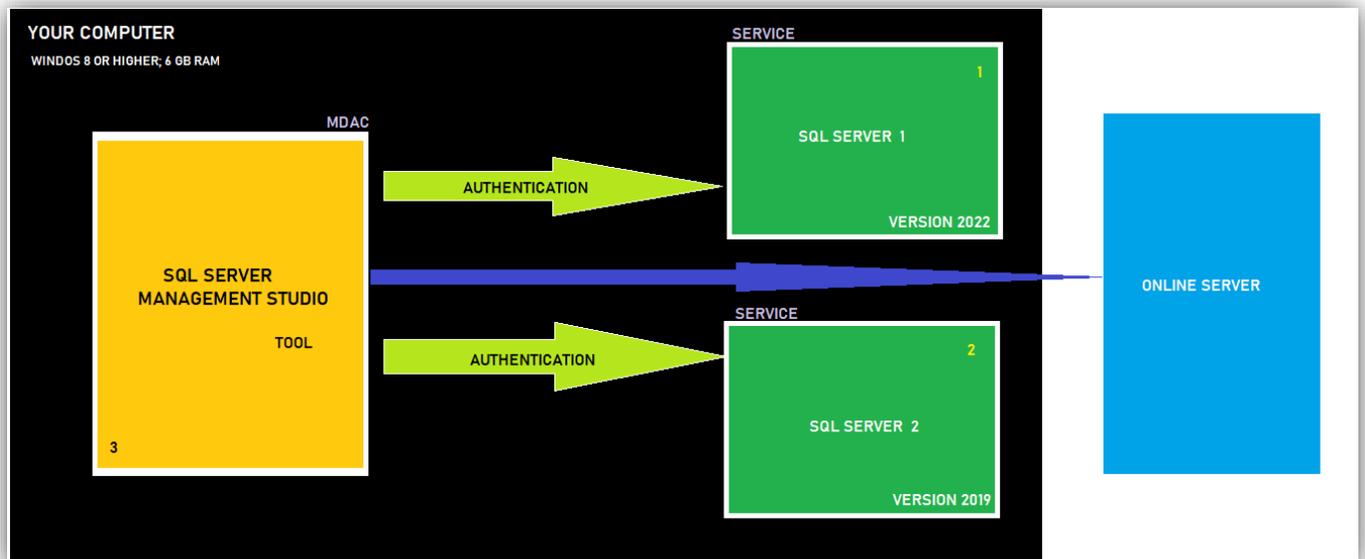


Chapter 2: LAB PLAN FOR OUR PRACTICE CLASSES

- | | |
|---|------------------|
| STEP 1: INSTALL SQL SERVER 2022 | WEBSITE1 |
| PURPOSE: TO STORE DATABASES | |
| STEP 2: INSTALL SQL SERVER 2019 | WEBSITE2 |
| PURPOSE: TO STORE DATABASES | |
| STEP 3: INSTALL SSMS TOOL (SQL SERVER MANAGEMENT STUDIO) | BROWSER |
| PURPOSE: TO DEVELOP / MANAGE THE DATABASES | |
| STEP 4: CONNECT TO OUR ONLINE SERVER | (LICENSING COPY) |



OS REQUIREMENTS [ANY ONE]		
VERSION NAME	VERSION NUMBER	INSTALLATION REQUIREMENTS
SQL Server 2022 *	16.0	WINDOWS 8 OR HIGHER. 64 bit
SQL Server 2019 *	15.0	
SQL Server 2017	14.0	
SQL Server 2016	13.0	
HARDWARE REQUIREMENTS		
6 GB RAM	10 GB DISK SPACE	Any Processor that supports Windows OS

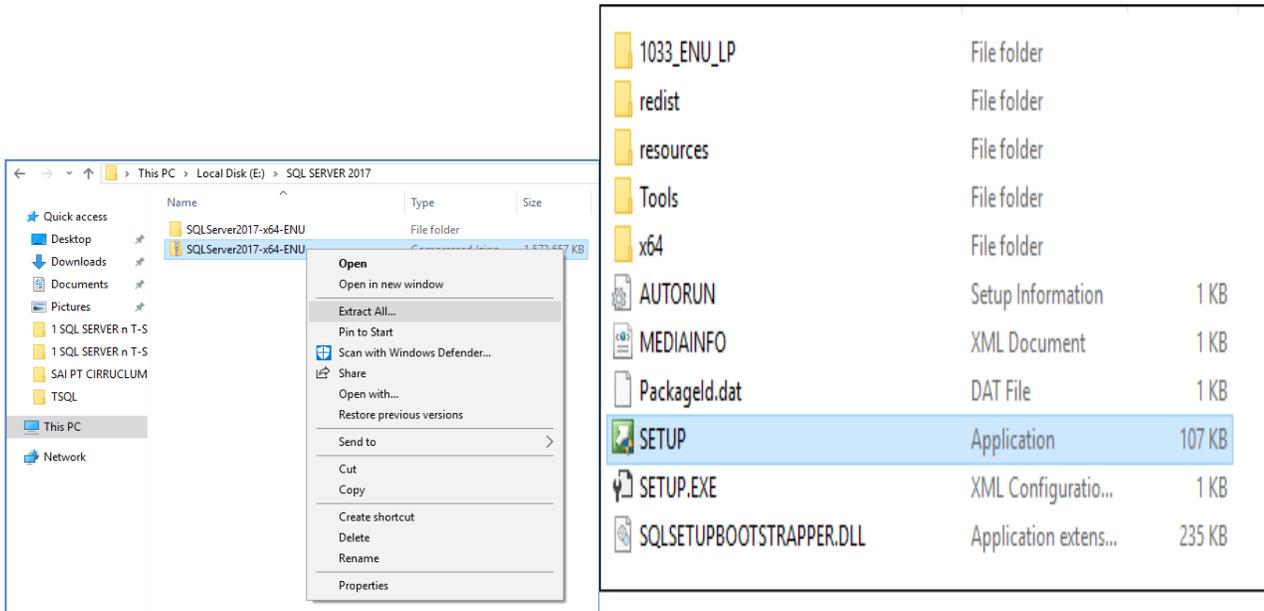
STEP 1: SQL Server Installation

Screen 1: Download SQL Server 2022 FROM <https://sqlschool.com/downloads/>

Right Click > Extract.

Then you get one Folder.

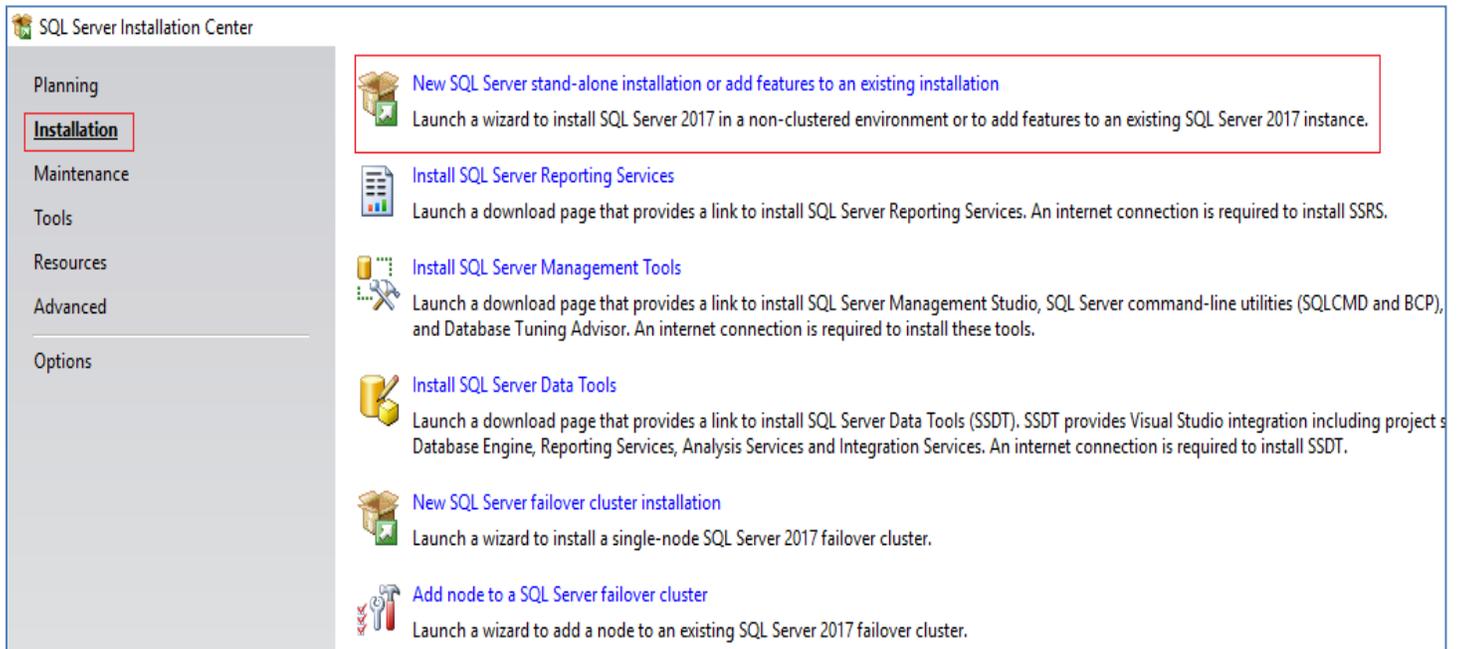
Inside the folder > Double Click Setup Application File [Green Icon] :



Screen 2:

GO TO LEFT > INSTALLATION > RIGHT: NEW INSTALLATION

WE GET "INSTALLATION CENTER" SCREEN > GO TO INSTALLATION PAGE > NEW INSTALLATION



Screen 3: Click Next > SELECT DEVELOPER EDITION > Accept Licensing Terms > Click Next :

License Terms

To install SQL Server 2017, you must accept the Microsoft Software License Terms.

Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

MICROSOFT EVALUATION SOFTWARE LICENSE TERMS

MICROSOFT SQL SERVER 2017 EVALUATION

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the evaluation software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft

- updates,
- supplements,
- Internet-based services, and

I accept the license terms.

SQL Server 2017 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 SQL Server 2017 data processing and privacy controls, please see the [Privacy Statement](#).

Copy Print

< Back Next > Cancel

Uncheck Azure Extension box

Screen 4: Click Next > Select Database Engine Component (For OLTP: LIVE, Real-time Data) > Next

Feature Selection

Select the Evaluation features to install.

Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

Looking for Reporting Services? [Download it from the web](#)

Features:

Instance Features

- Database Engine Services
- SQL Server Replication
- Machine Learning Services (In-Database)
 - R
 - Python
- Full-Text and Semantic Extractions for Search
- Data Quality Services
- PolyBase Query Service for External Data
- Analysis Services

Shared Features

Select All Unselect All

Instance root directory: C:\Program Files\Microsoft SQL Server\

Shared feature directory: C:\Program Files\Microsoft SQL Server\

Shared feature directory (x86): C:\Program Files (x86)\Microsoft SQL Server\

Feature description:

Includes the Database Engine, the core service for storing, processing and securing data. The Database Engine provides controlled access

Prerequisites for selected features:

Already installed:

- Windows PowerShell 3.0 or higher
- Microsoft .NET Framework 4.6

Disk Space Requirements

Drive C: 1001 MB required, 64675 MB available

< Back Next > Cancel

Screen 5: Specify a Name to your Installation = **INSTANCE NAME** > Click Next :

Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

Default instance
 Named instance:

Instance ID:

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL14.SQLSCHOOL_LAB

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
MSSQLSERVER	MSSQL15.MSSQLS...	SQLEngine_VNext	Evaluation	15.0.1000.34
<Shared Compone...		SSMS, Adv_SSMS		13.0.15900.1

< Back Next > Cancel

Screen 6: Click Next > Next > Add Current User as Administrator:

Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.

Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete

Server Configuration Data Directories TempDB FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode

Windows authentication mode
 Mixed Mode (SQL Server authentication and Windows authentication)

Specify the password for the SQL Server system administrator (sa) account.

Enter password:
Confirm password:

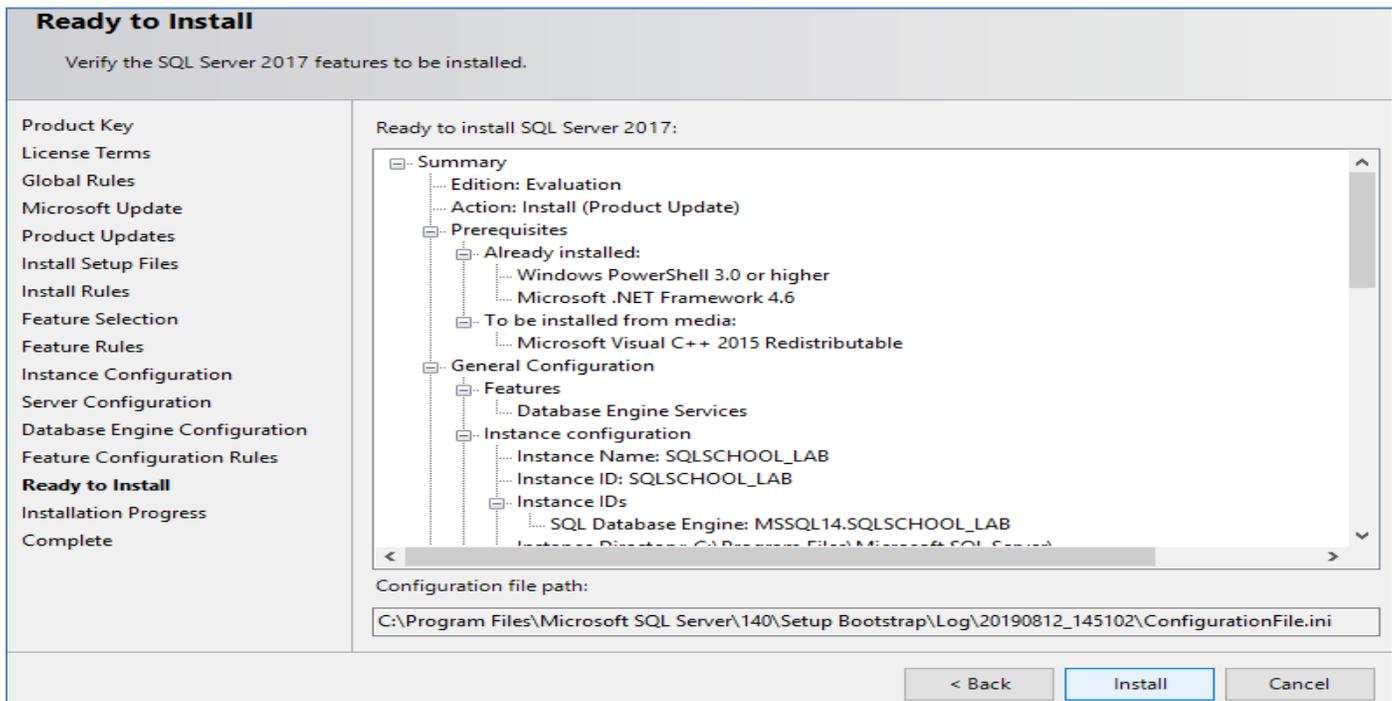
Specify SQL Server administrators

SQL Server administrators have unrestricted access to the Database Engine.

Add Current User Add... Remove

< Back Next > Cancel

Screen 7: Install



STEP 2: HOW TO INSTALL SSMS TOOL?

SSMS: SQL SERVER MANAGEMENT STUDIO

PURPOSE: THIS FREE TOOL IS USED TO CONNECT TO ABOVE INSTALLED SQL SERVER. PERFORM DATA STORAGE, RETREIVAL, MANAGEMENT, ETC... USING **SQL**.

JUST LIKE A BROWSER NEEDED TO OPERATE ON A WEBSITE, WE NEED **SSMS** TOOL TO OPERATE ON SQL SERVER.

Download SSMS Tool [Either 2019 or 2022] from : <https://aka.ms/ssmsfullsetup>

Double Click the **SSMS-Setup-ENU** File > Install. It would take about 30 to 45 mins.

Restart your computer.

After restarting your computer: If you get **REPAIR** screen then **CLOSE** it.

STEP 3: HOW TO TEST THE INSTALLATIONS ?

HOW TO TEST THE SERVER CONNECTIONS?

WINDOWS APPS > SEARCH > TYPE "**SSMS**" > CLICK > PROMPT FOR SERVER NAME > **BROWSE** FOR MORE > **EXPAND** DATABASE ENGINE > **SELECT** ABOVE INSTALLED SERVER (1) > OK > **CONNECT**.

Instance: A successful installation of SQL Server. We can install up to 50 instances per OS. Each instance has its own (UNIQUE) name. NO space for the Instance Name.

Types of Instances:	DEFAULT INSTANCE	NAMED INSTANCE
Instance Name	MSSQLSERVER	Defined during Installation
Server Name	ComputerName	ComputerName\InstanceName
Databases per Instance	32767 Databases	32767 Databases
Port	1433	Dynamic: Changes @ PC Restart
Real-time Usage	Production	Development & Testing
Edition	ENTERPRISE (LICENSED)	EVALUATION / DEVELOPER (FREE)
Number of Installations	Up to 1 per OS	Up to 50 Instances per OS
FOR PRACTICE	OUR ONLINE SERVER	YOUR LOCAL SERVER

AUTHENTICATION:

Authentication is a communication path between End Users / Apps and SQL Server

AUTHENTICATION TYPES:

1. **Windows Authentication:** Only Windows users can connect, operate on the server
2. **SQL Server Authentication:** Any user (Win, Linux, Mac, Android, IOS, etc..) can connect & operate on the sever

AUTHENTICATION MODES:

1. **Windows Authentication Mode:** Only Windows Logins are supported
2. **Mixed Mode Authentication:** Windows Logins + SQL Logins are supported

In case of SQL Logins, one default admin account “sa” : System Administrator is automatically enabled. We need to set a password for this Built In login.

COLLATION:

A server property to specify language settings. Ex: English, Chinese, Russian...

Collation also refers to Case Sensitivity setting. Ex: Storing Passwords in SQL Databases.

FILESTREAM:

A server property to store big data and perform analytics. For Azure Cloud &/ Power BI Cloud.

HOW TO CONNECT TO OUR ONLINE SEVER?

From SSMS Tool:

Top > Left > Connect > Database Engine >

Specify the server name

Authentication : SQL Server

Login Name: XXXXX
Password : YYYYYY
Trust Server Certificate
Connect

Video: How to connect to our online server?
Possible Errors & Solutions ?