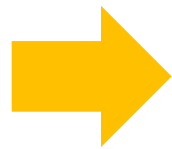
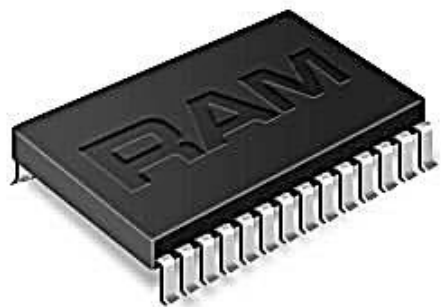




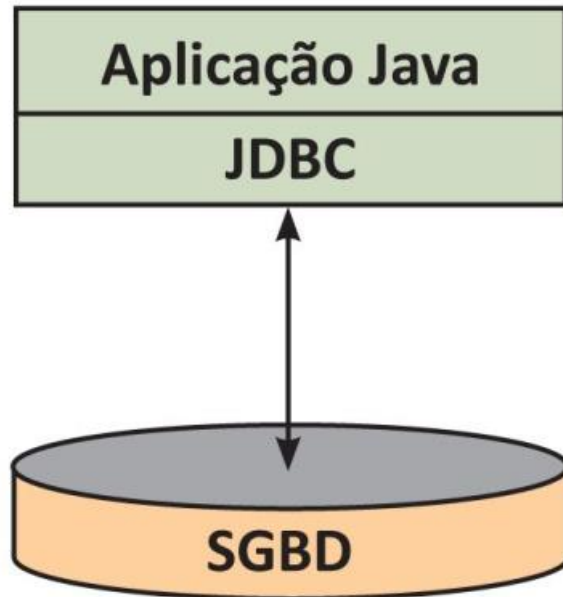
Conexão com banco de dados e CRUD

Geucimar Briatore

Por que **não** gravar “textos” no HD?



Banco de dados estruturados



1. Máquina Cliente

2. Protocolo Proprietário

3. Servidor de Dados

Tabelas em banco de dados

CODIGO	NOME	SOBRENOME	DTA_NASCIMENTO	PESO
10001	Axel	Silveira	28/10/1943	55
10083	Arvid	de Paula	24/11/1954	70
10120	Jonas	da Silva	01/01/1969	67
10005	Florence	Wojokowski	04/07/1971	80
10099	Fernando	Pereira	21/09/1966	69
10035	Elizabete	Yamaguchi	24/12/1959	58

Cadastro em banco de dados (CRUD)

Pessoa
<ul style="list-style-type: none">- Id: int- Nome: string- CPF: string- Altura: int

C (Create) → **INSERT**

R (Retrieve) → **SELECT**

U (Update) → **UPDATE**

D (Delete) → **DELETE**

Exemplos de comandos SQL (CRUD)

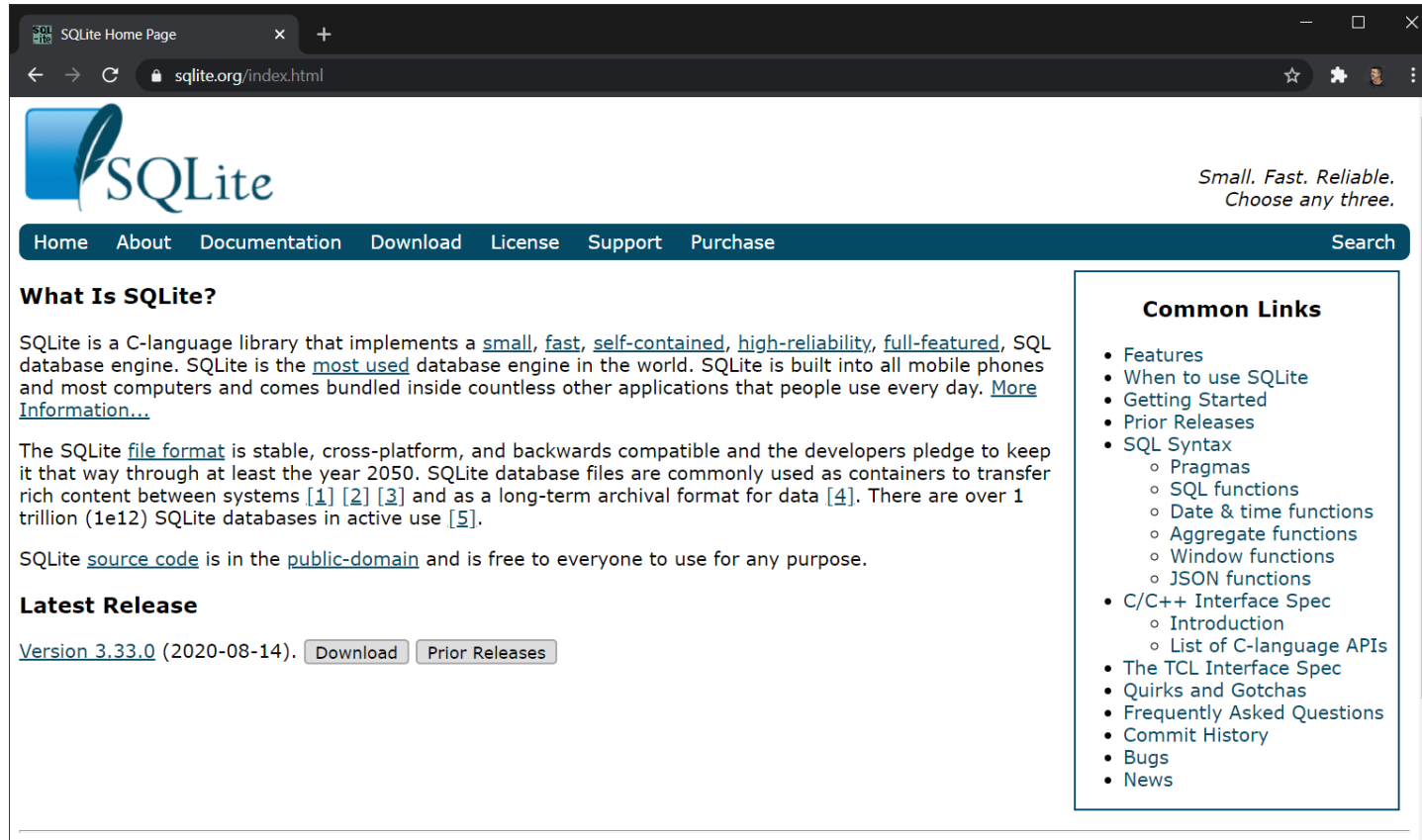
```
INSERT INTO pessoas (nome, sobrenome) VALUES ('João', 'Silva');
```

```
SELECT nome, sobrenome FROM pessoas WHERE peso > 50;
```

```
UPDATE pessoas SET nome = 'Pedro' WHERE nome = 'João';
```

```
DELETE FROM pessoas WHERE nome like 'Jo%';
```

Banco de dados SQLite + Driver JDBC



The screenshot shows the SQLite Home Page in a web browser. The browser's address bar displays 'sqlite.org/index.html'. The page features the SQLite logo on the left and the tagline 'Small. Fast. Reliable. Choose any three.' on the right. A navigation bar contains links for Home, About, Documentation, Download, License, Support, and Purchase, along with a search field. The main content area is divided into two columns. The left column, titled 'What Is SQLite?', describes SQLite as a C-language library and the most used database engine, providing links to more information, file format details, and source code. The right column, titled 'Common Links', lists various resources including Features, Getting Started, SQL Syntax, and C/C++ Interface Spec. At the bottom left, the 'Latest Release' section shows 'Version 3.33.0 (2020-08-14)' with buttons for 'Download' and 'Prior Releases'.

SQLite Home Page

sqlite.org/index.html

SQLite

Small. Fast. Reliable.
Choose any three.

Home About Documentation Download License Support Purchase Search

What Is SQLite?

SQLite is a C-language library that implements a [small](#), [fast](#), [self-contained](#), [high-reliability](#), [full-featured](#), SQL database engine. SQLite is the [most used](#) database engine in the world. SQLite is built into all mobile phones and most computers and comes bundled inside countless other applications that people use every day. [More Information...](#)

The SQLite [file format](#) is stable, cross-platform, and backwards compatible and the developers pledge to keep it that way through at least the year 2050. SQLite database files are commonly used as containers to transfer rich content between systems [\[1\]](#) [\[2\]](#) [\[3\]](#) and as a long-term archival format for data [\[4\]](#). There are over 1 trillion (1e12) SQLite databases in active use [\[5\]](#).

SQLite [source code](#) is in the [public-domain](#) and is free to everyone to use for any purpose.

Latest Release

[Version 3.33.0](#) (2020-08-14). [Download](#) [Prior Releases](#)

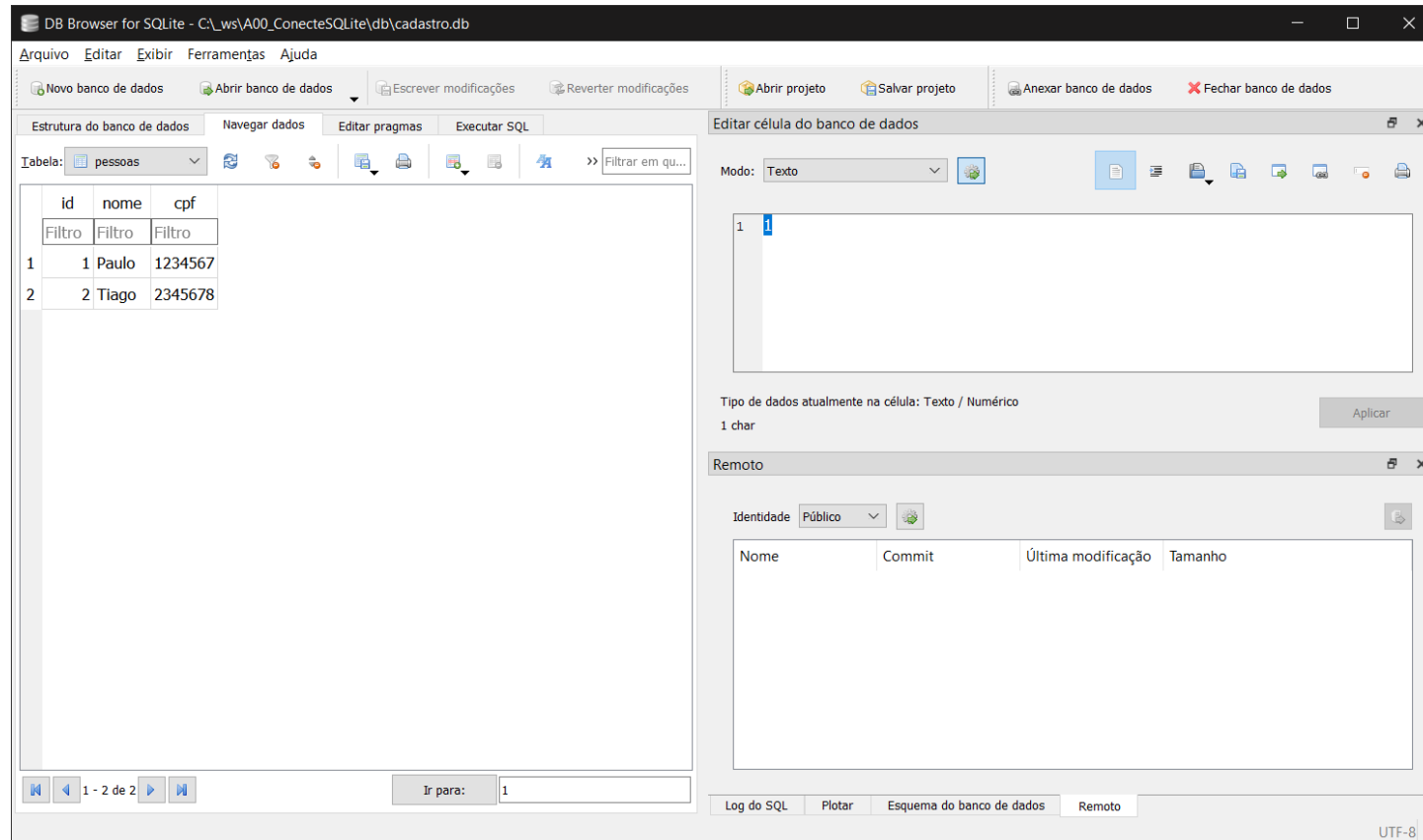
Common Links

- Features
- When to use SQLite
- Getting Started
- Prior Releases
- SQL Syntax
 - Pragma
 - SQL functions
 - Date & time functions
 - Aggregate functions
 - Window functions
 - JSON functions
- C/C++ Interface Spec
 - Introduction
 - List of C-language APIs
- The TCL Interface Spec
- Quirks and Gotchas
- Frequently Asked Questions
- Commit History
- Bugs
- News

<https://www.sqlite.org/index.html>

<https://github.com/xerial/sqlite-jdbc>

DB Browser for SQLite



<https://sqlitebrowser.org/>

Passos para a conexão JDBC

// 1. Abrir a conexão.

```
Connection conexao = DriverManager.getConnection  
    ("jdbc:nomeDoDriver:nomeDoBanco", "oLogin", "aSenha");
```

// 2. Criar e executar da consulta.

```
Statement comando = conexao.createStatement();  
ResultSet resultado = comando.executeQuery("SELECT a, b FROM tabela");
```

// 3. Utilizar os dados.

```
while (resultado.next()) {  
    int inteiro = resultado.getInt(1);  
    String texto = resultado.getString(2);  
    float decimal = resultado.getFloat(3);  
}
```

Create, Retreive, Update e Delete (CRUD)

// 1. Salvar (Create)

```
boolean inseriu = cmd.execute("INSERT INTO tab (a, b) VALUES ('...', '...')");
```

// 2. Buscar (Retreive)

```
ResultSet resultado = cmd.executeQuery("SELECT a, b FROM tabela");
```

// 3. Atualizar (Update)

```
int qtde = cmd.executeUpdate("UPDATE tabela SET a = '...' WHERE id = 1");
```

// 4. Excluir (Delete)

```
boolean excluiu = cmd.execute ("DELETE FROM tabela WHERE nome like 'Jo%'");
```

Exercício de fixação

- Criar um banco de dados SQLite chamado **cardapio.db** e tabelas no banco de dados referente aos campos dos arquivos **pratos.csv**, **bebidas-tabuladas.txt** e **vinhos-tabulados.txt**;
- Desenvolver um programa Java que faça a leitura dos dados nos arquivos de textos e insira os no banco de dados criado.