



PROYECTO SQL

TRABAJO CON BASES DE DATOS

<https://github.com/jviejocodecrypto/curso-sql-12.git>

OBJETIVOS

SQL

1. Se trata de instalar en Docker diferentes bases de datos
 1. MYSQL, SQLSERVER, ORACLE, POSTRGRES
2. Carga de datos de la base Northwidn
3. Hacer un servidor web que acceda a las distintas bases de datos

SQLITE

sqlite

https://github.com/jpwhite3/northwind-SQLite3/blob/master/Northwind_small.sqlite

MYSQL

```
docker run --name curso-mysql -p 3306:3306 -e  
MYSQL_ROOT_PASSWORD=my-secret-pw -d mysql:8.0.28
```

Instalar mysql

<https://dbeaver.io/download/>

Download bveaver

<https://www.dbvis.com/download/>

Download dbvisualize

Docker https://hub.docker.com/_/phpmyadmin

Instalar phpadmin

POSTGRES

https://hub.docker.com/_/postgres

```
docker run --name curso-pg-14 -e POSTGRES_PASSWORD=my-secret-  
pw -p 5437:5432 -d postgres:13
```

SQLSERVER

https://hub.docker.com/_/microsoft-mssql-server

```
docker run -e "ACCEPT_EULA=Y" -e "SA_PASSWORD=my-secret-pw" -p 1433:1433 -d mcr.microsoft.com/mssql/server:2019-CU15-ubuntu-20.04
```

CARGA DE DATOS MYSQL

carga de datos mysql

<https://www.aspsnippets.com/Handlers/DownloadFile.ashx?File=9cb579c6-86db-4596-84c3-d549428fdcf5.zip>

carga de datos pg

https://raw.githubusercontent.com/pthom/northwind_psql/master/northwind.sql

carga de datos sql server

<https://raw.githubusercontent.com/microsoft/sql-server-samples/master/samples/databases/northwind-pubs/instnwnd.sql>

MYSQL

```
const mysql = require("mysql8")

var pool = mysql.createPool({
  connectionLimit: 10,
  host: 'localhost',
  user: 'root',
  password: 'my-secret-pw',
  database: 'northwind'
});

function q(sql) {
  return new Promise((resolver, reject) => {
    pool.query(sql, function (error, results, fields) {
      if (error) reject(error);
      return resolver(results);
    });
  });
}
```

ACCESO CON SQL SERVER

SQL SERVER

```
const mssql = require('mssql')
const sqlConfig = {
  user: process.env.SQLSERVER_USER,
  password: process.env.SQLSERVER_PASSWORD,
  database: process.env.SQLSERVER_DATABASE,
  server: process.env.SQLSERVER_HOST,
  pool: {
    max: 10,
    min: 0,
    idleTimeoutMillis: 30000
  },
  options: {
    encrypt: true,
    trustServerCertificate: true
  }
}
```

```
async function q(sql, params) {
  try {

    await mssql.connect(sqlConfig)
    const result = await mssql.query(`select * from
Customers`)
    return result;
  } catch (err) {
    return {err:JSON.stringify(err)}
  }
}
```


ACCESO A POSTGRES

```

const { Pool } = require('pg');
const util = require("util")

const poolPg = new Pool({
  user: process.env.PG_USER,
  host: process.env.PG_HOST,
  database: 'postgres',
  password: process.env.PG_PASSWORD,
  port: process.env.PG_PORT,
})

```

```

async function q(sql, parametros) {
  return new Promise(async (resolve, reject) => {
    poolPg.connect((err, client, done) => {
      if (err) reject(err)
      client.query(sql, parametros, (err, result) => {
        done()
        if (err) {
          reject(err)
        } else {
          resolve(result.rows)
        }
      })
    })
  })
}

module.exports = {
  q
}

```

POSTGRES

ORACLE

```
docker run -d --name orcl1 -e ORACLE_PWD=changeme123 -p  
1521:1521 container-registry.oracle.com/database/express:21.3.0-  
xe
```

USUARIO:SYS AS SYSDBA password:changeme123

carga de datos oracle

<https://gist.githubusercontent.com/Jviejo/4f59dfe1d31d55c633b6c4a441bfb806/raw/800005c1ea4264f4e16b2a13cca7af28431f3879/northwind%2520oracle>

Configuración de la conexión "localhost 2"

Ajustes de conexión

Oracle ajustes de conexión

ORACLE

▼ Ajustes de conexión

- Inicialización
- Comandos de s
- Identificación d
- Transacciones
- General
- Metadatos
- Errores y timeouts
- Editor de datos
- Editor SQL

General Oracle properties Driver properties SSH Proxy

Connection Type:

Basic TNS Custom

Host: localhost Port: 1521

Database: XE Service Name

Authentication

Authentication: Oracle Database Native

Nombre de usuario: system Role: Normal

Contraseña: ☒ Save password loca

Client:

ⓘ You can use variables in connection parameters.

Driver name: Oracle Edit Driver Settings

Probar conexión ... Aceptar Cancelar

HOST: localhost
SERVICE: XE
PORT: 1521
Usuario: SYS
Role: SYSDBA
Contraseña: changeme123

carga de datos oracle

https://raw.githubusercontent.com/dshifflet/NorthwindOracle_DDL/master/northwind_export.sql

HAY QUE INSTALAR EL CLIENTE DE ORACLE

<https://www.oracle.com/database/technologies/instant-client/winx64-64-downloads.html>

```
const oracledb = require('oracledb');

var pool = null
try {
  oracledb.initOracleClient({ libDir: 'C:\\Users\\jviejo\\Downloads\\instantclient-basiclite-windows.x64-21.3.0.0.0\\instantclient_21_3' });
} catch (err) {
  console.error('Whoops!');
  console.error(err);
  process.exit(1);
}
```

```
async function getPool(con) {  
  return new Promise(async (resolve, reject) => {  
    if (pool) resolve(pool)  
    try {  
      console.log("obtengo pool")  
      pool = await oracledb.createPool(con)  
      resolve(pool)  
    } catch (error) {  
      reject(error)  
    }  
  });  
}
```



```
async function q(sql, parametros) {
  let connection;
  try {
    await getPool({
      user: process.env.ORACLE_USER,    password: process.env.ORACLE_PASSWORD,
      connectString: process.env.ORACLE_CN, poolAlias: "curso"
    })
    connection = await oracledb.getConnection("curso");
    const result = await connection.execute(
      sql,
      parametros, { outFormat: oracledb.OBJECT},
    );
    return (result.rows);
  } catch (err) {
    return err;
  } finally {
    if (connection) {
      try {
        await connection.close();
      } catch (err) {
        return err;
      }
    }
  }
}
```