

Laboratorio1- Angel Gabriel Ortega

instalacion de los manejadores sql, sql server y mysql

Introducción

En este documento se describen los pasos para instalar y configurar los manejadores de bases de datos SQL Server y MySQL en mi caso en el sistema operativo windows.

Instalación de SQL Server

Requisitos Previos

- Windows 10/11 .
- 2 GB de espacio libre en disco minimo.

luego vamos a su pagina oficial y descargamos el instalador de toda la vida, el cual instala el servidor de sql server y luego debemos instalar sql management studio que es la herramienta de administracion por excelencia.

Instalación de MySQL

Requisitos Previos

- Windows 10/11 .
- 2 GB de espacio libre en disco minimo.

junto con el instalador podemos elegir instalar el workbench que es una herramienta bastante popular para poder administrar las bases de datos de este indole.

ya realizado esto podremos tener ambas herramientas(que nunca voy a usar xD) porque prefiero usar una extension de vsc que provee una interfaz infinitas veces mas comoda.



ahora procedemos a **crear** la base de datos con nombre "Database2-2024", entonces procedemos a crearla en cada base de datos

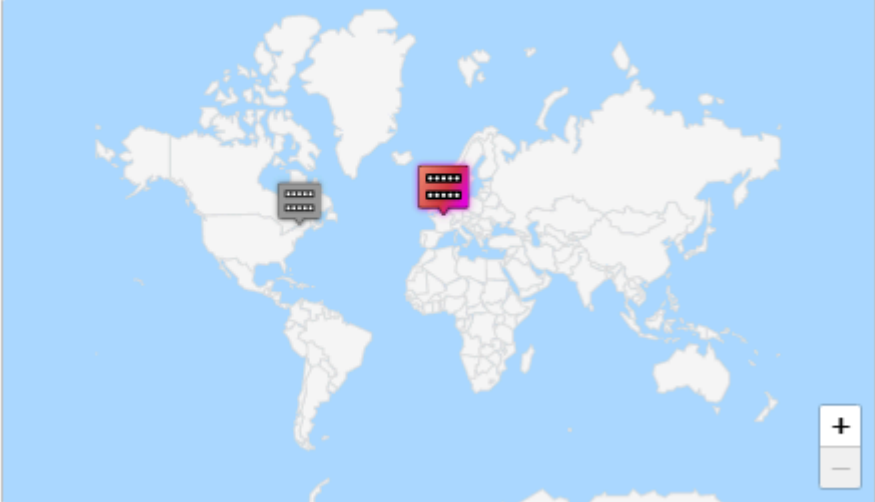
MySQL


en el caso de mysql solo instale el workbench porque el servidor lo uso desde la nube lo cual me resulta mas sencillo y eficiente para usarlo


What is the name of your MySQL add-on? In which region should it be located?

NAME: *

ZONE: *



**Paris** France 
infra:clever-cloud

**Montreal** Canada 
infra:ovh

NEXT

obtenemos las credenciales y podremos conectarnos a nuestra base de datos, desde workbench

Host

Database Name

User

Password

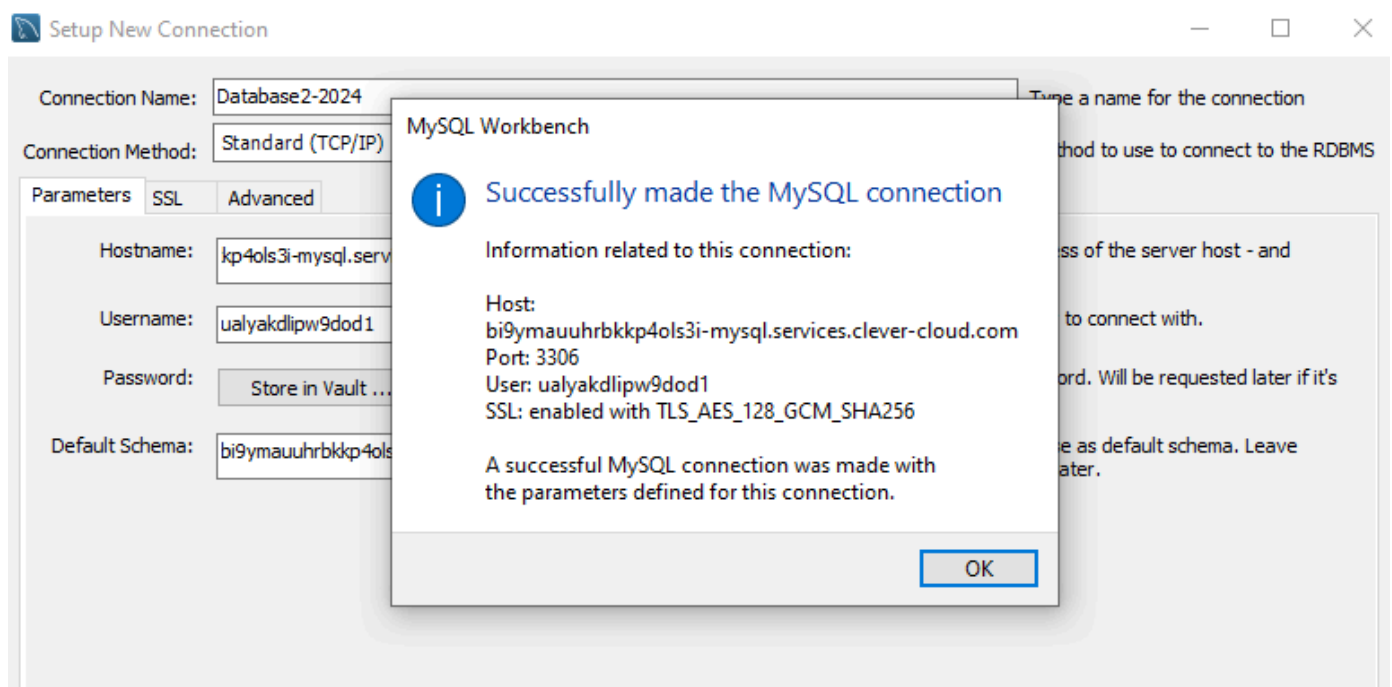


Port

Connection URI

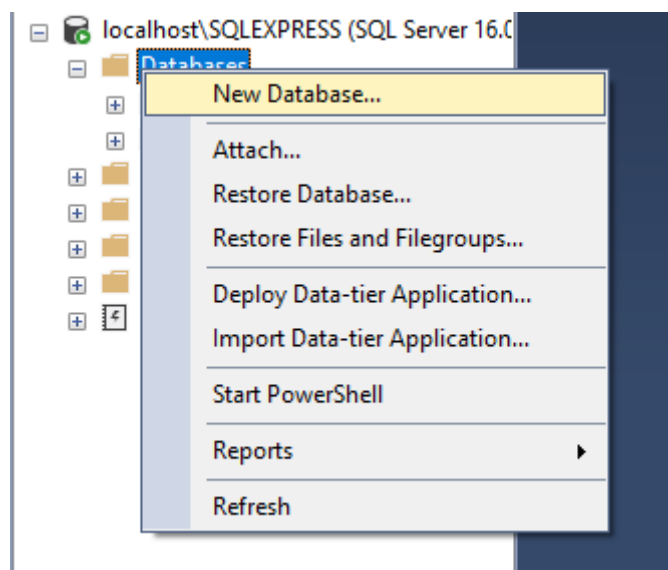


asignamos las credenciales respectivas, probamos y podremos conectarnos exitosamente:



SQL SERVER

en cuanto a sql server es tan sencillo como irnos al ssms y crear la base de datos con el nombre solicitado:



New Database

Select a page: General, Options, Filegroups

Script Help

Database name: Database2-2024

Owner: <default>

☒ Use full-text indexing

Database files:

Logical Name	File Type	Filegroup	Initial Size (MB)	Autogrowth / Maxsize	Path
Database2-...	ROWS...	PRIMARY	8	By 64 MB, Unlimited	C:\P...
Database2-...	LOG	Not Applicable	8	By 64 MB, Unlimited	C:\P...

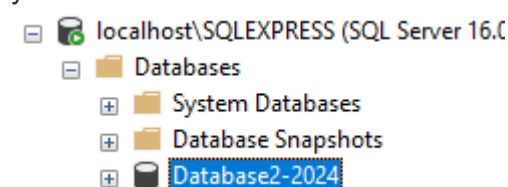
Connection: Server: DESKTOP-7NOB8QT\SQLEXPRESS, Connection: DESKTOP-7NOB8QT\Usuario, View connection properties

Progress: Ready

Add Remove

OK Cancel

y listo tendremos nuestra base de datos lista para almacenar los registros.



actividad 2

El propósito es que los estudiantes sepan realizar un modelo entidad-relación correcto aplicando las normalizaciones necesarias.

el diagrama se encontrara en los archivos fuente de la entrega.

actividad 3

en esta ultima actividad debiamos realizar algunas operaciones crud:

- Insertar Medico, Paciente y Cita
- Actualizar Cita
- Insertar Medicamento y Receta
- Actualizar Receta
- Eliminar/Cancelar Cita

```
> Run | New Tab
START TRANSACTION; 4ms

> Run | New Tab
INSERT INTO doctor (full_name, email, is_active, years_of_experience, office_number, id_speciality, hospital_id)
VALUES ('Dra. Ana Torres', 'ana.torres@gmail.com', true, 10, 'D-4', 4, 1);

> Run | New Tab
INSERT INTO patient (full_name, gender, birth_date, blood_type, medical_insurance, height, weight)
VALUES ('Ana Serrano', 'FEMALE', '1995-04-22', 'AB+', 'Seguro OPQ', 1.65, 60);

> Run | New Tab
INSERT INTO appointments (id_doctor, id_patient, appointment_date, status, reason)
VALUES (11, 4, '2024-10-01 15:00:00', 'PENDING', 'Consulta dermatológica');

> Run | New Tab
UPDATE appointments
SET status = 'CONFIRMED', reason = 'Consulta dermatológica confirmada'
WHERE id_appointment = 4;

> Run | New Tab
INSERT INTO medications (name_medication, presentation, dosage, indications, contraindications)
VALUES ('Loratadina', 'Tabletas', '10mg', 'Alergias', 'Hipersensibilidad');

> Run | New Tab
INSERT INTO prescriptions (id_doctor, id_patient, id_medication, prescription_date, dosage, frequency, duration)
VALUES (11, 4, 4, '2024-10-01', '10mg', 'Cada 24 horas', '7 dias');

> Run | New Tab
UPDATE prescriptions
SET duration = '14 dias'
WHERE id_prescription = 4;

> Run | New Tab
DELETE FROM appointments
WHERE id_appointment = 4;

> Run | New Tab
COMMIT;
```

```

167 ✓ INSERT INTO doctor (full_name, email, is_active, years_of_experience, office_number, id_speciality, hospital_id)
168 VALUES ('Dra. Ana Torres', 'ana.torres@gmail.com', true, 10, 'D-4', 4, 1); AffectedRows: 1 8ms
169
170
171 ✓ INSERT INTO patient (full_name, gender, birth_date, blood_type, medical_insurance, height, weight)
172 VALUES ('Ana Serrano', 'FEMALE', '1995-04-22', 'AB+', 'Seguro OPQ', 1.65, 60); 11ms AffectedRows: 1
173
174 ✓ INSERT INTO appointments (id_doctor, id_patient, appointment_date, status, reason)
175 VALUES (11, 4, '2024-10-01 15:00:00', 'PENDING', 'Consulta dermatológica'); AffectedRows: 1 8ms
176
177 ✓ UPDATE appointments
178 SET status = 'CONFIRMED', reason = 'Consulta dermatológica confirmada'
179 WHERE id_appointment = 4; 6ms
180
181 ✓ INSERT INTO medications (name_medication, presentation, dosage, indications, contraindications)
182 VALUES ('Loratadina', 'Tabletas', '10mg', 'Alergias', 'Hipersensibilidad'); 6ms AffectedRows: 1
183
184 ✓ INSERT INTO prescriptions (id_doctor, id_patient, id_medication, prescription_date, dosage, frequency, duration)
185 VALUES (11, 4, 4, '2024-10-01', '10mg', 'Cada 24 horas', '7 días'); AffectedRows: 1 9ms
186
187 ✓ UPDATE prescriptions
188 SET duration = '14 días'
189 WHERE id_prescription = 4; 6ms
190
191 ✓ DELETE FROM appointments
192 WHERE id_appointment = 4; 4ms
193
194
195 ✓ COMMIT; 4ms
196

```

por otro lado adjunto el script de sql usado en el lab:

```
-- Active: 1711459746437@@127.0.0.1@3306@hospitalx
--base de datos

CREATE TABLE focus (
    id_speciality INT PRIMARY KEY AUTO_INCREMENT,
    name_speciality VARCHAR(30) UNIQUE
);

CREATE TABLE hospitals (
    id_hospital INT PRIMARY KEY AUTO_INCREMENT,
    name_hospital VARCHAR(40) NOT NULL UNIQUE,
    address_hospital VARCHAR(50) NOT NULL
);

CREATE TABLE contact_info (
    id_contact INT PRIMARY KEY AUTO_INCREMENT,
    telephone VARCHAR(15),
    address VARCHAR(80),
    patient_id INT,
    FOREIGN KEY (patient_id) REFERENCES patient(patient_id)
);

CREATE TABLE patient (
    patient_id INT PRIMARY KEY AUTO_INCREMENT,
    full_name VARCHAR(50) NOT NULL,
    gender ENUM ('MALE', 'FEMALE', 'OTHER') NOT NULL,
    birth_date DATE,
    blood_type VARCHAR(3),
    medical_insurance VARCHAR(30),
    height DOUBLE NOT NULL,
    weight DOUBLE NOT NULL
);

CREATE TABLE doctor (
    doctor_id INT PRIMARY KEY AUTO_INCREMENT,
    full_name VARCHAR(50) NOT NULL,
    email VARCHAR(50),
    is_active BOOLEAN,
    years_of_experience INT,
    office_number VARCHAR(10),
    id_speciality INT NOT NULL,
```

```
hospital_id INT NOT NULL,  
FOREIGN KEY (id_speciality) REFERENCES focus(id_speciality),  
FOREIGN KEY (hospital_id) REFERENCES hospitals(id_hospital)  
);
```

```
CREATE TABLE appointments (  
    id_appointment INT PRIMARY KEY AUTO_INCREMENT,  
    id_doctor INT,  
    id_patient INT,  
    appointment_date DATETIME,  
    status ENUM ('PENDING', 'CONFIRMED', 'CANCELLED') NOT NULL,  
    reason VARCHAR(255),  
    FOREIGN KEY (id_doctor) REFERENCES doctor(doctor_id),  
    FOREIGN KEY (id_patient) REFERENCES patient(patient_id)  
);
```

```
CREATE TABLE medical_records (  
    id_record INT PRIMARY KEY AUTO_INCREMENT,  
    id_patient INT NOT NULL,  
    creation_date DATE,  
    notes TEXT,  
    diagnoses TEXT,  
    FOREIGN KEY (id_patient) REFERENCES patient(patient_id)  
);
```

```
CREATE TABLE tests (  
    id_test INT PRIMARY KEY AUTO_INCREMENT,  
    id_patient INT,  
    test_type VARCHAR(50),  
    description TEXT,  
    results TEXT,  
    test_date DATE,  
    FOREIGN KEY (id_patient) REFERENCES patient(patient_id)  
);
```

```
CREATE TABLE medications (  
    id_medication INT PRIMARY KEY AUTO_INCREMENT,  
    name_medication VARCHAR(50) NOT NULL,  
    presentation VARCHAR(50),  
    dosage VARCHAR(50),  
    indications TEXT,  
    contraindications TEXT  
);
```



```
CREATE TABLE prescriptions (  
    id_prescription INT PRIMARY KEY AUTO_INCREMENT,  
    id_doctor INT,  
    id_patient INT,  
    id_medication INT,  
    prescription_date DATE,  
    dosage VARCHAR(50),  
    frequency VARCHAR(50),  
    duration VARCHAR(50),  
    FOREIGN KEY (id_doctor) REFERENCES doctor(doctor_id),  
    FOREIGN KEY (id_patient) REFERENCES patient(patient_id),  
    FOREIGN KEY (id_medication) REFERENCES medications(id_medication)  
);
```

-- inserts porque no quiero problemas de foraneas xD

```
INSERT INTO focus (name_speciality)  
VALUES  
    ('Cardiología'),  
    ('Oftalmología'),  
    ('Pediatria'),  
    ('Cirugía Plástica'),  
    ('Dermatología'),  
    ('Neurocirugía');
```

```
INSERT INTO hospitals (name_hospital, address_hospital)  
VALUES  
    ('International', 'Valle de Menzuly, Km 7. Piedecuesta'),  
    ('Clinica Chicamocha', 'Cl. 40 #27A-22'),  
    ('Clinica Giron E.S.E', 'Cl. 33 #25-36');
```

```
INSERT INTO doctor (full_name, email, is_active, years_of_experience,  
office_number, id_speciality, hospital_id)  
VALUES
```

```
('Dr. Juan Perez', 'juan.perez@gmail.com', true, 12, 'C-3', 3, 1),
('Dra. Maria Lopez', 'maria.lopez@gmail.com', true, 8, 'B-2', 1, 2),
('Dr. Carlos Ruiz', 'carlos.ruiz@gmail.com', true, 15, 'A-1', 2, 3);
```

```
INSERT INTO patient (full_name, gender, birth_date, blood_type,
medical_insurance, height, weight)
```

```
VALUES
```

```
('Luis Colmenares', 'MALE', '1980-05-15', 'O+', 'Seguro ABC', 1.75, 70),
('Lucia Gómez', 'FEMALE', '1992-10-25', 'A-', 'Seguro XYZ', 1.60, 55),
('Carlos Martínez', 'MALE', '1985-07-20', 'B+', 'Seguro DEF', 1.80, 85);
```

```
INSERT INTO appointments (id_doctor, id_patient, appointment_date, status,
reason)
```

```
VALUES
```

```
(8, 1, '2024-09-10 10:00:00', 'PENDING', 'Chequeo general'),
(9, 2, '2024-09-15 11:30:00', 'CONFIRMED', 'Consulta cardiológica'),
(10, 3, '2024-09-20 09:00:00', 'PENDING', 'Examen de la vista');
```

```
INSERT INTO medications (name_medication, presentation, dosage, indications,
contraindications)
```

```
VALUES
```

```
('Ibuprofeno', 'Tabletas', '200mg', 'Dolor leve a moderado', 'Úlceras
pépticas'),
('Amoxicilina', 'Cápsulas', '500mg', 'Infecciones bacterianas', 'Alergia
a penicilina'),
('Paracetamol', 'Jarabe', '500mg/5ml', 'Fiebre', 'Insuficiencia hepática
grave');
```

```
INSERT INTO prescriptions (id_doctor, id_patient, id_medication,
prescription_date, dosage, frequency, duration)
```

```
VALUES
```

```
(8, 1, 1, '2024-09-10', '200mg', 'Cada 8 horas', '5 días'),
(9, 2, 2, '2024-09-15', '500mg', 'Cada 12 horas', '7 días'),
(10, 3, 3, '2024-09-20', '500mg/5ml', 'Cada 6 horas', '3 días');
```

```
SELECT * FROM doctor;
```

```
SELECT * FROM patient;
```

```
SELECT * FROM appointments;

START TRANSACTION;

INSERT INTO doctor (full_name, email, is_active, years_of_experience,
office_number, id_speciality, hospital_id)
VALUES ('Dra. Ana Torres', 'ana.torres@gmail.com', true, 10, 'D-4', 4, 1);

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