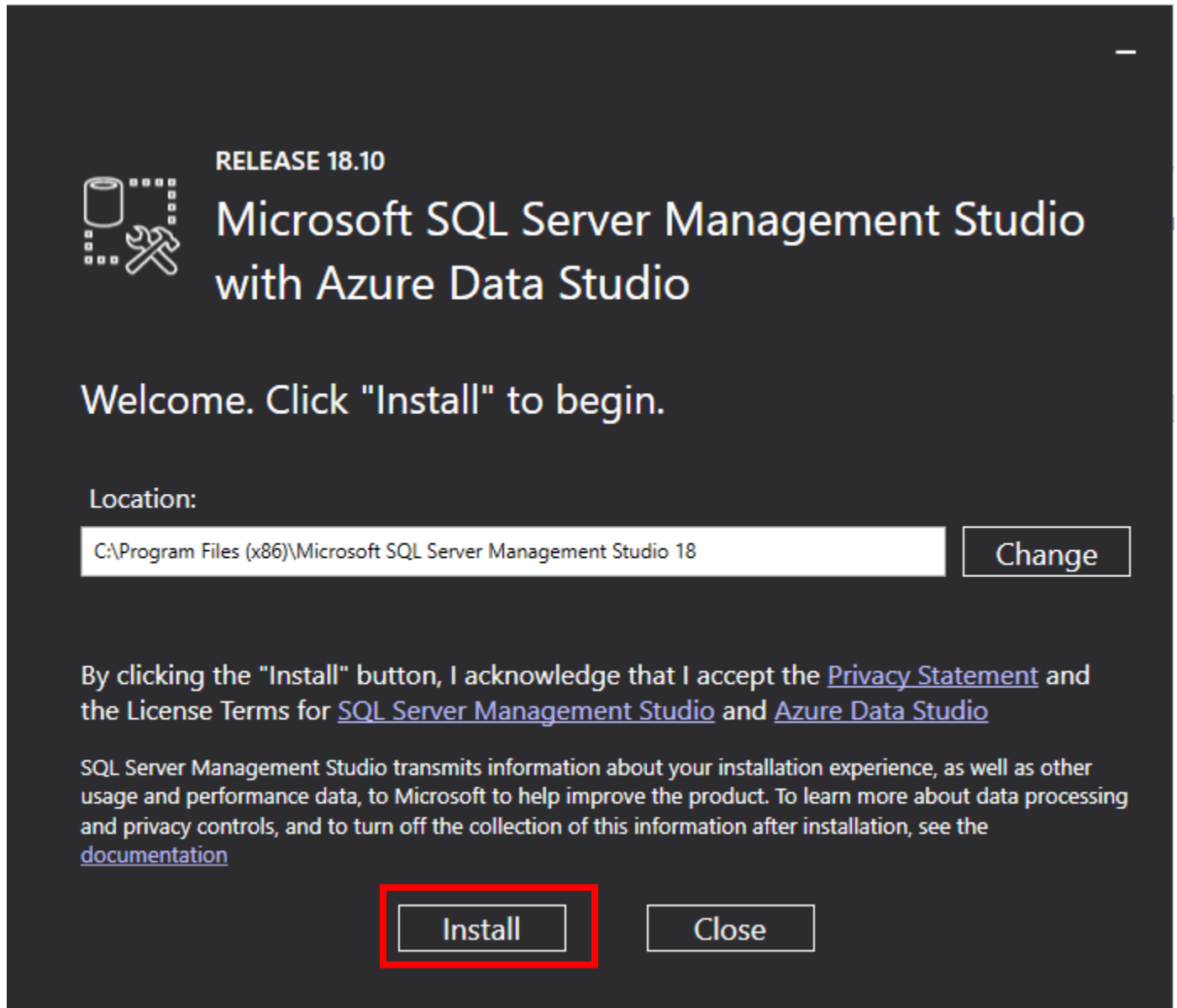


Figure 7: Installation of SSMS



### 3. Generate Scripts of a schema

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- **Step 1**

Right click on your database and select Task -> generate script.

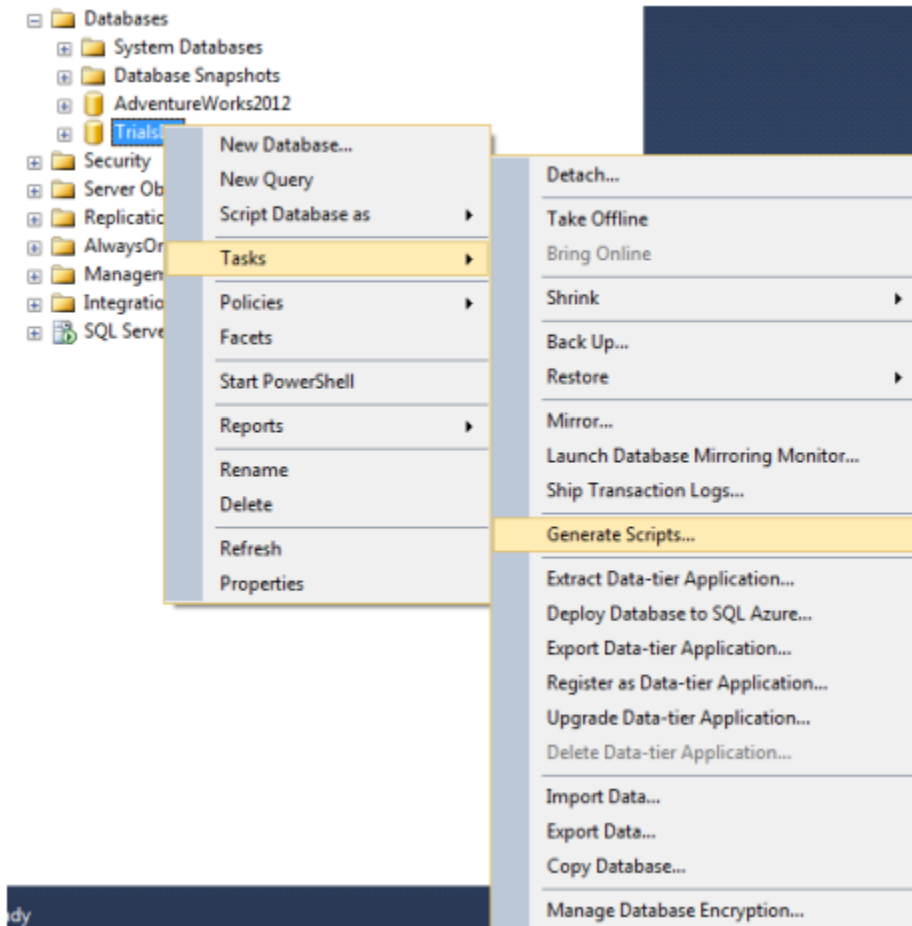


Figure 8: Database\_Scripts\_With\_Data\_Select\_Option

- **Step 2**

Click next in the introduction screen

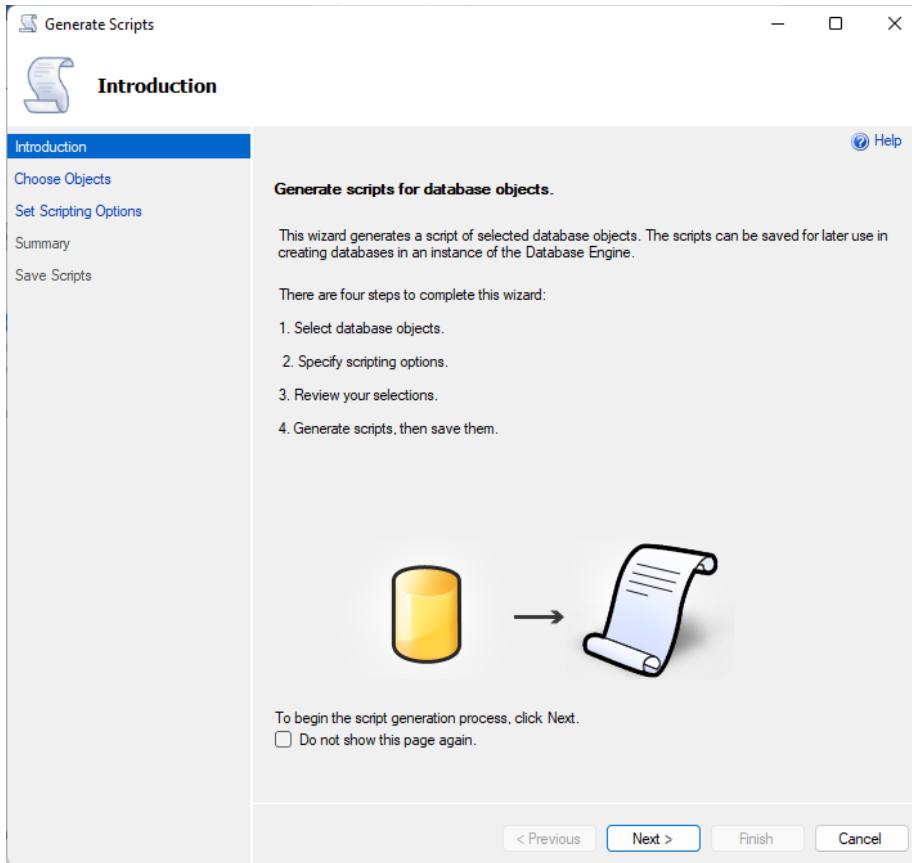


Figure 9: Database\_Scripts\_With\_Data\_Introduction

- **Step 3**

Select the database object which you are all you need and then click next.

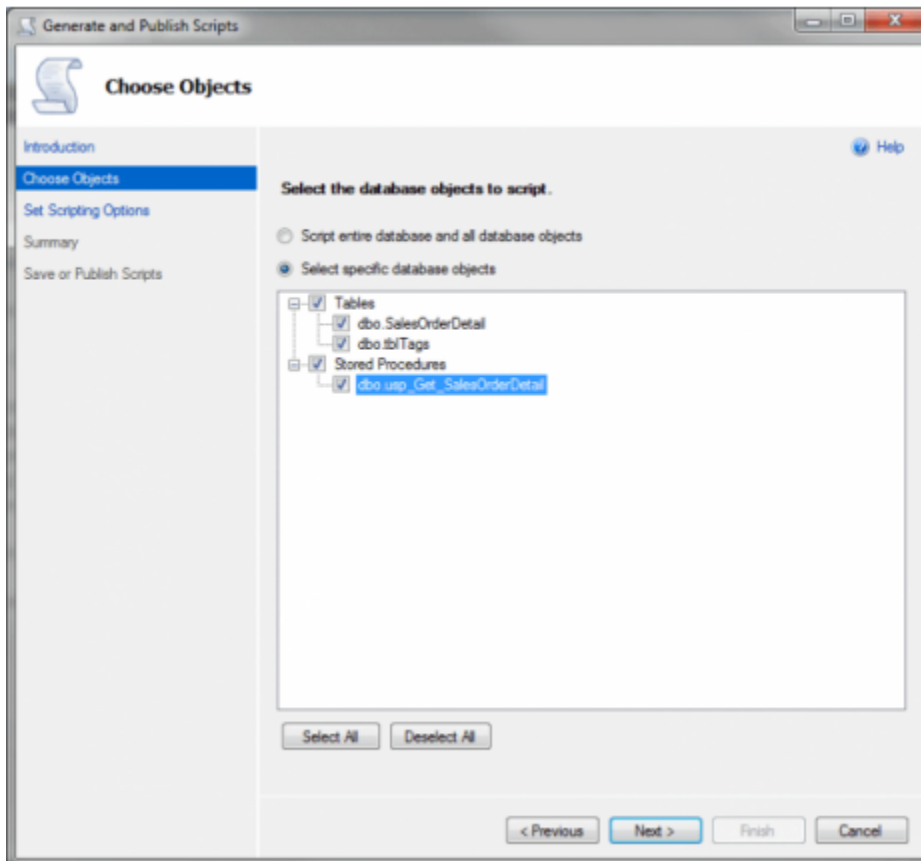


Figure 10: Selecting database objects

- **Step 4**

Now you will be shown a window which asks you about how your script should be published.

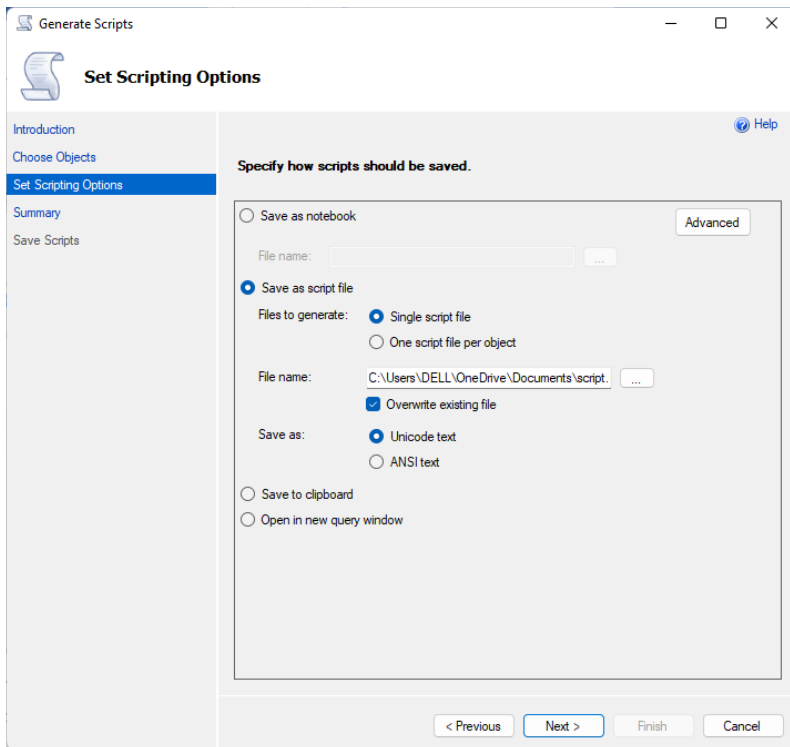


Figure 11: Database\_Scripts\_With\_Data\_Publish\_Options

Click on advanced in that window.

- **Step 5**

Select 'Schema and data' from type of data to script option and then click OK.

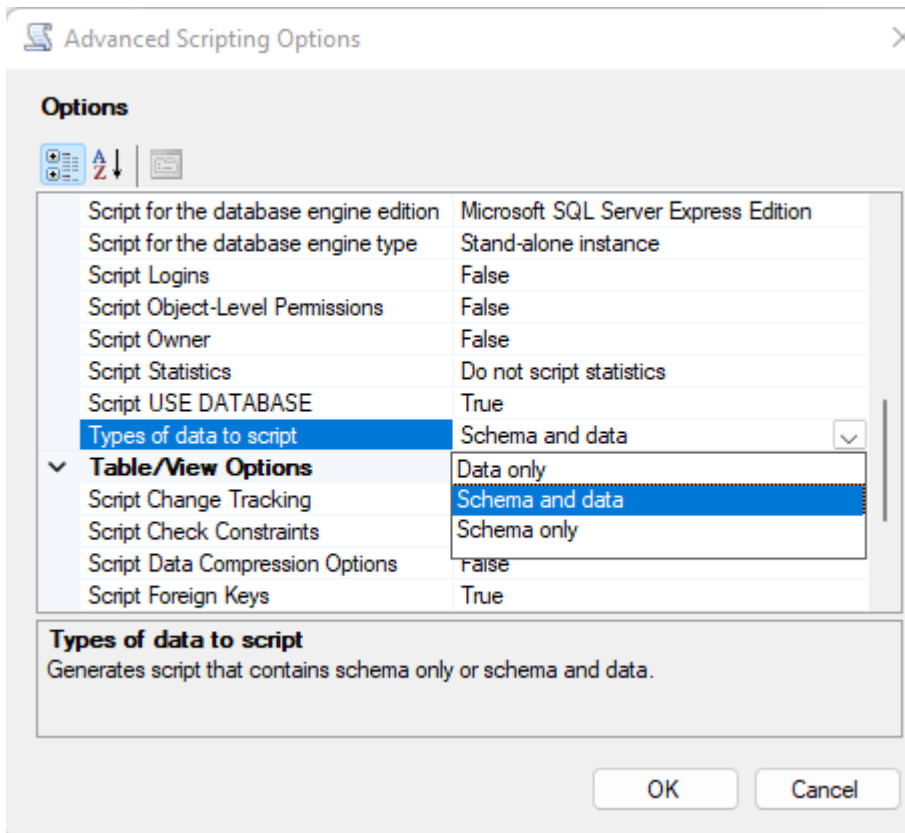


Figure 12: Database\_Scripts\_With\_Data\_Advanced

Click on Next.

- **Step 6**

Click finish, now check the script file, it must be having the insert queries too.

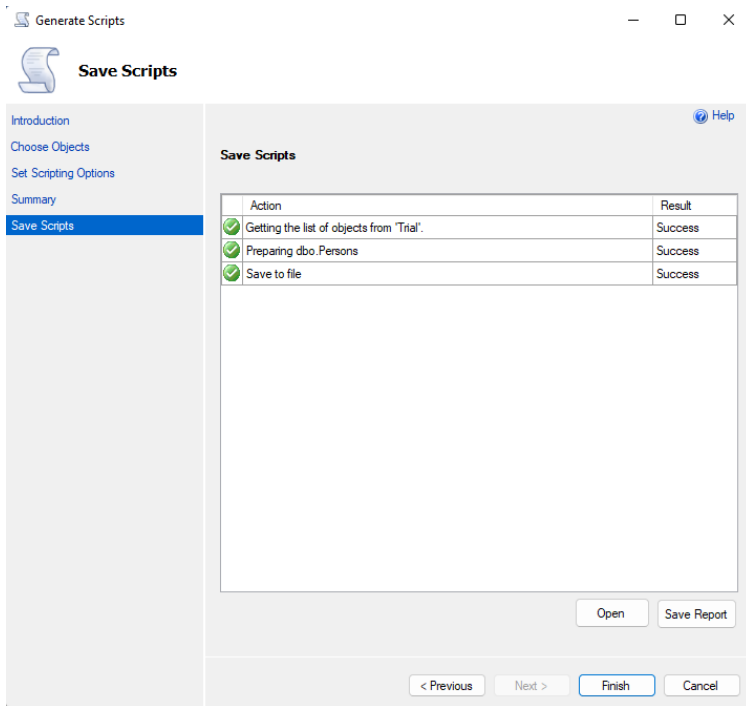


Figure 13: Database\_Scripts\_With\_Data\_Finish

Now what else is pending, go ahead and run your script.

## 4. Lab Tasks

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1. Install Microsoft SQL server
2. Install SSMS
3. Create a new database named TestDB\_2021\_SE\_X

*X being your registration number*