

1º) Instalación y uso de SQLite.

(A) Tabla de empleados.

1) Ejecuta sqlite3.exe en modo consola y crea una nueva BD ejemplo:

```
C:\Users\Jake>sqlite3.exe
SQLite version 3.39.4 2022-09-29 15:55:41
Enter ".help" for usage hints.
Connected to a transient in-memory database.
Use ".open FILENAME" to reopen on a persistent database.
sqlite>
```

2) Crea una tabla de emple con la estructura:

deptno entero (de 0 a 255, tinyint), PK

nombre varchar(15)

y valores a los campos.

```
sqlite> create table emple(
...> deptno tinyint(2) not null primary key,
...> nombre varchar(15));
sqlite> insert into emple values(10,'contabilidad');
sqlite> insert into emple values(20,'marketing');
sqlite> insert into emple values(30,'informatica');
sqlite>
```

3) Observa todas las operaciones de definición y manipulación que puedes hacer con esta BD embebida.

```
sqlite> .help
.archive ...           Manage SQL archives
.auth ON|OFF           Show authorizer callbacks
.backup ?DB? FILE      Backup DB (default "main") to FILE
.bail on|off           Stop after hitting an error. Default OFF
.binary on|off         Turn binary output on or off. Default OFF
.cd DIRECTORY          Change the working directory to DIRECTORY
.changes on|off        Show number of rows changed by SQL
.check GLOB            Fail if output since .testcase does not match
.clone NEWDB           Clone data into NEWDB from the existing database
.connection [close] [#] Open or close an auxiliary database connection
.databases             List names and files of attached databases
.dbconfig ?op? ?val?   List or change sqlite3_db_config() options
.dbinfo ?DB?          Show status information about the database
.dump ?OBJECTS?       Render database content as SQL
.echo on|off           Turn command echo on or off
.eqp on|off|full|...   Enable or disable automatic EXPLAIN QUERY PLAN
.excel                Display the output of next command in spreadsheet
.exit ?CODE?           Exit this program with return-code CODE
.expert               EXPERIMENTAL. Suggest indexes for queries
.explain ?on|off|auto? Change the EXPLAIN formatting mode. Default: auto
.filectrl CMD ...      Run various sqlite3_file_control() operations
.fullschema ?--indent? Show schema and the content of sqlite_stat tables
.headers on|off        Turn display of headers on or off
.help ?-all? ?PATTERN? Show help text for PATTERN
.import FILE TABLE    Import data from FILE into TABLE
.imposter INDEX TABLE Create imposter table TABLE on index INDEX
.indexes ?TABLE?       Show names of indexes
.limit ?LIMIT? ?VAL?   Display or change the value of an SQLITE_LIMIT
.lint OPTIONS          Report potential schema issues.
.load FILE ?ENTRY?     Load an extension library
.log FILE|off          Turn logging on or off. FILE can be stderr/stdout
.mode MODE ?OPTIONS?   Set output mode
.nonce STRING          Suspend safe mode for one command if nonce matches
.nullvalue STRING      Use STRING in place of NULL values
.once ?OPTIONS? ?FILE? Output for the next SQL command only to FILE
.open ?OPTIONS? ?FILE? Close existing database and reopen FILE
.output ?FILE?         Send output to FILE or stdout if FILE is omitted
.parameter CMD ...     Manage SQL parameter bindings
.print STRING...       Print literal STRING
.progress N            Invoke progress handler after every N opcodes
.prompt MAIN CONTINUE  Replace the standard prompts
.quit                 Exit this program
.read FILE             Read input from FILE or command output
.recover              Recover as much data as possible from corrupt db.
.restore ?DB? FILE     Restore content of DB (default "main") from FILE
.save ?OPTIONS? FILE   Write database to FILE (an alias for .backup ...)
.scanstats on|off      Turn sqlite3_stmt_scanstatus() metrics on or off
.schema ?PATTERN?     Show the CREATE statements matching PATTERN
.selftest ?OPTIONS?    Run tests defined in the SELFTEST table
```

4) Muestra la descripción (o estructura) de la tabla:

```
sqlite> .fullschema
CREATE TABLE emple(
deptno tinyint(2) not null primary key,
nombre varchar(15));
/* No STAT tables available */
sqlite>
```

5) Muestra todos los datos almacenados en la tabla emple:

```
sqlite> select * from emple;
10|contabilidad
20|marketing
30|informatica
sqlite>
```

(B) Crea las tablas Empleados y Departamentos en una nueva BD SQLite con registros y la siguiente estructura:

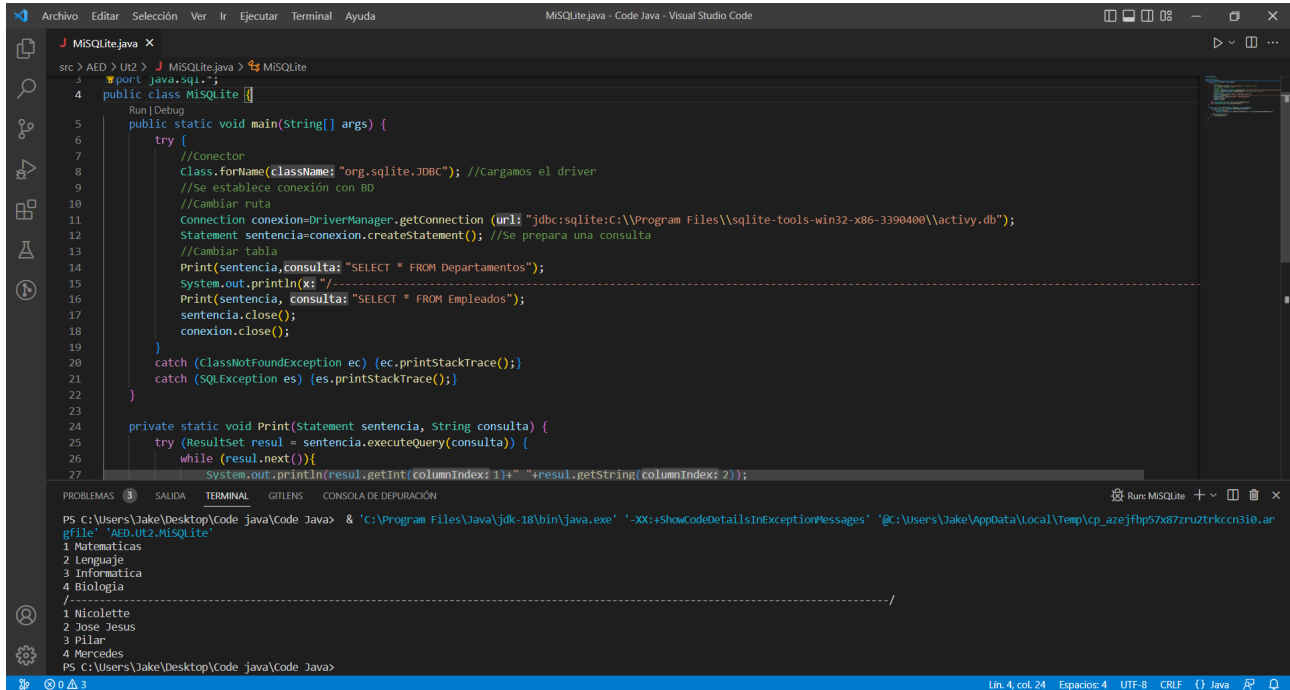
Departamentos	Empleados
Deptno numérico, clave primaria	Empno numérico, clave primaria
NombreDeptno varchar(15)	NombreEmpno varchar(20)
Localidad varchar(15)	Cargo varchar(10)
	FechaIng date
	Salario numérico
	Comision numérico
	Deptno numérico, clave ajena (a Departamentos)

```
sqlite> create table Departamentos(
...> deptno int not null primary key,
...> nombredptno varchar(15),
...> localidad varchar(15));
sqlite> .fullschema
CREATE TABLE Departamentos(
deptno int not null primary key,
nombredptno varchar(15),
localidad varchar(15));
/* No STAT tables available */
sqlite>
```

```
sqlite> create table Empleados(
...> empno int not null primary key,
...> nombreempno varchar(20),
...> cargo varchar(10),
...> fechaIng date,
...> salario int,
...> comision int,
...> deptno int,
...> foreign key(deptno) references Departamentos(deptno));
sqlite> .fullschema
CREATE TABLE Departamentos(
deptno int not null primary key,
nombredptno varchar(15),
localidad varchar(15));
CREATE TABLE Empleados(
empno int not null primary key,
nombreempno varchar(20),
cargo varchar(10),
fechaIng date,
salario int,
comision int,
deptno int,
foreign key(deptno) references Departamentos(deptno));
```

2º) Conexión con Java.

Desde Java, conecta con JDBC con una de las BD creadas en el punto anterior (Emple) y muestra todos los datos almacenados.



```
src > AED > UT2 > MISQLite.java > MISQLite
1 *port: java+sql+;
4 public class MISQLite {
5     Run | Debug
6     public static void main(String[] args) {
7         try {
8             //conector
9             Class.forName(className: "org.sqlite.JDBC"); //cargamos el driver
10            //Se establece conexión con BD
11            //Cambiar ruta
12            Connection conexion=DriverManager.getConnection (url: "jdbc:sqlite:C:\\Program Files\\sqlite-tools-win32-x86-3390400\\activy.db");
13            Statement sentencia=conexion.createStatement(); //Se prepara una consulta
14            //Cambiar tabla
15            Print(sentencia, consulta: "SELECT * FROM Departamentos");
16            System.out.println(x: "/-----/");
17            Print(sentencia, consulta: "SELECT * FROM Empleados");
18            sentencia.close();
19            conexion.close();
20        }
21        catch (ClassNotFoundException ec) {ec.printStackTrace();}
22        catch (SQLException es) {es.printStackTrace();}
23    }
24
25    private static void Print(Statement sentencia, String consulta) {
26        try (ResultSet resul = sentencia.executeQuery(consulta)) {
27            while (resul.next()){
28                System.out.println(resul.getInt(columnIndex: 1)+" "+resul.getString(columnIndex: 2));
29            }
30        }
31    }
32}
```

PROBLEMAS 3 SALIDA TERMINAL GITLENS CONSOLA DE DEPURACIÓN

PS C:\Users\Jake\Desktop\code java\code Java> & "C:\Program Files\Java\jdk-18\bin\java.exe" "-XX:+ShowCodeDetailsInExceptionMessages" "C:\Users\Jake\AppData\Local\Temp\cp_azejfbp57x87zru2trkccn310.ar
gFile" "AED.UT2.MISQLite"

```
1 Automaticas
2 Lenguaaje
3 Informatica
4 Biologia
/-----/
1 Nicolette
2 Jose Jesus
3 Pilar
4 Mercedes
PS C:\Users\Jake\Desktop\code java\code Java>
```

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Si quieres testearlo tu te paso la tabla con los datos y el código