



# **INSTITUTO TECNOLÓGICO SUPERIOR ZACATECAS SUR**



**ADMINISTRACIÓN DE BASE DE DATOS**

SGBD: SQL SERVER

**DOCENTE**

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**PRESENTA**

ALDO FABIÁN DE LUCAS CASTILLO  
LUIS FERNANDO VALDÉS MOTA  
ALAN EDUARDO TREJO SANTOS  
NAYELI ROMERO DAVILA

**CARRERA**

INGENIERÍA EN SISTEMAS COMPUTACIONALES

**VI SEMESTRE**

***TLALTENÁNGO DE SÁNCHEZ ROMÁN ZAC.  
10 DE MARZO DEL 2023***

# SGBD SQL Server

## Links de descarga

SQL Server 2022 Developer

[Descargas de SQL Server | Microsoft](#)

SSMS

[Descarga de SQL Server Management Studio \(SSMS\) - SQL Server Management Studio \(SSMS\) | Microsoft Learn](#)

## Requerimientos de instalación

- Memoria de la computadora
- Ram: 4 GB
- Disco duro 250 GB.
- Procesador
- Intel core i3.
- Sistema operativo Windows 10.

## Instalación y configuración de SQL Server 2022

O descarga una edición especializada gratis.

**Desarrollador**

SQL Server 2022 Developer es una edición gratuita con todas las características, que se puede usar como base de datos de desarrollo y pruebas en los entornos no productivos.

[Descargar ahora](#)

**Express**

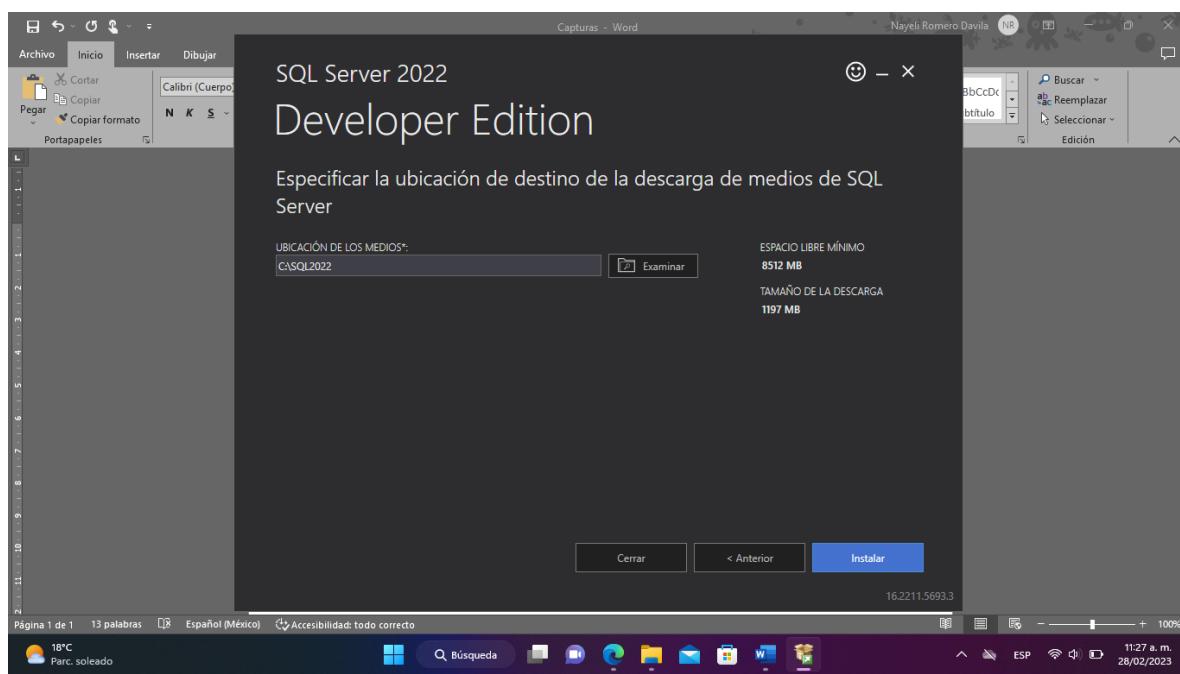
SQL Server 2022 Express es una edición gratuita de SQL Server, que es ideal para el desarrollo y la producción, para aplicaciones de escritorio, Internet y pequeños servidores.

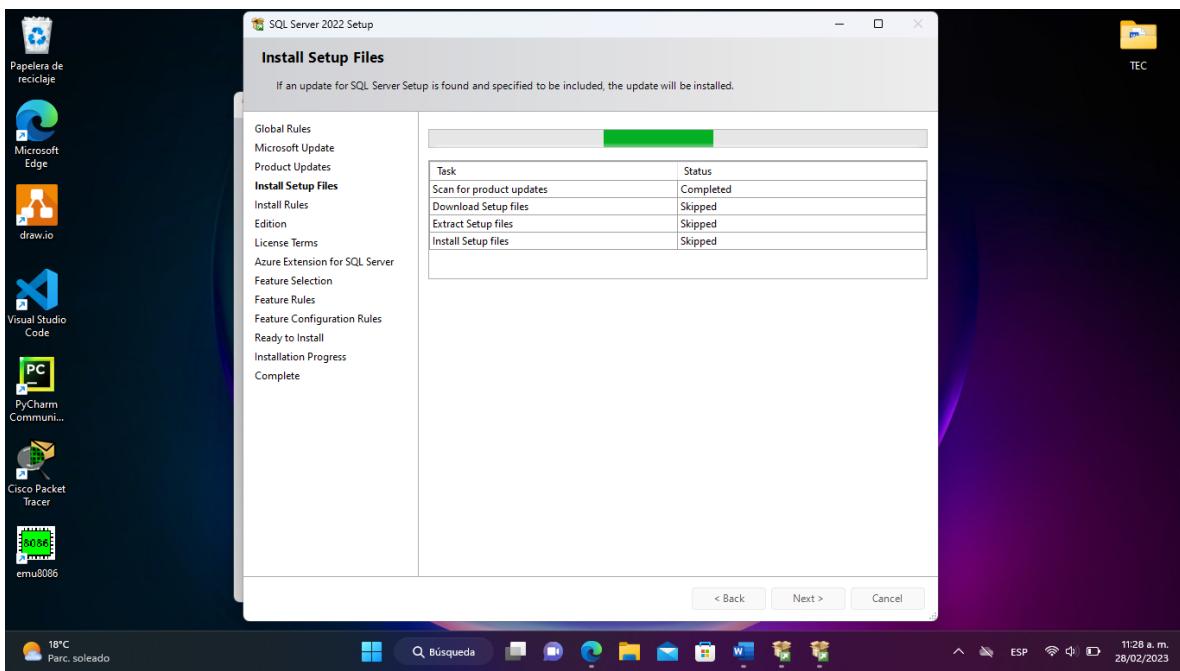
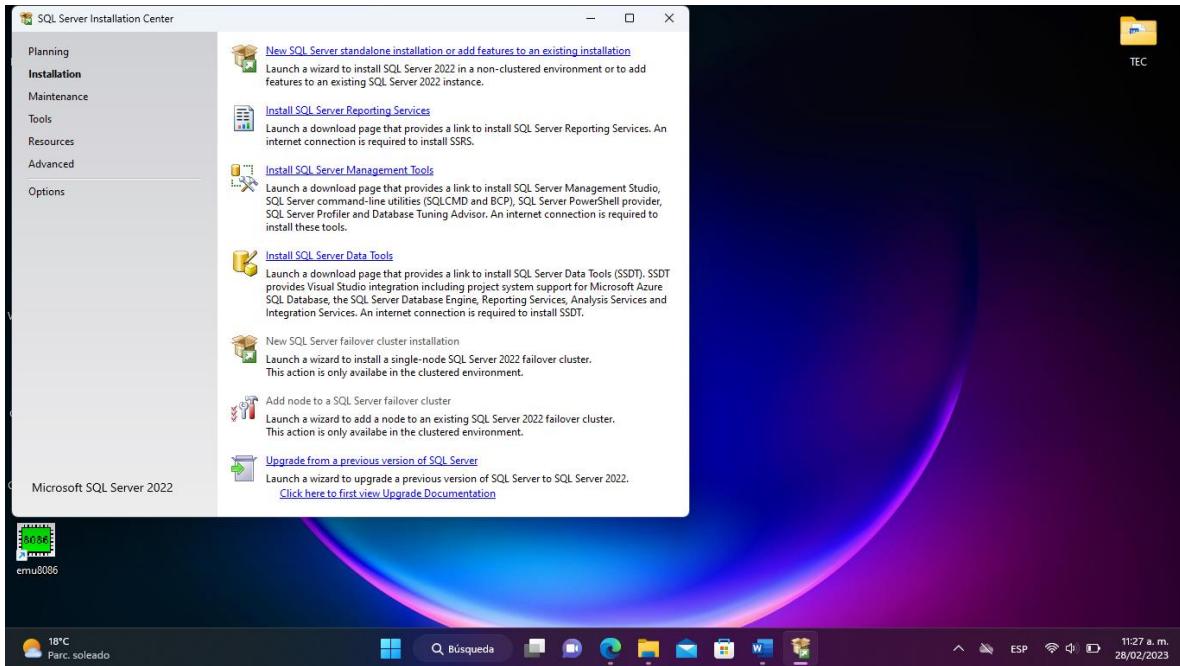
[Descargar ahora](#)

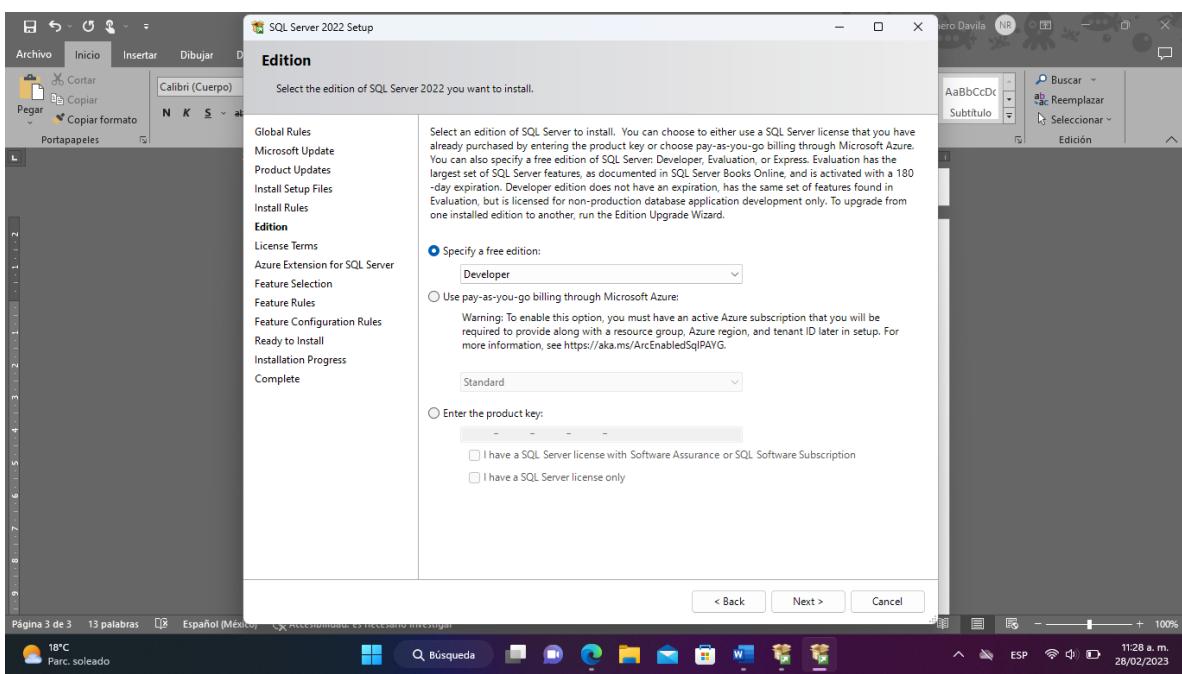
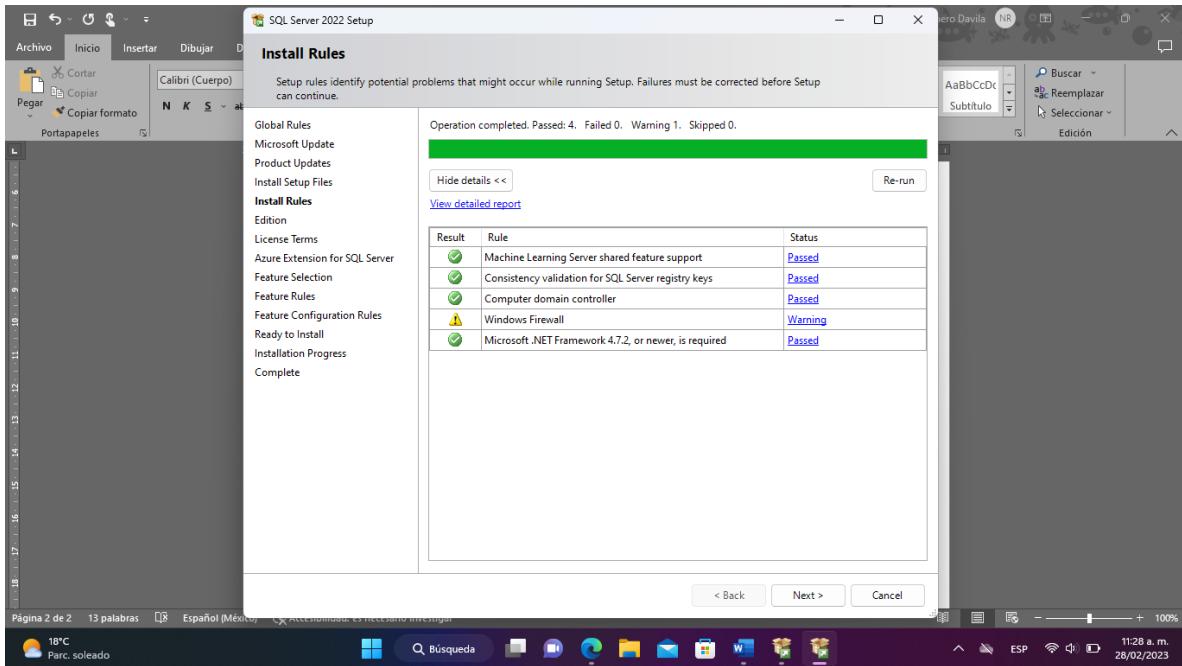
PASS Data Community Summit: una conferencia híbrida celebrada en Seattle y en línea, del 15 al 18 de noviembre. [Más información >](#)

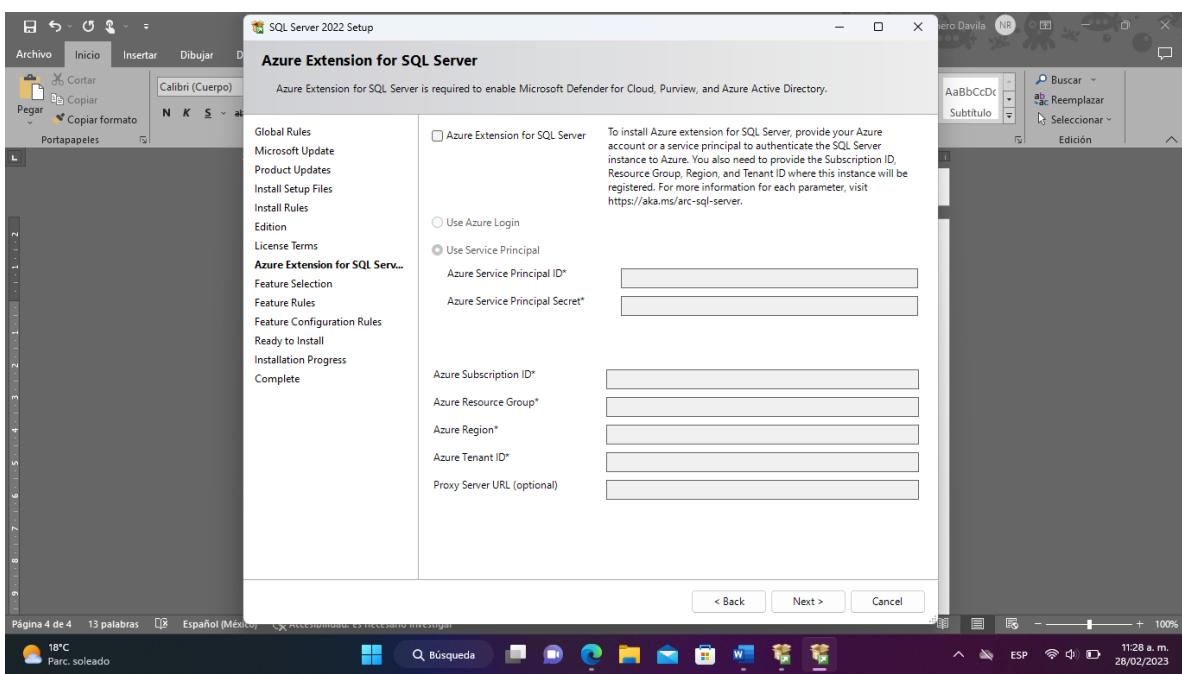
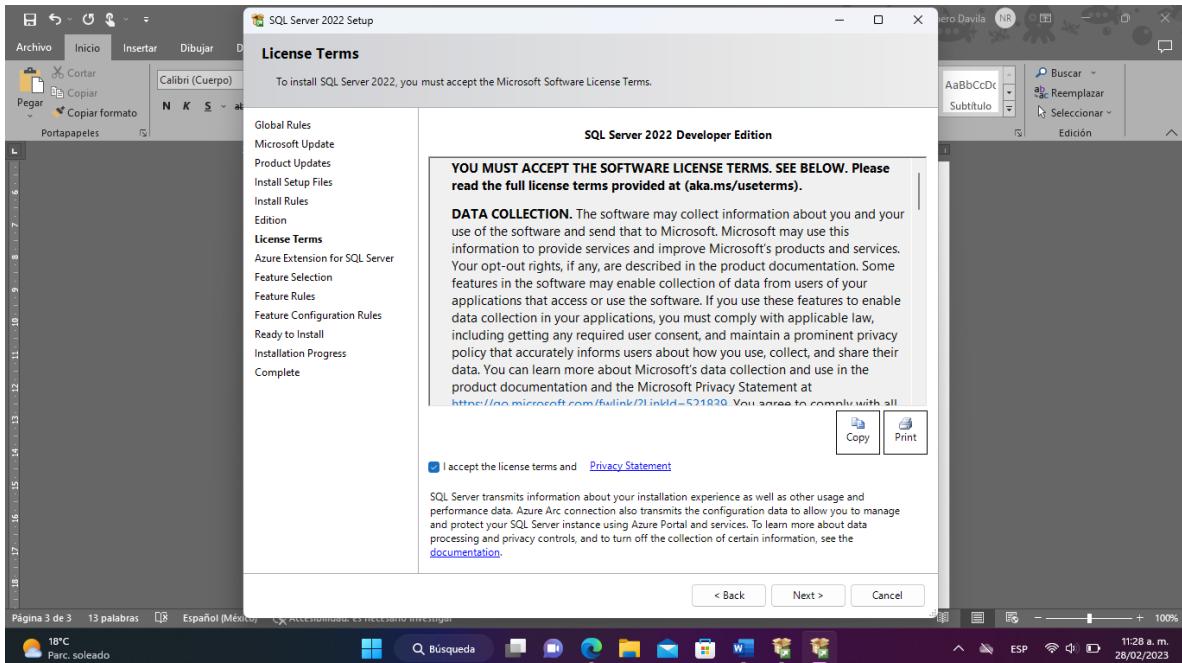
18°C  
Parc. soleado

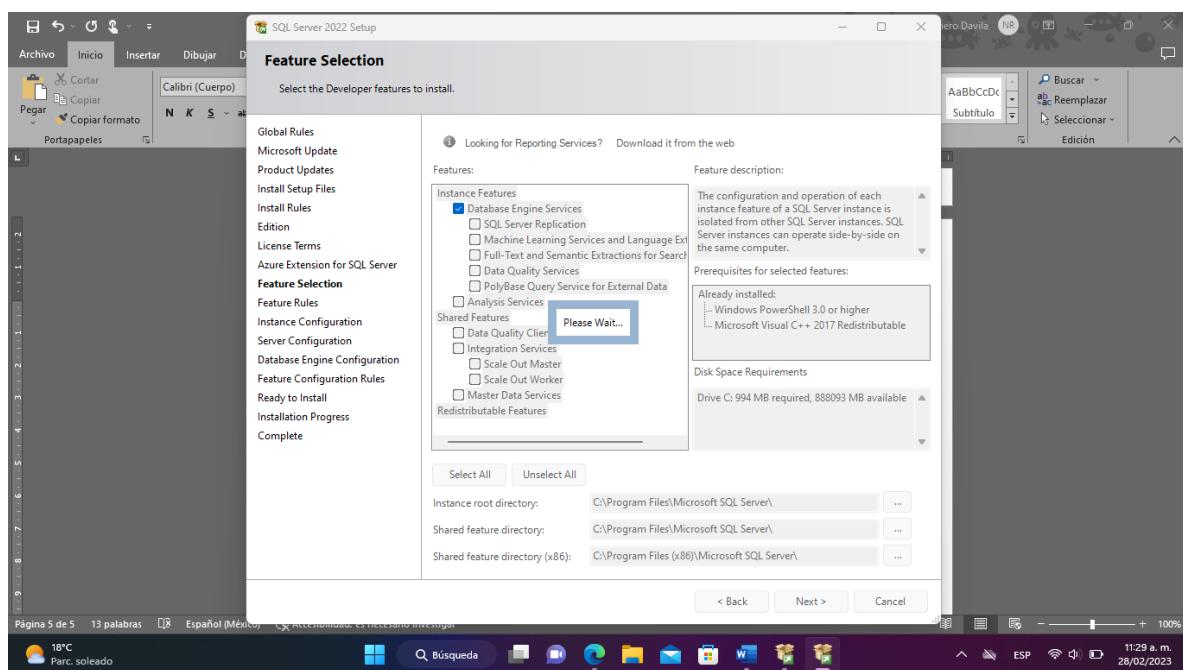
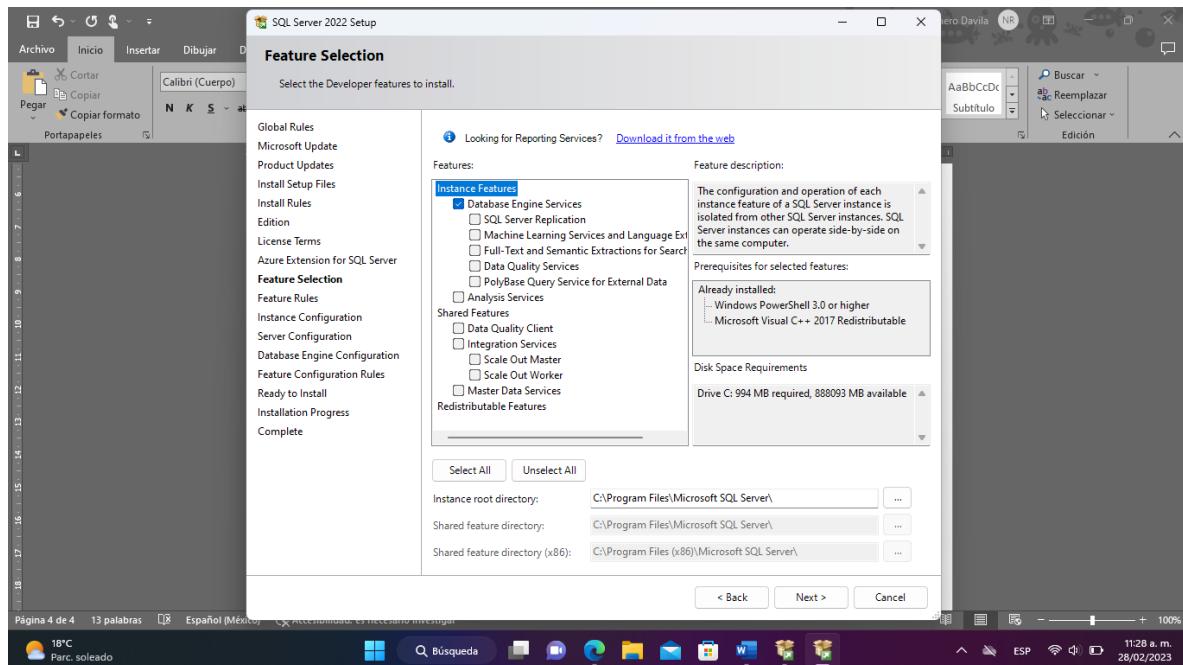
11:34 a. m.  
28/02/2023

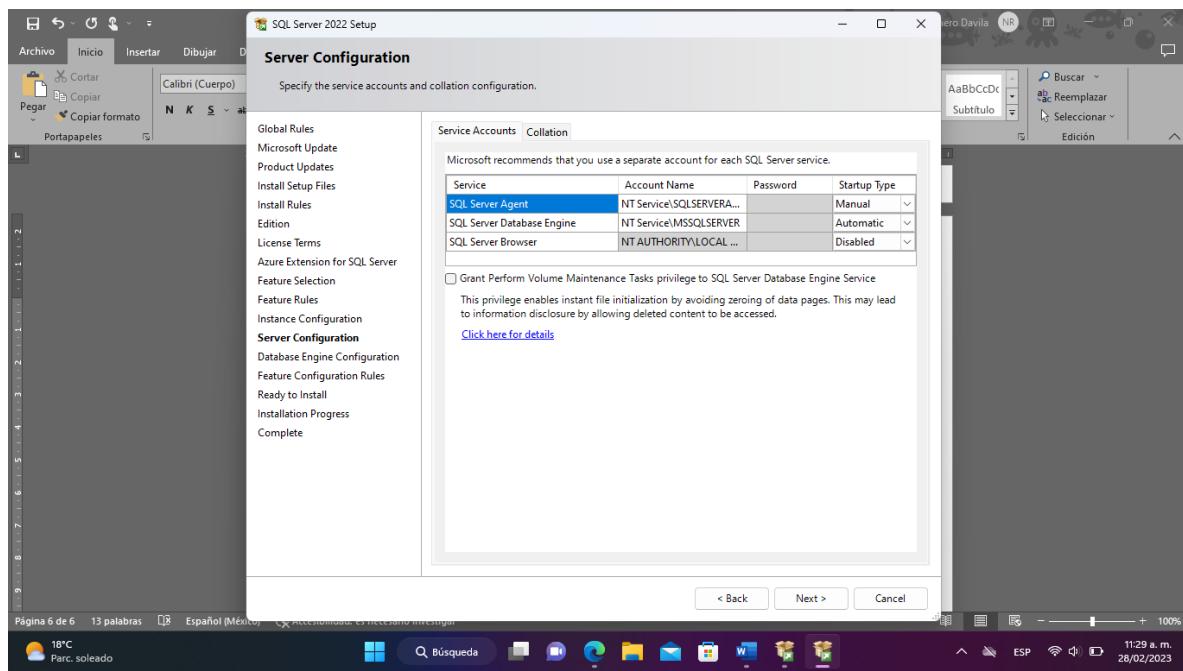
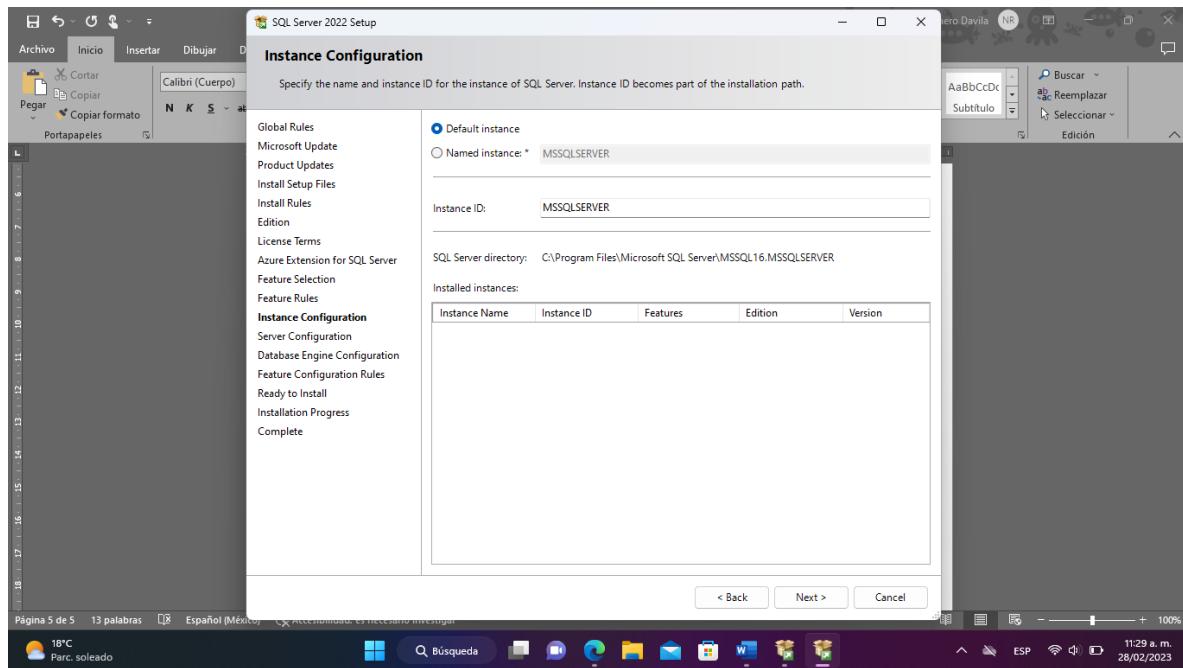


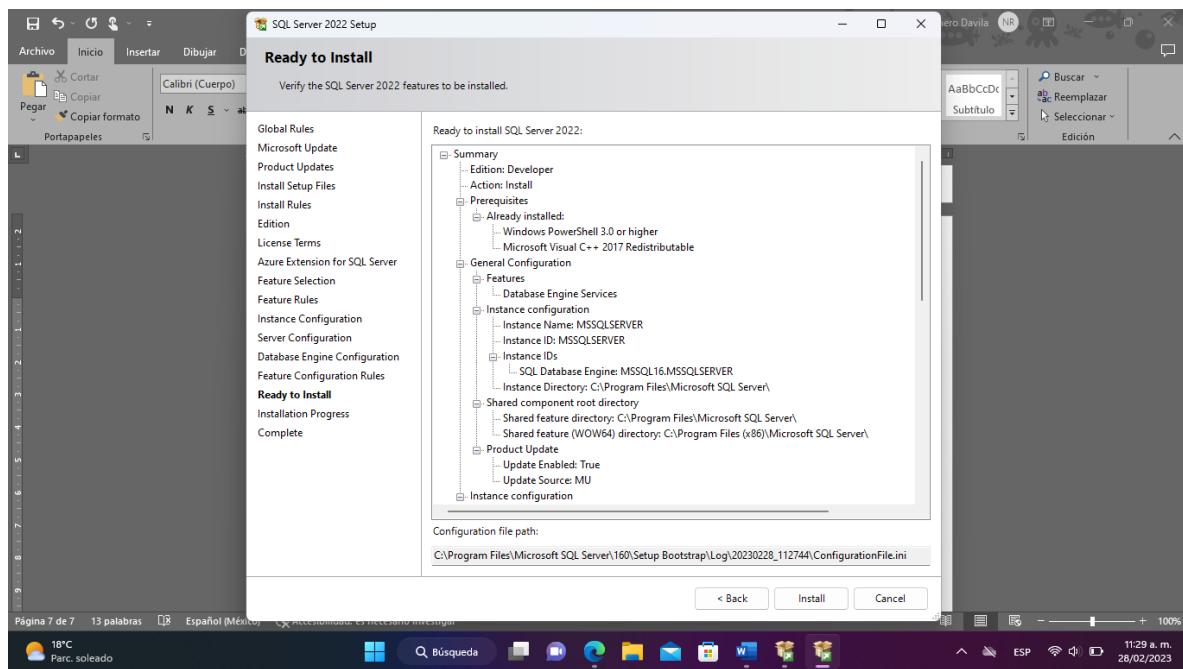
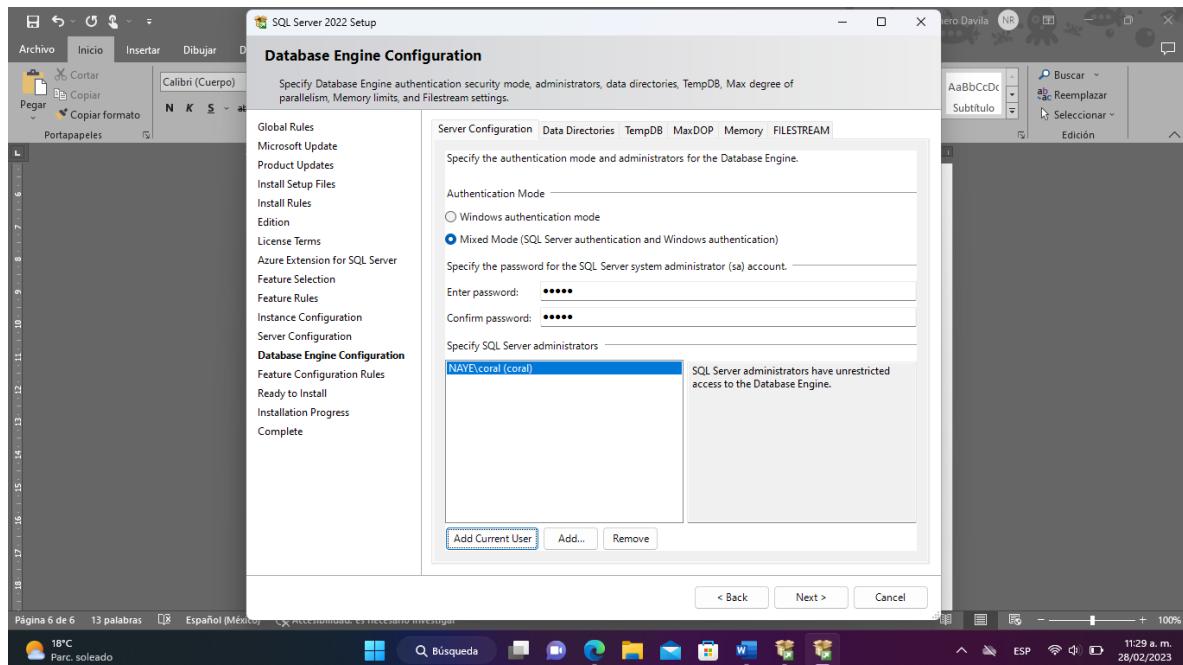


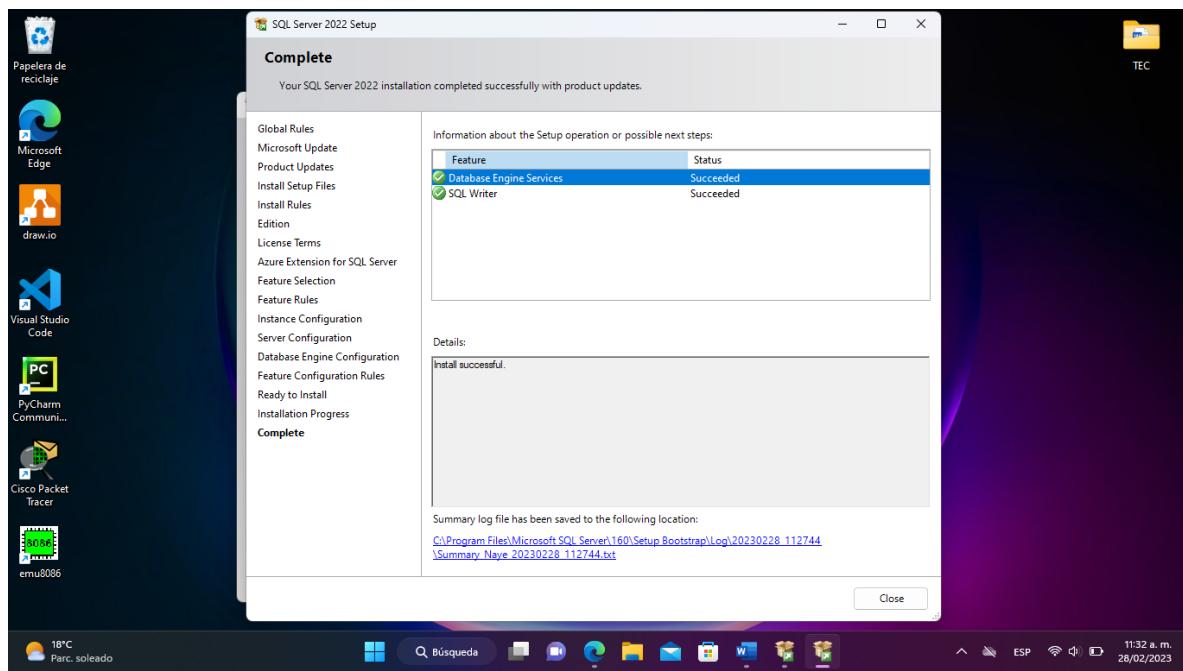
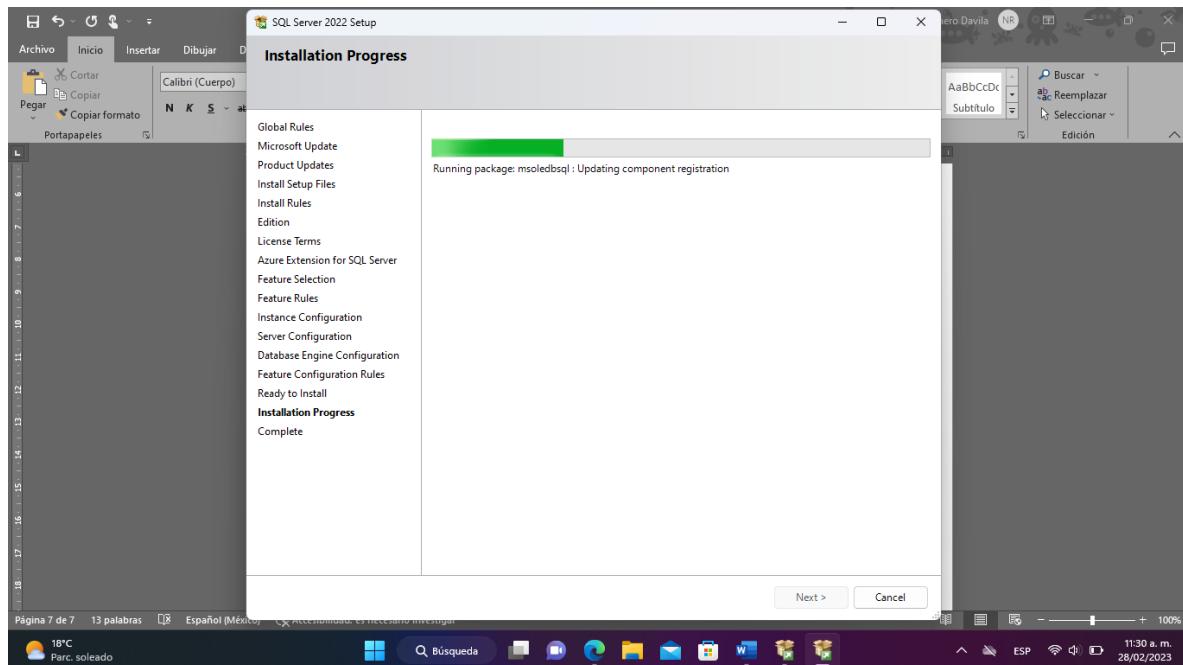












## Instalación y configuración de SSMS

Versión

SQL Server 2022

Importante

A partir de SQL Server Management Studio (SSMS) 18.7, Azure Data Studio se instala automáticamente junto a SSMS. Los usuarios de SQL Server Management Studio ahora pueden aprovechar las innovaciones y características de Azure Data Studio. Azure Data Studio es una herramienta de escritorio multiplataforma y de código abierto para entornos en la nube, locales o híbridos.

Para obtener más información sobre Azure Data Studio, consulte [¿Qué es Azure Data Studio?](#) o las preguntas más frecuentes.

Idiomas disponibles

Esta versión de SSMS puede instalarse en los idiomas siguientes:

SQL Server Management Studio 19.0.1:

Chino (simplificado) | Chino (tradicional) | [Inglés \(Estados Unidos\)](#) | Francés | Alemán | Italiano | Japonés | Coreano | Portugués (Brasil) | Ruso | Español

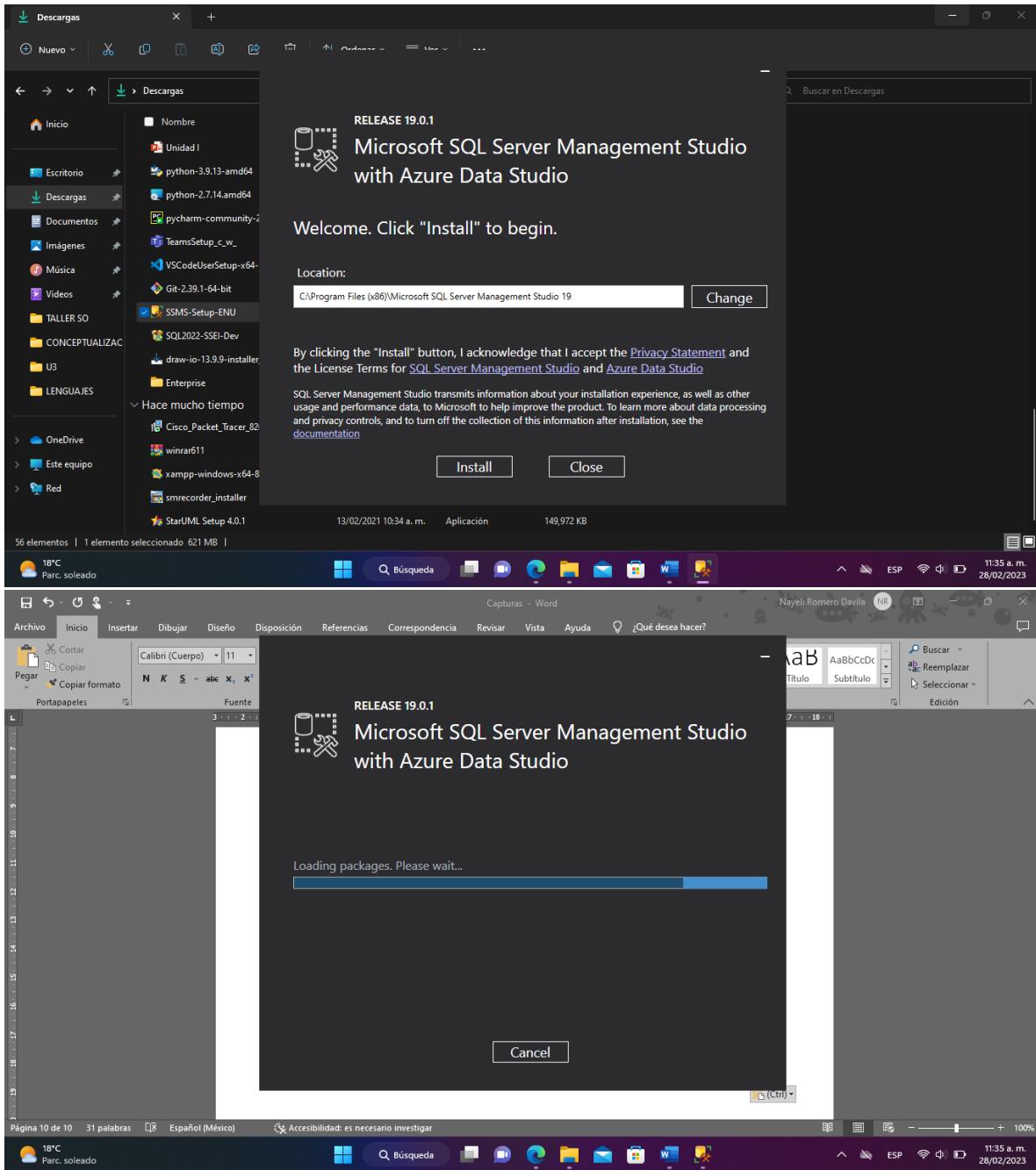
Sugerencia

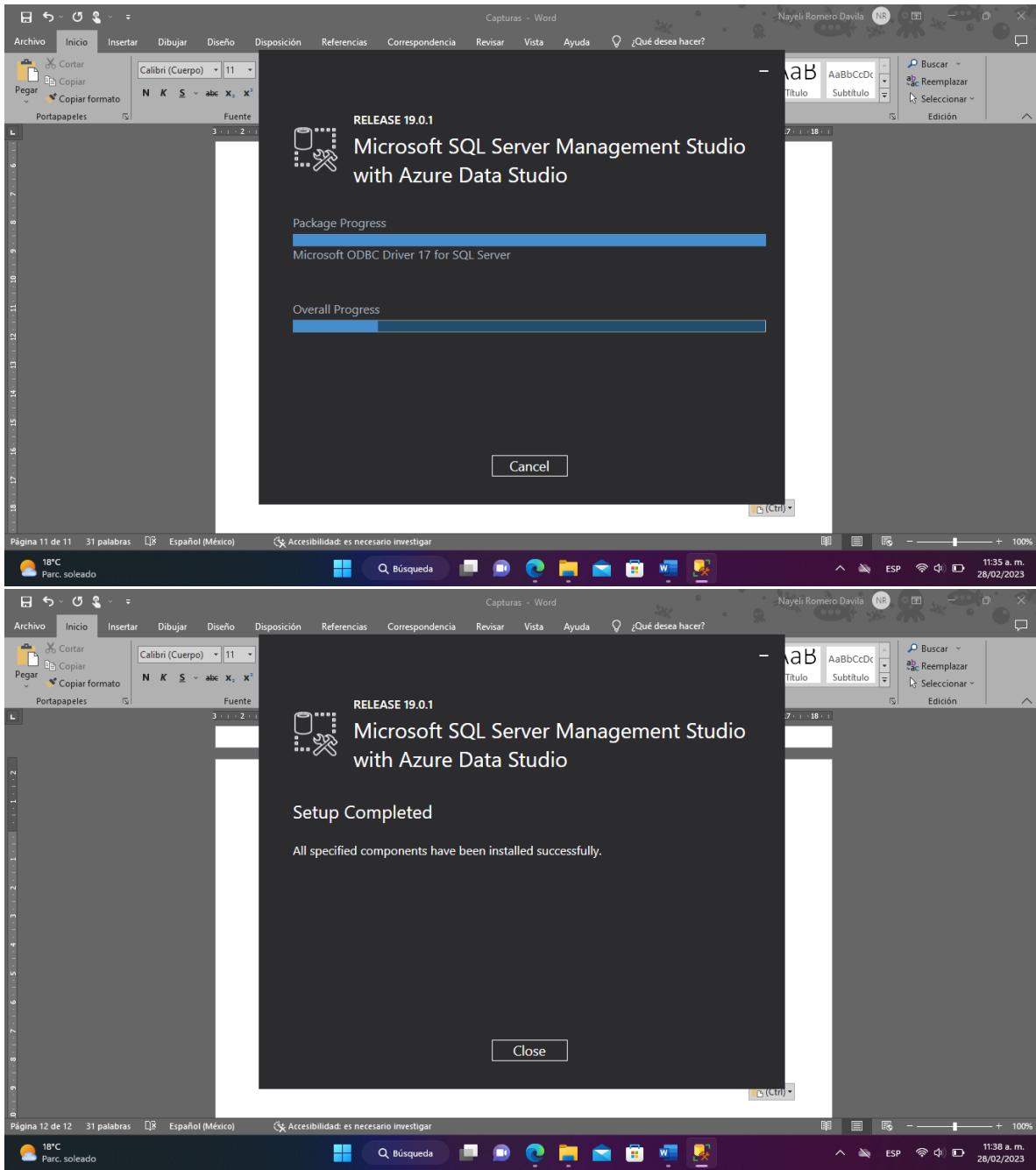
Si accede a esta página desde una versión de idioma que no es el inglés y quiere ver el contenido más actualizado, seleccione [Leer en inglés](#) en la parte superior de esta página. Puede descargar distintos idiomas en el sitio de la versión en inglés de EE.UU. si selecciona [idiomas disponibles](#).

18°C Parc. soleado

https://aka.ms/ssmsfullsetup?clcid=0x409

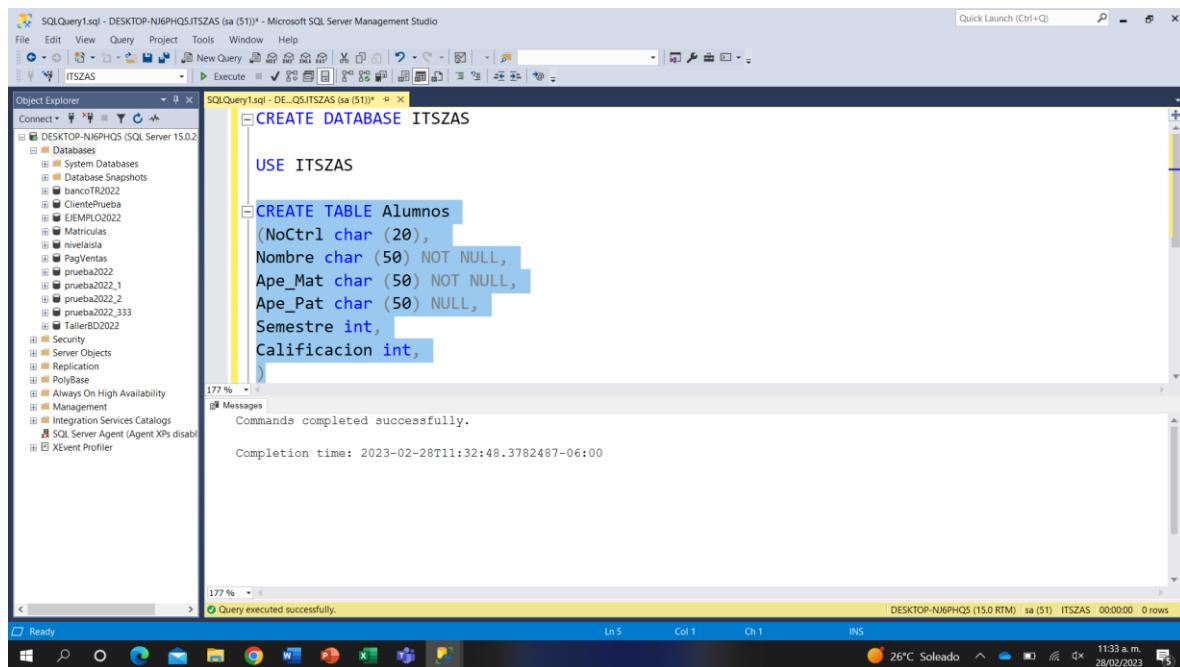
11:34 a. m. 28/02/2023





## Ya instalado:

### Ingresar datos



The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a database named 'ITSZAS' is selected. In the main query window, the following T-SQL code is executed:

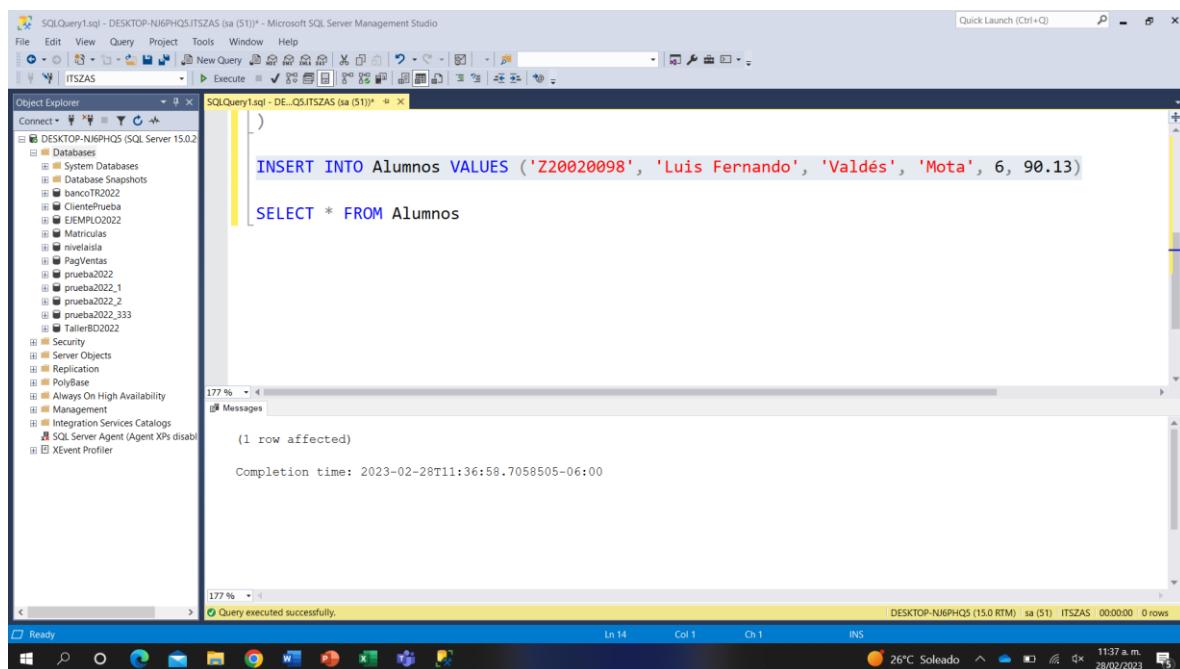
```
CREATE DATABASE ITSZAS
USE ITSZAS
CREATE TABLE Alumnos
(
    NoCtrl char (20),
    Nombre char (50) NOT NULL,
    Ape_Mat char (50) NOT NULL,
    Ape_Pat char (50) NULL,
    Semestre int,
    Calificacion int,
)
```

The execution completed successfully, as indicated by the message in the Messages pane:

```
Commands completed successfully.
```

Completion time: 2023-02-28T11:32:48.3782487-06:00

### Almacenar datos



The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, the 'ITSZAS' database is selected. In the main query window, the following T-SQL code is executed:

```
INSERT INTO Alumnos VALUES ('Z20020098', 'Luis Fernando', 'Valdés', 'Mota', 6, 90.13)
SELECT * FROM Alumnos
```

The execution completed successfully, as indicated by the message in the Messages pane:

```
(1 row affected)
```

Completion time: 2023-02-28T11:36:58.7058505-06:00

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

Connect ITSZAS

DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)

Databases

System Databases

Database Snapshots

bancoTR2022

ClientePrueba

EJEMPLO2022

Matriculas

nivelista

PagVentas

prueba2022

prueba2022\_1

prueba2022\_2

prueba2022\_333

TallerBD2022

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent (Agent XPs disabled)

XEvent Profiler

SQLQuery1.sql - DE...-Q5.ITSZAS (sa (51))

```
INSERT INTO Alumnos VALUES ('Z20020031', 'Estefanía', 'Salcedo', 'Luna', 6, 95)
SELECT * FROM Alumnos
```

Results Messages

NoChr	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion	
1	Z20020098	Luis Fernando	Valdés	Mota	6	90
2	Z20020113	Alan Eduardo	Trejo	Santos	6	91
3	Z20020001	Nayeli	Romero	Davila	6	100
4	Z20020007	Aldo Fabio	De Lucas	Castillo	6	90
5	Z20020031	Estefanía	Salcedo	Luna	6	95

Query executed successfully.

Ln 16 Col 1 Ch 1 INS

DESKTOP-NJ6PHQ5 (15.0 RTM) - sa (51) ITSZAS 00:00:00 5 rows

Ready

Windows Taskbar: 26°C Soleado 11:40 a. m. 28/02/2023

## Recuperar datos y trabajar con ellos

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

Connect ITSZAS

DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)

Databases

System Databases

Database Snapshots

bancoTR2022

ClientePrueba

EJEMPLO2022

Matriculas

nivelista

PagVentas

prueba2022

prueba2022\_1

prueba2022\_2

prueba2022\_333

TallerBD2022

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent (Agent XPs disabled)

XEvent Profiler

SQLQuery1.sql - DE...-Q5.ITSZAS (sa (51))

```
INSERT INTO Alumnos VALUES ('Z20020031', 'Estefanía', 'Salcedo', 'Luna', 6, 95)
SELECT * FROM Alumnos
SELECT * FROM Alumnos WHERE Calificacion>=95
```

Results Messages

NoChr	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion	
1	Z20020001	Nayeli	Romero	Davila	6	100
2	Z20020031	Estefanía	Salcedo	Luna	6	95

Query executed successfully.

Ln 18 Col 1 Ch 1 INS

DESKTOP-NJ6PHQ5 (15.0 RTM) - sa (51) ITSZAS 00:00:00 2 rows

Ready

Windows Taskbar: 26°C Soleado 11:43 a. m. 28/02/2023

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

SQLQuery1.sql - DE...-Q5.ITSZAS (sa (51))

```

INSERT INTO Alumnos VALUES ('Z20020031', 'Estefania', 'Salcedo', 'Luna', 6, 95)

SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95
  
```

Results Messages

NoCtrl	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion	
1	Z20020098	Luis Fernando	Valdes	Mota	6	90
2	Z20020113	Alan Eduardo	Trejo	Santos	6	91
3	Z20020007	Aldo Fabian	De Lucas	Castillo	6	90
4	Z20020031	Estefania	Salcedo	Luna	6	95

Query executed successfully.

Ln 18 Col 1 Ch 1 INS 26°C Soleado 11:43 a. m. 28/02/2023

## Capturar, editar y manipular datos

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

SQLQuery1.sql - DE...-Q5.ITSZAS (sa (51))

```

Semestre int,
Calificacion int,
)

INSERT INTO Alumnos VALUES ('Z20020031', 'Estefania', 'Salcedo', 'Luna', 6, 95)

SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95

SELECT * FROM Alumnos WHERE NoCtrl='Z20020113'
  
```

Results Messages

NoCtrl	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion	
1	Z20020113	Alan Eduardo	Trejo	Santos	6	91

Query executed successfully.

Ln 20 Col 1 Ch 1 INS 26°C Soleado 11:46 a. m. 28/02/2023

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

Connect DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)

Databases

bancoTR2022

ClientePrueba

EJEMPLO0222

Matriculas

nivealista

PagVarios

prueba2022

prueba2022\_1

prueba2022\_2

prueba2022\_333

TallerBD2022

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent (Agent XPs disabled)

XEvent Profiler

SQLQuery1sql - DE\_05ITSZAS (sa (51))

```

SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95

SELECT * FROM Alumnos WHERE NoCtrl='Z20020113'

UPDATE Alumnos SET Calificacion=80 WHERE NoCtrl='Z20020113'

```

(1 row affected)

Completion time: 2023-02-28T11:46:26.1196216-06:00

177 %

Messages

Query executed successfully.

Ready

Ln 22 Col 1 Ch 1 INS

DESKTOP-NJ6PHQ5 (15.0 RTM) · sa (51) ITSZAS 00:00:00 0 rows

26°C Soleado 11:46 a. m. 28/02/2023

SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query Execute

Object Explorer

Connect DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)

Databases

bancoTR2022

ClientePrueba

EJEMPLO0222

Matriculas

nivealista

PagVarios

prueba2022

prueba2022\_1

prueba2022\_2

prueba2022\_333

TallerBD2022

Security

Server Objects

Replication

PolyBase

Always On High Availability

Management

Integration Services Catalogs

SQL Server Agent (Agent XPs disabled)

XEvent Profiler

SQLQuery1sql - DE\_05ITSZAS (sa (51))

```

SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95

SELECT * FROM Alumnos WHERE NoCtrl='Z20020113'

UPDATE Alumnos SET Calificacion=80 WHERE NoCtrl='Z20020113'

```

Results

NoCtrl	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion
Z20020113	Alan Eduardo	Trejo	Santos	6	80

Query executed successfully.

Ready

Ln 20 Col 1 Ch 1 INS

DESKTOP-NJ6PHQ5 (15.0 RTM) · sa (51) ITSZAS 00:00:00 1 rows

26°C Soleado 11:46 a. m. 28/02/2023

## Aplicar seguridad

```
SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query Execute
Object Explorer
Connect > ITSZAS
DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)
Database Snapshots
bancotr2022
EJEMPL02022
Matriculas
nivelaista
PagVentas
prueba2022
prueba2022_1
prueba2022_2
prueba2022_333
TallerBD2022
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery1sql - DE...ITSZAS (sa (51))
INSERT INTO Alumnos VALUES ('Z20020031', 'Estephania', 'Salcedo', 'Luna', 6, 95)

SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95

SELECT * FROM Alumnos WHERE NoCtrl='Z20020113'

UPDATE Alumnos SET Calificacion=80 WHERE NoCtrl='Z20020113'

SP ADDLOGIN 'Luis', '1234'

Commands completed successfully.

Completion time: 2023-02-28T11:53:15.1000867-06:00
```

```
SQLQuery1.sql - DESKTOP-NJ6PHQ5.ITSZAS (sa (51)) - Microsoft SQL Server Management Studio
File Edit View Query Project Tools Window Help
New Query Execute
Object Explorer
Connect > ITSZAS
DESKTOP-NJ6PHQ5 (SQL Server 15.0.2)
Database Snapshots
bancotr2022
ClientePrueba
EJEMPL02022
Matriculas
nivelaista
PagVentas
prueba2022
prueba2022_1
prueba2022_2
prueba2022_333
TallerBD2022
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
SQLQuery1sql - DE...ITSZAS (sa (51))
SELECT * FROM Alumnos

SELECT * FROM Alumnos WHERE Calificacion<=95

SELECT * FROM Alumnos WHERE NoCtrl='Z20020113'

UPDATE Alumnos SET Calificacion=80 WHERE NoCtrl='Z20020113'

SP ADDLOGIN 'Luis', '1234'

SP_GRANTDBACCESS 'Luis'

Commands completed successfully.

Completion time: 2023-02-28T11:54:01.7351982-06:00
```

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, a new database named 'ITSZAS' is visible under the 'DESKTOP-NJ6PHQ5\ITSZAS (sa (51))' connection. In the center pane, a query window titled 'SQLQuery1.sql' contains the following T-SQL code:

```
CREATE DATABASE ITSZAS  
ON PRIMARY  
    (NAME = ITSZAS, FILENAME = 'C:\Program Files\Microsoft SQL Server\M...  
    , SIZE = 10, MAXSIZE = 100, FILEGROWTH = 10)  
LOG ON  
    (NAME = ITSZAS_log, FILENAME = 'C:\Program Files\Microsoft SQL Server\M...  
    , SIZE = 10, MAXSIZE = 100, FILEGROWTH = 10);  
  
USE ITSZAS;  
  
CREATE TABLE Alumnos  
    (NoCtrl nvarchar(10), Nombre nvarchar(50), Ape_Mat nvarchar(50), Ape_Pat nvarchar(50), Semestre int, Calificacion int);  
  
INSERT INTO Alumnos  
VALUES ('Z20020096', 'Luis Fernando', 'Valdés', 'Trejo', 6, 90),  
('Z20020113', 'Alan Eduardo', 'Trejo', 'Santos', 6, 80),  
('Z20020001', 'Nayeli', 'Romero', 'Davila', 6, 100),  
('Z20020007', 'Aldo Fabián', 'De Lucas', 'Castillo', 6, 90),  
('Z20020031', 'Estephanía', 'Salcedo', 'Luna', 6, 95);  
  
UPDATE Alumnos SET Calificacion=80 WHERE NoCtrl='Z20020113';  
  
SP_ADDLOGIN 'Luis', '1234'  
  
SP_GRANTDBACCESS 'Luis'  
  
GRANT SELECT, INSERT  
ON Alumnos  
TO Luis
```

The 'Messages' tab at the bottom of the query window displays the message: 'Commands completed successfully.' Below it, the completion time is shown as 'Completion time: 2023-02-28T11:54:40.0417011-06:00'. The status bar at the bottom right shows the system is at 26°C, the date is 28/02/2023, and the time is 11:54 a.m.

## Reporte de datos

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, the 'ITSZAS' database is selected. In the center pane, a query window titled 'SQLQuery1.sql' contains the following T-SQL code:

```
GRANT SELECT, INSERT  
ON Alumnos  
TO Luis  
  
SELECT * FROM Alumnos
```

The 'Results' tab at the bottom of the query window displays a table of student data:

NoCtrl	Nombre	Ape_Mat	Ape_Pat	Semestre	Calificacion
Z20020096	Luis Fernando	Valdés	Trejo	6	90
Z20020113	Alan Eduardo	Trejo	Santos	6	80
Z20020001	Nayeli	Romero	Davila	6	100
Z20020007	Aldo Fabián	De Lucas	Castillo	6	90
Z20020031	Estephanía	Salcedo	Luna	6	95

The 'Messages' tab at the bottom of the query window displays the message: 'Query executed successfully.' Below it, the completion time is shown as 'Completion time: 2023-02-28T11:55:00.0417011-06:00'. The status bar at the bottom right shows the system is at 26°C, the date is 28/02/2023, and the time is 11:55 a.m.