

English Log in

Page [Discussion](#) Read [View source](#) [View history](#)

Development

TDF LibreOffice Document Liberation Project Community Blogs Weblate Nextcloud Redmine Ask LibreOffice Donate

Wiki Home | [Development](#) | Design | QA | Events | Documentation | Website | Localization | Accessibility | Marketing | Diversity | Wiki Help

[Overview](#) | [Reporting Bugs](#) | [How to build](#) | [Code Overview](#) | [Git Commands](#) | [Debugging](#) | [EasyHacks](#) | [Release Plan](#) | [FAQ](#) | [Developers](#) | [Extensions](#) | [→ Open Issues](#)

[EN](#) | [AN](#) | [AR](#) | [AST](#) | [BE](#) | [BG](#) | [BN](#) | [BRX](#) | [CA](#) | [CS](#) | [DA](#) | [DE](#) | [EL](#) | [EO](#) | [ES](#) | [ET](#) | [FA](#) | [FI](#) | [FR](#) | [GD](#) | [GL](#) | [GUG](#) | [HE](#) | [HI](#) | [HR](#) | [HU](#) | [ID](#) | [IS](#) | [IT](#) | [JA](#) | [JV](#) | [KO](#) | [KU](#) | [LO-LA](#) | [LT](#) | [MN](#) | [MR](#) | [NE](#) | [NL](#) | [NO](#) | [OC](#) | [OM](#) | [PA](#) | [PL](#) | [PT](#) | [PT-BR](#) | [RO](#) | [RU](#) | [SAH](#) | [SK](#) | [SL](#) | [SQ](#) | [SV](#) | [TA](#) | [TE](#) | [ไทย \(TH\)](#) | [TR](#) | [UK](#) | [UZ](#) | [VI](#) | [正體 \(ZH-TW\)](#) | [简体 \(ZH-CN\)](#)

Getting Started with Development	General Programming Guidelines
<ul style="list-style-type: none"> • Get Involved • LibreOffice Learning Materials • Building LibreOffice – Video Tutorial • Using an IDE to work on LibreOffice • Pick a Task: <ul style="list-style-type: none"> • EasyHacks 	<ul style="list-style-type: none"> • Building LibreOffice -- Tips and Tricks: <ul style="list-style-type: none"> • ... on Linux and *BSD systems • ... on macOS • ... on Windows • ... for Android • ... on any platform (platform-independent hints)

LibreOffice Kaigi 2021 オンライン, Jun 12 2021 15:20-15:50

LibreOfficeのNeo4jネイティブドライバを作ってみる

Koji Annoura
 案浦浩二
koji@annoura.com

Who am I

- ❖ Apple IIが好きすぎてソフトウェア業界参入
- ❖ グラフ理論LOVE
 - ❖ Neo4jグラフデータベースにハマってます
 - ❖ Graph Community MVP
 - ❖ Neo4j Ambassador
 - ❖ Neo4j Speaker
 - ❖ Neo4j Ninja
 - ❖ Neo4j Developer



NODES 2021

- ❖ Neo4j Online Developer Expo and Summit
- ❖ <https://neo4j.com/nodes-2021/>
- ❖ 2021-06-17
 - ❖ Online
- ❖ 日本からのスピーカー
 - ❖ Norbert Preining
 - ❖ Koji Annoura

neo4j

[NODES 2021]

Welcome to 2021 NODES Online Conference!

Neo4j Online Developer Expo and Summit

For the third year (and running), NODES is back!

Yes, it is 2021, which means plenty of graphistas are emerging from quarantine with the coolest, smartest, and inspiring projects using Neo4j – and they will be here to talk about it!

Join us on June 17 for this live, virtual, all-day (free) event, for beginners and experts alike. Whether you're experiencing your first graph epiphany, or back to learn best practices from the experts, there's something for everyone.

NODES 2021 highlights:

- Live, highly technical presentations delivered by Neo4j experts
- Hands-on practice workshops for beginners and those looking to brush up their skills
- Pre-party happenings and special events to totally immerse yourself in NODES goodness

Register today and you'll be the first to hear about scheduled announcements and other conference news.

[Save My Spot](#)

Learn about some of our expert speakers below!

Source: Neo4j <https://neo4j.brand.live/c/2021nodes-homepage>

Neo4j

- ❖ Neo4jは、Graph Databaseです
- ❖ NoSQL Databasesの1つ
- ❖ ACID (Transaction)
- ❖ 日本国内でも事例は増えています
- ❖ 項目の追加削除はDBの再起動不要
(何かと助かります)

The screenshot shows the Neo4j website homepage. At the top, there is a navigation bar with links for Company, Support, Contact Us, and a search bar. Below the navigation bar, the Neo4j logo is displayed on the left, and a menu with links for PRODUCTS, USE CASES, CUSTOMERS, PARTNERS, EVENTS & RESOURCES, and DEVELOPERS is on the right. A prominent red button labeled 'TRY NEO' is also visible. The main content area features a large banner for a free offer of the 'Graph Algorithms' eBook, which expires on October 15. The banner includes the text 'Free - Offer Expires October 15', 'Graph Algorithms', 'New Data Science Code and Content', and a 'Download eBook' button. To the right of the text is an image of the 'Graph Algorithms' book cover. Below the banner, there is a row of logos for partner companies: CISCO, telenor, pitney bowes, zenoss, and Telia. The bottom section of the page contains three columns of promotional content, each with an eBook cover image and text describing the offer. The first column offers a free O'Reilly eBook 'Graph Algorithms: Examples in Spark and Neo4j' with sample code and tips. The second column offers a 'No Download Required' option to 'Get Started Quickly with the Neo4j Sandbox', providing built-in guides and sample datasets. The third column offers a free O'Reilly eBook 'Graph Databases for Connected Data' to help users manage their data.

Source: Neo4j <https://neo4j.com>

DB Ranking

- ❖ よく見るランキングですが18位に
- ❖ June. 2021
- ❖ 20 > 19 > 18
- ❖ <https://db-engines.com/en/ranking>

Rank			DBMS	Database Model	Score Jun 2021
Jun 2021	May 2021	Jun 2020			
1.	1.	1.	Oracle	Relational, Multi-model	1270.94
2.	2.	2.	MySQL	Relational, Multi-model	1227.86
3.	3.	3.	Microsoft SQL Server	Relational, Multi-model	991.07
4.	4.	4.	PostgreSQL	Relational, Multi-model	568.51
5.	5.	5.	MongoDB	Document, Multi-model	488.22
6.	6.	6.	IBM Db2	Relational, Multi-model	167.03
7.	7.	8.	Redis	Key-value, Multi-model	165.25
8.	8.	7.	Elasticsearch	Search engine, Multi-model	154.71
9.	9.	9.	SQLite	Relational	130.54
10.	10.	11.	Microsoft Access	Relational	114.94
11.	11.	10.	Cassandra	Wide column	114.11
12.	12.	12.	MariaDB	Relational, Multi-model	96.79
13.	13.	13.	Splunk	Search engine	90.27
14.	14.	14.	Hive	Relational	79.69
15.	15.	23.	Microsoft Azure SQL Database	Relational, Multi-model	74.79
16.	16.	16.	Amazon DynamoDB	Multi-model	73.76
17.	17.	15.	Teradata	Relational, Multi-model	69.34
18.	19.	22.	Neo4j	Graph	55.75
19.	18.	19.	SAP HANA	Relational, Multi-model	54.11
20.	20.	18.	Solr	Search engine, Multi-model	52.10
21.	22.	20.	FileMaker	Relational	49.13
22.	21.	17.	SAP Adaptive Server	Relational, Multi-model	48.99
23.	23.	21.	HBase	Wide column	43.52
24.	24.	26.	Google BigQuery	Relational	39.63
25.	25.	24.	Microsoft Azure Cosmos DB	Multi-model	36.47

Source: DB-Engines <https://db-engines.com/en/ranking>

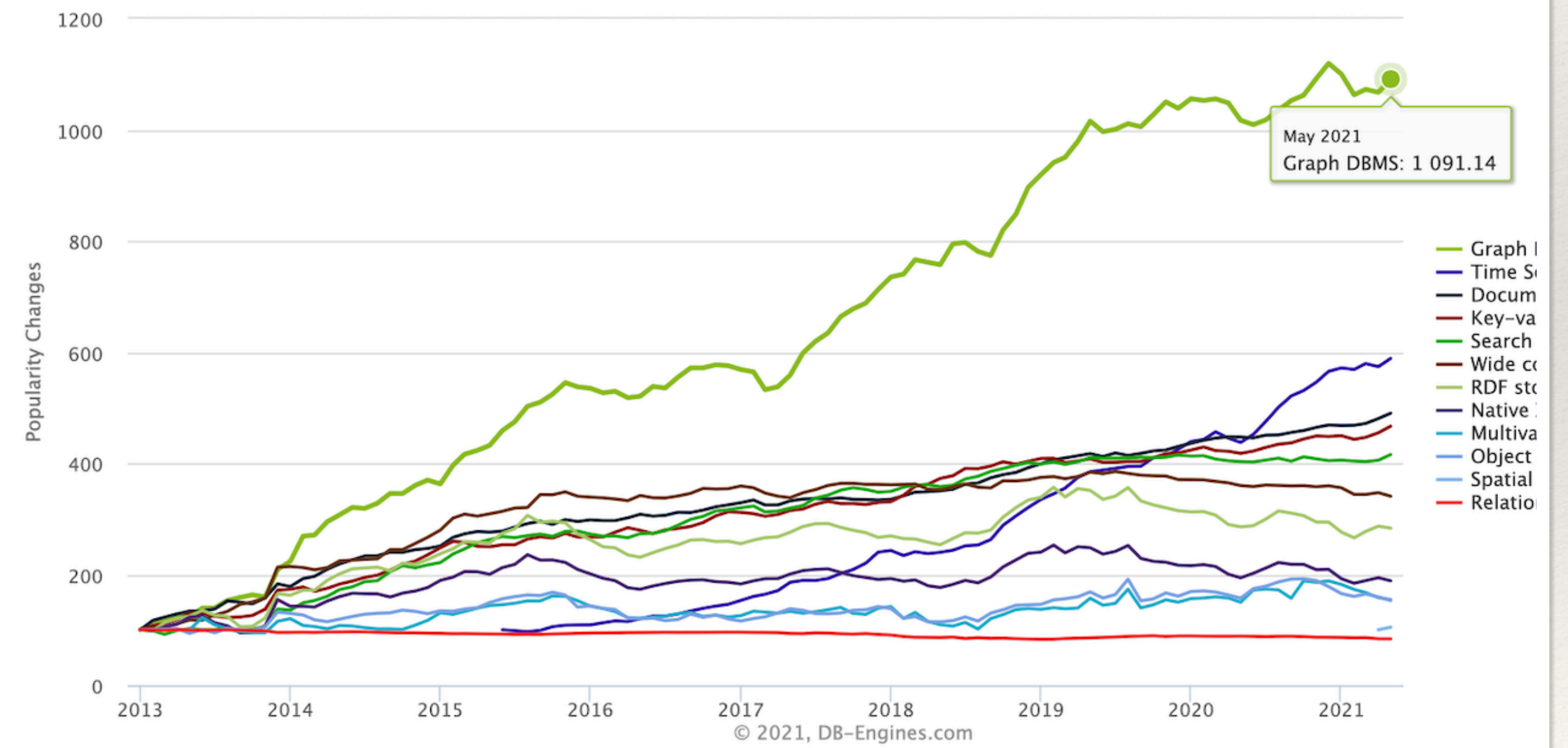
DB Model

- ❖ DBMS popularity by database model
- ❖ May. 2021
- ❖ https://db-engines.com/en/ranking_categories

Popularity changes per category, May 2021

The following charts show the historical trend of the categories' popularity. In the ranking of each month three systems per category are chosen and the average of their ranking scores is calculated. In order to comparisons, the initial value is normalized to 100.

Complete trend, starting with January 2013

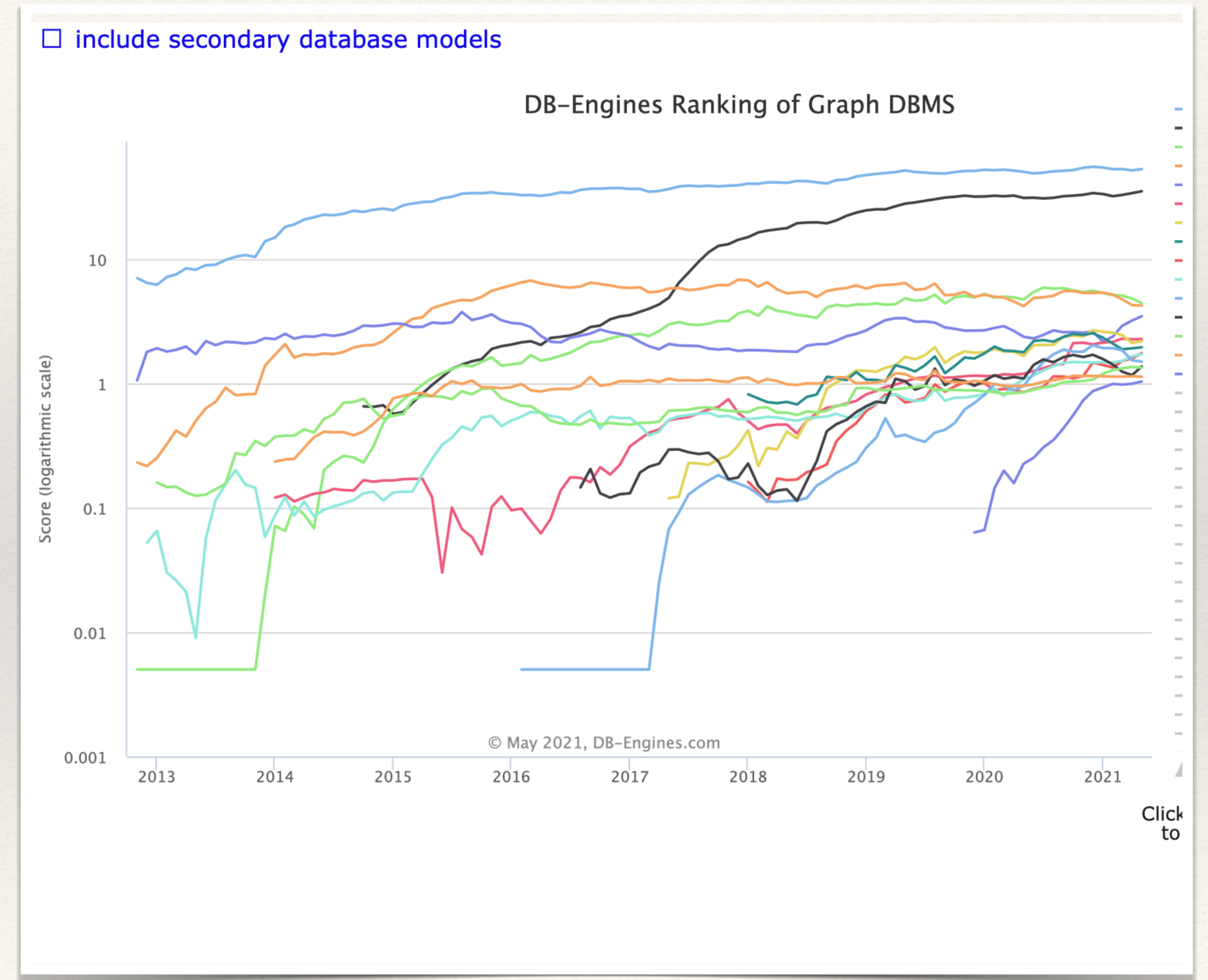


Trend of the last 24 months

グラフデータベースのランキング

❖ DB-Engines Ranking of Graph DBMS (May. 2021)

Rank	DBMS	Model	Score
1	Neo4j	Native Graph	52.23
2	Microsoft Azure Cosmos DB	Multi	34.71
3	ArangoDB	Multi	4.28
4	OrientDB	Multi	4.19
5	Virtuoso	Multi	3.44
6	GraphDB	Multi	2.25
7	JanusGraph	Graph	2.17



Source: DB-Engines, <https://db-engines.com/en/ranking/graph+dbms>

放送大学

❖ データベース ('17)

❖ 14回、データベースの発展技術 (2)

❖ グラフデータベース

❖ リレーショナルモデルとは大きく異なるデータモデルを採用するグラフデータベースについて説明する。データモデルや問い合わせ言語について述べる。

❖ データ構造とプログラミング ('18)

❖ 15回、グラフ

❖ グラフのデータ構造について学習する。グラフに関する用語と意味、そして、コンピュータにおけるグラフの表現方法、深さ優先探索 (DFS)、幅優先探索 (BFS) 等のグラフ探索アルゴリズムについて学ぶ。

シラバス参照

データベース('17)

Introduction to Databases ('17)

主任講師名: 辻 靖彦(放送大学准教授)、芝崎 順司(放送大学教授)

【講義概要】

日常生活や仕事を進める上で重要なシステムではほとんど利用されているデータベースについて、その概念、歴史、仕組みと応用を、例を交えて基本から解説する。身近なデータベースの活用例から始まり、データベースを使うとどのような所が便利なのか、データベースの意義や役割を明らかにし、もっとも利用頻度の高いデータベースであるリレーショナルデータベースの設計・管理方法を解説する。さらに、データベース技術の応用として、複雑な処理が必要になるデータモデルや近年様々なシステムで汎用的に使われているマークアップ言語であるXML、そして分散データベースなども併せて扱う。

【授業の目標】

データベースが動作する仕組み及びデータベースの設計手法を理解すると共に、現在の主流であるリレーショナルデータベースの概念を基本から理解することを目標とする。データベースの概念設計、論理設計、SQLによるデータベース操作、DBMSの基本構成、Webでの利用やNoSQLなどの応用についての知識を習得する。

【履修上の留意点】

特になし。

各回のテーマと授業内容

第1回 インTRODクシヨ ーデータベースとは何かー

データベースの基本的な概念と簡単な仕組みや事例、利点と欠点について学ぶことを通じてデータベースを概観する。

【キーワード】

データベース、データベース管理システム

執筆担当講師名: 辻 靖彦(放送大学准教授)、
芝崎 順司(放送大学准教授) スクリーンショット

メディア	テレビ
放送時間	2020年度 [第2学期](金 21:00~21:45)
単位認定試験日/時 限	2021/01/27 5時限 (14:25~15:15)
学部・院	教養学部
科目区分	('16カリ) コース科目 専門科目 情報
科目コード	1570269
ナンバリング	320
単位数	2単位
単位認定試験平均点	2019年度2学期(76.3点 2019年度1学期(70.3点)
インターネット配信	あり
改訂回	なし
改訂内容	
履修制限	

なぜ作るうと思ったのか？

- ❖ http/httpsのみで新しいBolt接続がなかった
- ❖ CSV経由の変換が面倒だった
- ❖ ところが..



Neo4j Drivers

❖ Official Neo4j Drivers

❖ Java, Javascript, Python, .NET, Go

❖ Community-Contributed Drivers

❖ .NET, Java, Spring, Neo4j-OGM, JavaScript, Python, Ruby, PHP, R, Go, Erlang/Elixir, C/C++, Clojure, Perl, Haskell

🔗 Official Neo4j Drivers

Language	Distribution	Release Notes and Changelog	Preview	Current
Java	maven	Neo4j Java Driver Wiki	n/a	4.3.1
Javascript	npm	Neo4j Javascript Driver Wiki	n/a	4.3.0
Python	pypi	Neo4j Python Driver Wiki	n/a	4.3.1
.NET	nuget	Neo4j .NET Driver Wiki	n/a	4.3.0
Go	github	Neo4j Go Driver Wiki	n/a	4.3.0

Community-Contributed Drivers

Thanks to the Neo4j contributor community, there are additionally drivers for almost every popular programming language, most of which mimic existing database driver idioms and approaches. See the dedicated pages linked below for more detail.

.NET	Java	Spring	Neo4j-OGM	JavaScript
Python	Ruby	PHP	R	Go
Erlang/Elixir	C/C++	Clojure	Perl	Haskell

LibreOffice Drivers

❖ LibreOffice Base Connections

❖ Databases

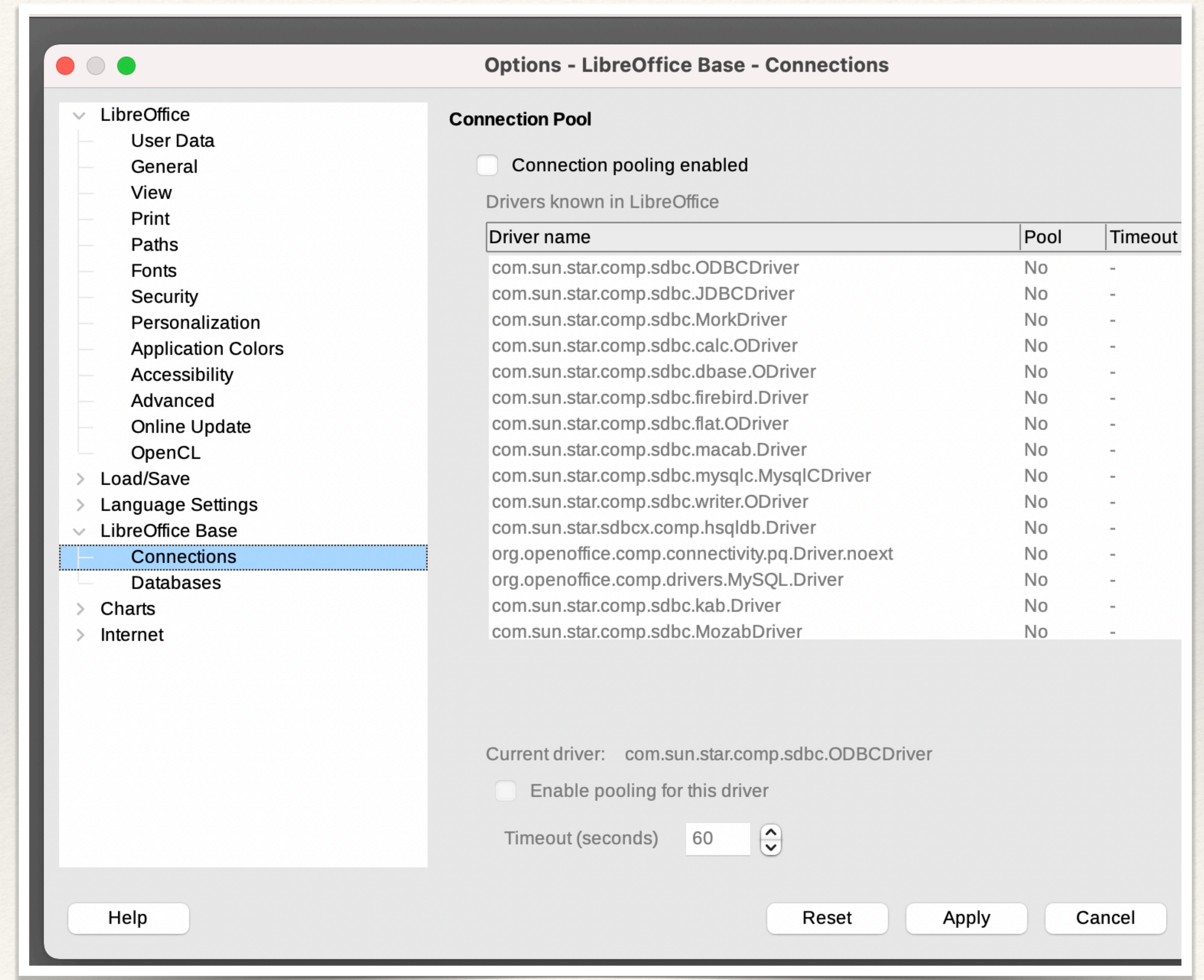
- ❖ HSQLDB Embedded
- ❖ ODBC, JDBC
- ❖ PostgreSQL, MySQL ...

❖ Office

- ❖ Spreadsheet
- ❖ Writer

❖ Addressbooks

- ❖ Mac OS X Address Book
- ❖ Thunderbird Address Book



LibreOffice Development

❖ Development

❖ Extension

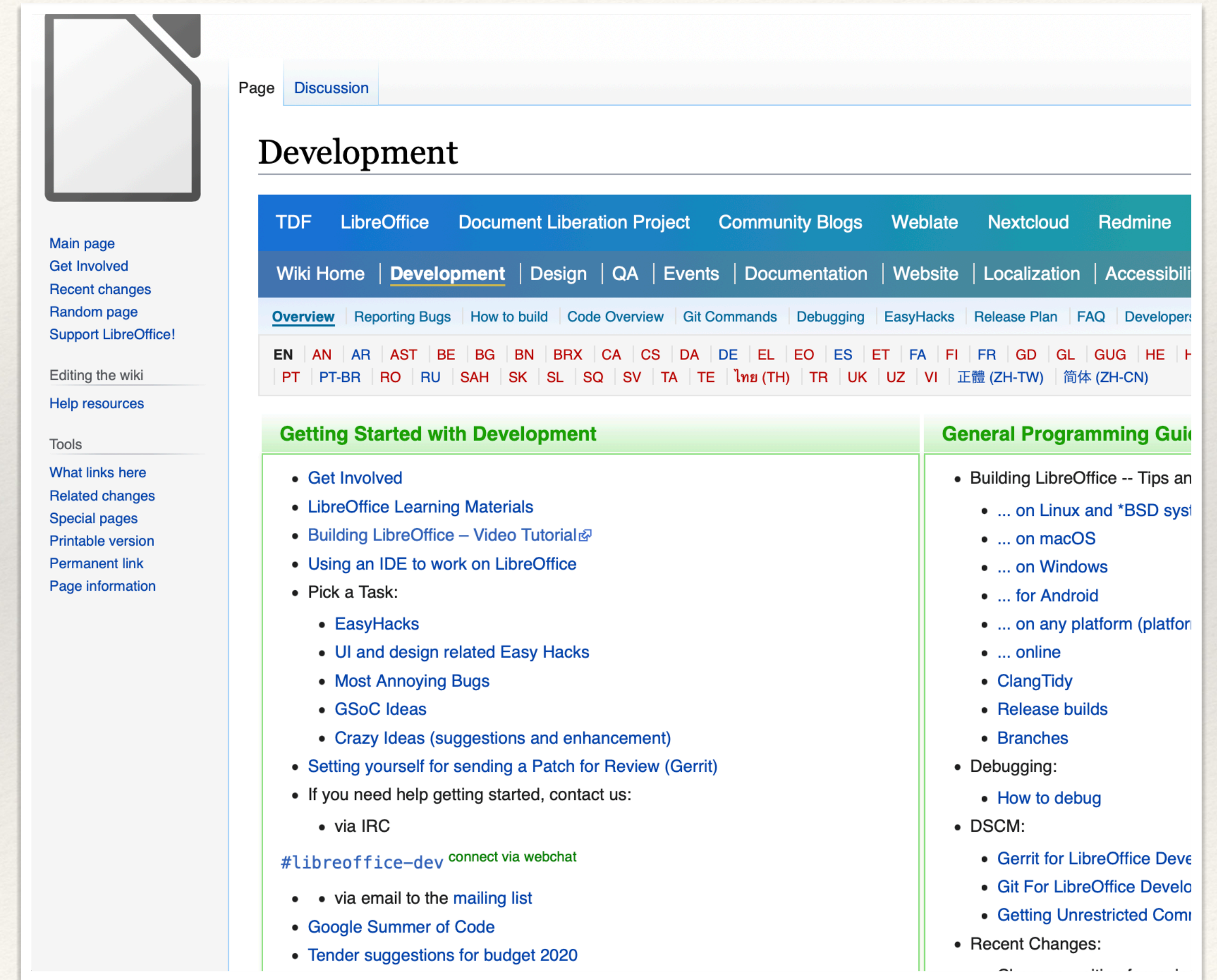
❖ Extension Development

❖ https://wiki.documentfoundation.org/Development/Extension_Development

❖ Hello World

❖ Create a Hello World LibreOffice extension

❖ https://wiki.documentfoundation.org/Development/Create_a>Hello_World_LibreOffice_extension



The screenshot shows the LibreOffice Development Wiki page. The page title is "Development" and it is part of the "Discussion" page. The page content is organized into two main columns. The left column, titled "Getting Started with Development", contains a list of links: "Get Involved", "LibreOffice Learning Materials", "Building LibreOffice – Video Tutorial", "Using an IDE to work on LibreOffice", "Pick a Task:" (with sub-links for EasyHacks, UI and design related Easy Hacks, Most Annoying Bugs, GSoC Ideas, and Crazy Ideas (suggestions and enhancement)), "Setting yourself for sending a Patch for Review (Gerrit)", and "If you need help getting started, contact us:" (with a sub-link for via IRC). Below this is a link to "#libreoffice-dev connect via webchat" and a list of links: "via email to the mailing list", "Google Summer of Code", and "Tender suggestions for budget 2020". The right column, titled "General Programming Guide", contains a list of links: "Building LibreOffice -- Tips and Tricks" (with sub-links for "... on Linux and *BSD systems", "... on macOS", "... on Windows", "... for Android", "... on any platform (platforms)", "... online", "ClangTidy", "Release builds", "Branches"), "Debugging:" (with a sub-link for "How to debug"), "DSCM:" (with sub-links for "Gerrit for LibreOffice Development" and "Git For LibreOffice Development"), and "Getting Unrestricted Commits".

Protocol

❖ Neo4j

❖ Protocol

❖ **HTTP**, 7474

❖ **HTTPS**, 7473

❖ **Bolt**, 7687

❖ specialized binary protocol

❖ TCP or WebSocket connection

❖ No http overhead

Bolt Protocol and Neo4j Compatibility

Neo4j Version	Bolt 1	Bolt 2	Bolt 3	Bolt 4.0	Bolt 4.1	Bolt 4.2
3.0	x					
3.1	x					
3.2	x					
3.3	x					
3.4	(x)	x				
3.5		(x)	x			
4.0			(x)	x		
4.1			(x)	(x)	x	
4.2			(x)	(x)	(x)	x

The (x) denotes that support could be removed in next version of Neo4j.

Neo4j Driver API

Neo4j Contrib

❖ GitHub

❖ <https://github.com/neo4j-contrib>

❖ Repositories

❖ 151

❖ neo4j-jdbc

❖ Pinned repositories

❖ neo4j-etl

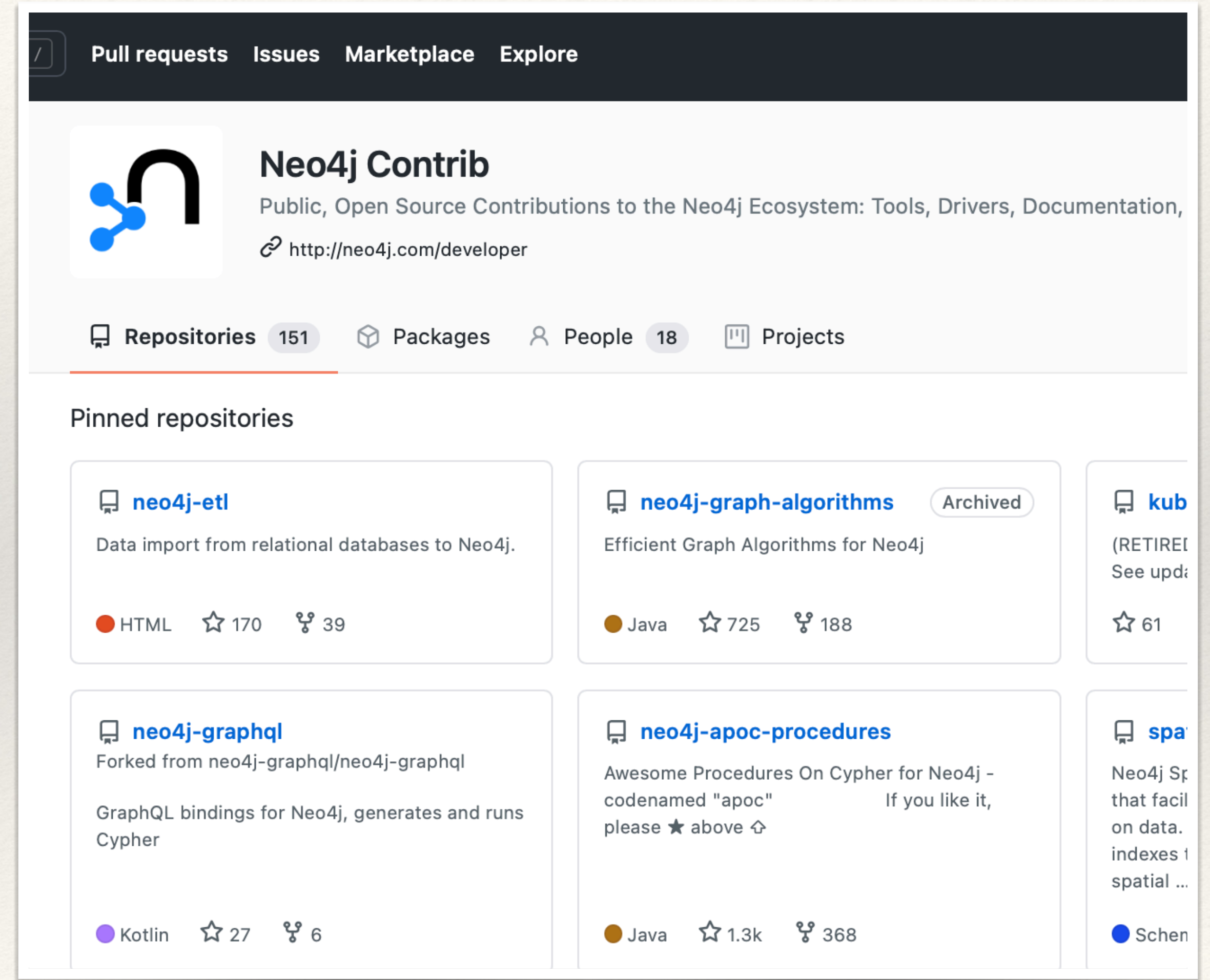
❖ neo4j-graph-algorithms

❖ kubernetes-neo4j

❖ neo4j-graphql

❖ neo4j-apoc-procedures

❖ spatial



The screenshot shows the GitHub profile for Neo4j Contrib. At the top, there are navigation links for Pull requests, Issues, Marketplace, and Explore. The profile header includes the Neo4j logo, the name 'Neo4j Contrib', and a description: 'Public, Open Source Contributions to the Neo4j Ecosystem: Tools, Drivers, Documentation, http://neo4j.com/developer'. Below the header, there are statistics for Repositories (151), Packages, People (18), and Projects. The 'Pinned repositories' section displays six repository cards:

- neo4j-etl**: Data import from relational databases to Neo4j. 170 stars, 39 forks. Language: HTML.
- neo4j-graph-algorithms**: Efficient Graph Algorithms for Neo4j. 725 stars, 188 forks. Language: Java. Status: Archived.
- kub**: (RETIRED) See update. 61 stars.
- neo4j-graphql**: Forked from neo4j-graphql/neo4j-graphql. GraphQL bindings for Neo4j, generates and runs Cypher. 27 stars, 6 forks. Language: Kotlin.
- neo4j-apoc-procedures**: Awesome Procedures On Cypher for Neo4j - codenamed "apoc". If you like it, please ★ above ↗. 1.3k stars, 368 forks. Language: Java.
- spa**: Neo4j Spatial Indexes that facilitate on data. indexes 1 spatial ... 368 forks. Language: Schen.

Source: Neo4j Contrib <https://github.com/neo4j-contrib>

Seabolt

❖ Seabolt

❖ <https://github.com/neo4j-drivers/seabolt>

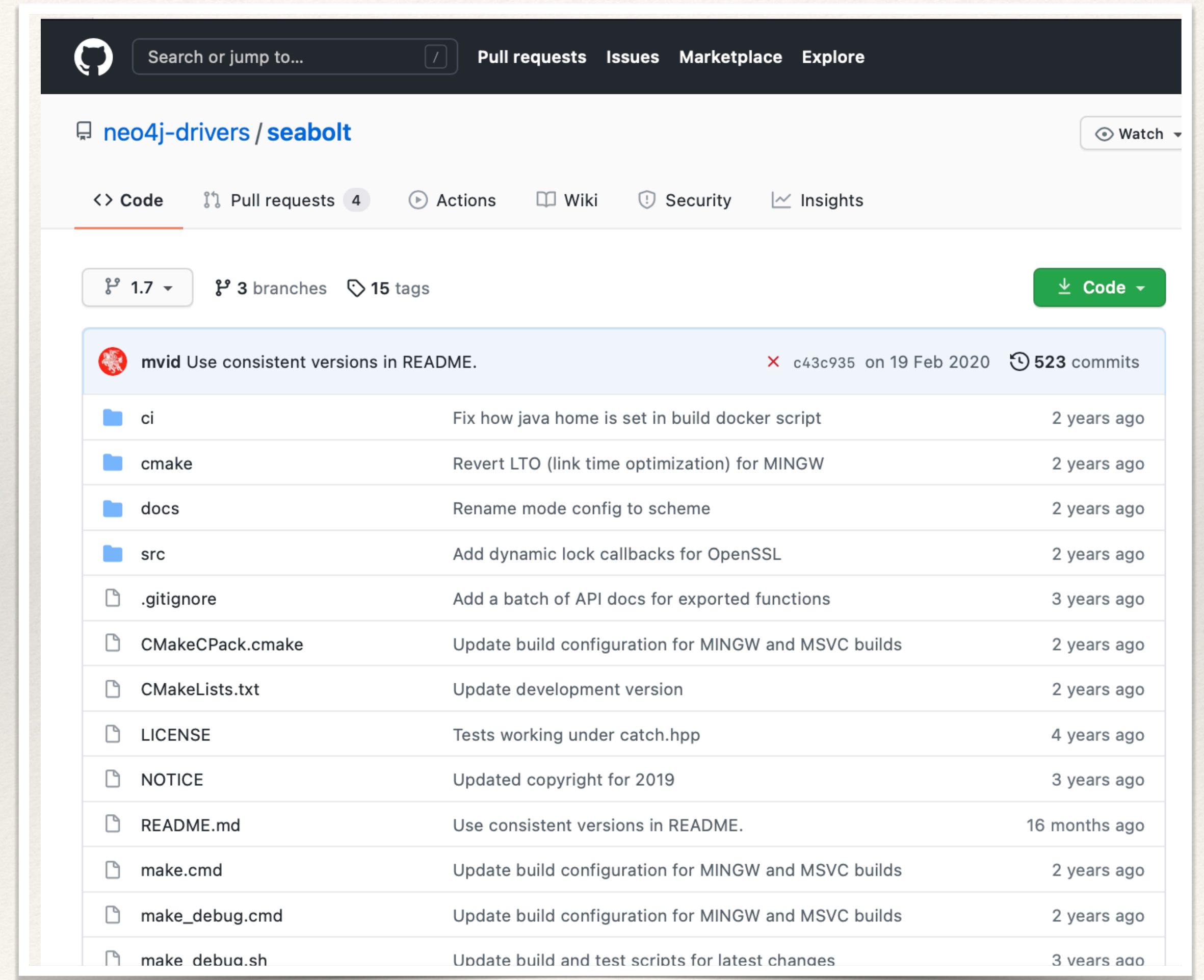
❖ C Connector Library

❖ Bolt protocol

❖ V1.7.4

❖ Latest release

❖ 9 May 2019



neo4j-drivers / seabolt

Code Pull requests 4 Actions Wiki Security Insights

1.7 3 branches 15 tags Code

mvid Use consistent versions in README. c43c935 on 19 Feb 2020 523 commits

ci	Fix how java home is set in build docker script	2 years ago
cmake	Revert LTO (link time optimization) for MINGW	2 years ago
docs	Rename mode config to scheme	2 years ago
src	Add dynamic lock callbacks for OpenSSL	2 years ago
.gitignore	Add a batch of API docs for exported functions	3 years ago
CMakeCPack.cmake	Update build configuration for MINGW and MSVC builds	2 years ago
CMakeLists.txt	Update development version	2 years ago
LICENSE	Tests working under catch.hpp	4 years ago
NOTICE	Updated copyright for 2019	3 years ago
README.md	Use consistent versions in README.	16 months ago
make.cmd	Update build configuration for MINGW and MSVC builds	2 years ago
make_debug.cmd	Update build configuration for MINGW and MSVC builds	2 years ago
make_debua.sh	Update build and test scripts for latest changes	3 years ago

Source: Neo4j <https://github.com/neo4j-drivers/seabolt>

neo4j-jdbc

❖ GitHub

❖ <https://github.com/neo4j-contrib/neo4j-jdbc>

❖ Neo4j-JDBC

❖ **3.5.2** (2021-05-02)

❖ <https://github.com/neo4j-contrib/neo4j-jdbc/releases/tag/3.5.2>

❖ Neo4j 3.4.x - 3.5.x

❖ Neo4j Driver 1.7.5

❖ Java 8

❖ **4.0.1** (2020-07-13)

❖ <https://github.com/neo4j-contrib/neo4j-jdbc/releases/tag/4.0.1>

❖ Neo4j 3.5.x - 4.x

❖ Neo4j Driver 4.0.2

❖ Java 11

Search or jump to... Pull requests Issues Marketplace Explore

neo4j-contrib / neo4j-jdbc
forked from lorusba/neo4j-jdbc

Watch 28 Star 101

<> Code Issues 28 Pull requests 4 Actions Projects 1 Security Insights

4.0 13 branches 18 tags Code

This branch is 99 commits ahead of lorusba:3.2. Contribute Fetch upstream

fbiville Migrate Bolt JDBC driver to transaction functions ... 18df1ec on 25 Mar 424 commits

.github/workflows	Replace Travis CI with Github Actions	5 months ago
docs	included matlab.adoc as part of the documentation	3 years ago
neo4j-jdbc-bolt	Migrate Bolt JDBC driver to transaction functions	3 months ago
neo4j-jdbc-driver	bump version to 4.0.1	12 months ago
neo4j-jdbc-examples	bump version to 4.0.1	12 months ago
neo4j-jdbc-http	Implement DatabaseMetadata#getSystemFunctions for HTTP d...	4 months ago
neo4j-jdbc	Implement DatabaseMetadata#getSystemFunctions for HTTP d...	4 months ago
.gitignore	Set JDK to 11 (#243)	7 months ago
README.adoc	Add CI badge (#251)	5 months ago
docs.sh	Pre Release 3.3.1 - Introducing BOLT+ROUTING Protocol (#130)	3 years ago
index.html	included matlab.adoc as part of the documentation	3 years ago
license.txt	fixed license.txt	5 years ago
neo4j-jdbc-idea-settings.jar	CHANGED LICENSE TO APACHE 2.0	5 years ago
pom.xml	Implement DatabaseMetadata#getSystemFunctions for HTTP d...	4 months ago

About
Neo4j JDBC driver for 4.x with BOLT protocol
neo4j-contrib.github.io
java integration neo4j jdbc driver neo4j business-intelligence
Readme
Apache-2.0 License

Releases 18
3.5.2 Latest on 2 Mar
+ 17 releases

Environments 1
github-pages

Languages
Java 90.8% HTML

Source: Neo4j Contrib <https://github.com/neo4j-contrib/neo4j-jdbc>

Base

❖ Base Database



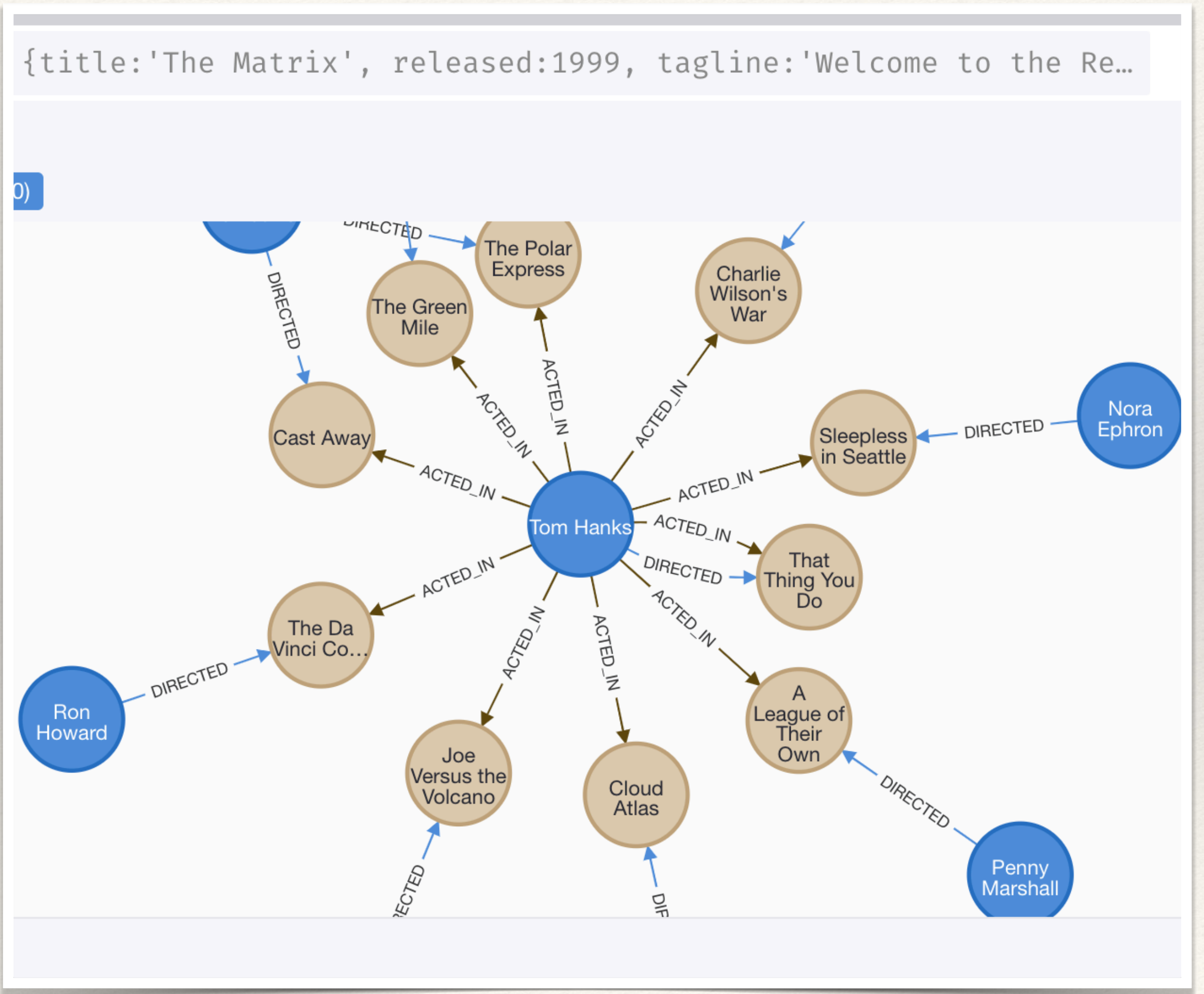
The screenshot shows the LibreOffice website's 'Base' page. At the top, there is a green navigation bar with the LibreOffice logo and 'The Document Foundation' text. To the right of the logo are menu items: DISCOVER, DOWNLOAD, GET HELP, IMPROVE IT, and EVENTS. In the top right corner, there are language options: English | 中文 (简). Below the navigation bar, a breadcrumb trail reads 'Discover / Base'. The main heading is 'Base'. Below the heading is a large blue-tinted image of a hexagonal grid pattern. Underneath the image, there are two sections. The first section has a green heading 'A powerful manager for all databases' and a green minus sign icon. The second section has a green heading 'A fast and flexible database' and a green plus sign icon. The text between the sections describes Base as a full-featured desktop database front end, designed to meet the needs of a broad array of users, supporting various database engines like MySQL/MariaDB, Adabas D, MS Access, and PostgreSQL, as well as JDBC and ODBC standard drivers.

Source: Neo4j Contrib <https://github.com/neo4j-contrib/neo4j-jdbc>

Movie Database

❖ Database

- ❖ (:Person)-[:ACTED_IN]->(:Movie)
- ❖ (:Person)-[:DIRECTED]->(:Movie)
- ❖ (:Person)-[:FOLLOWS]->(:Movie)

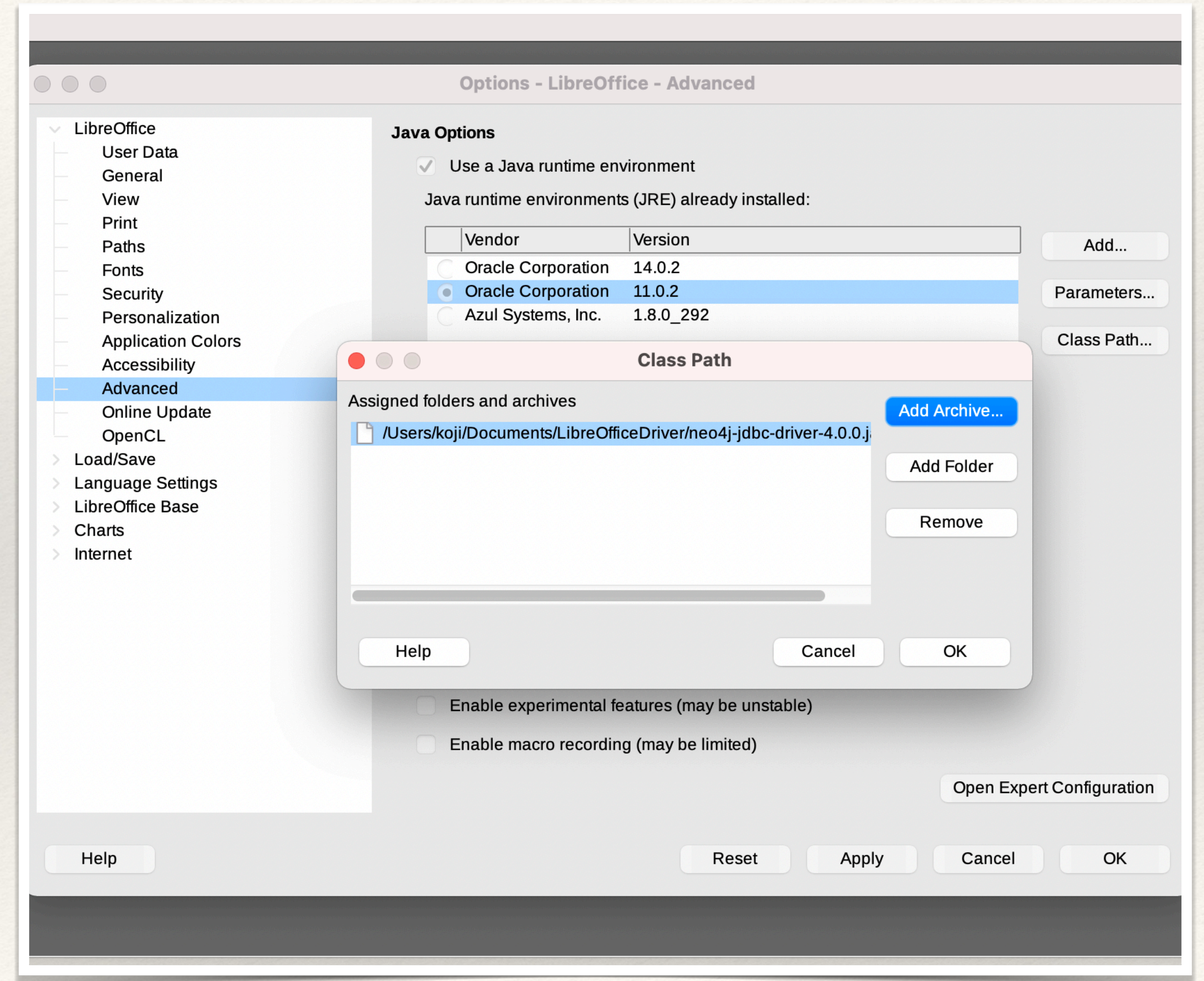


Movie Database

❖ Add Driver

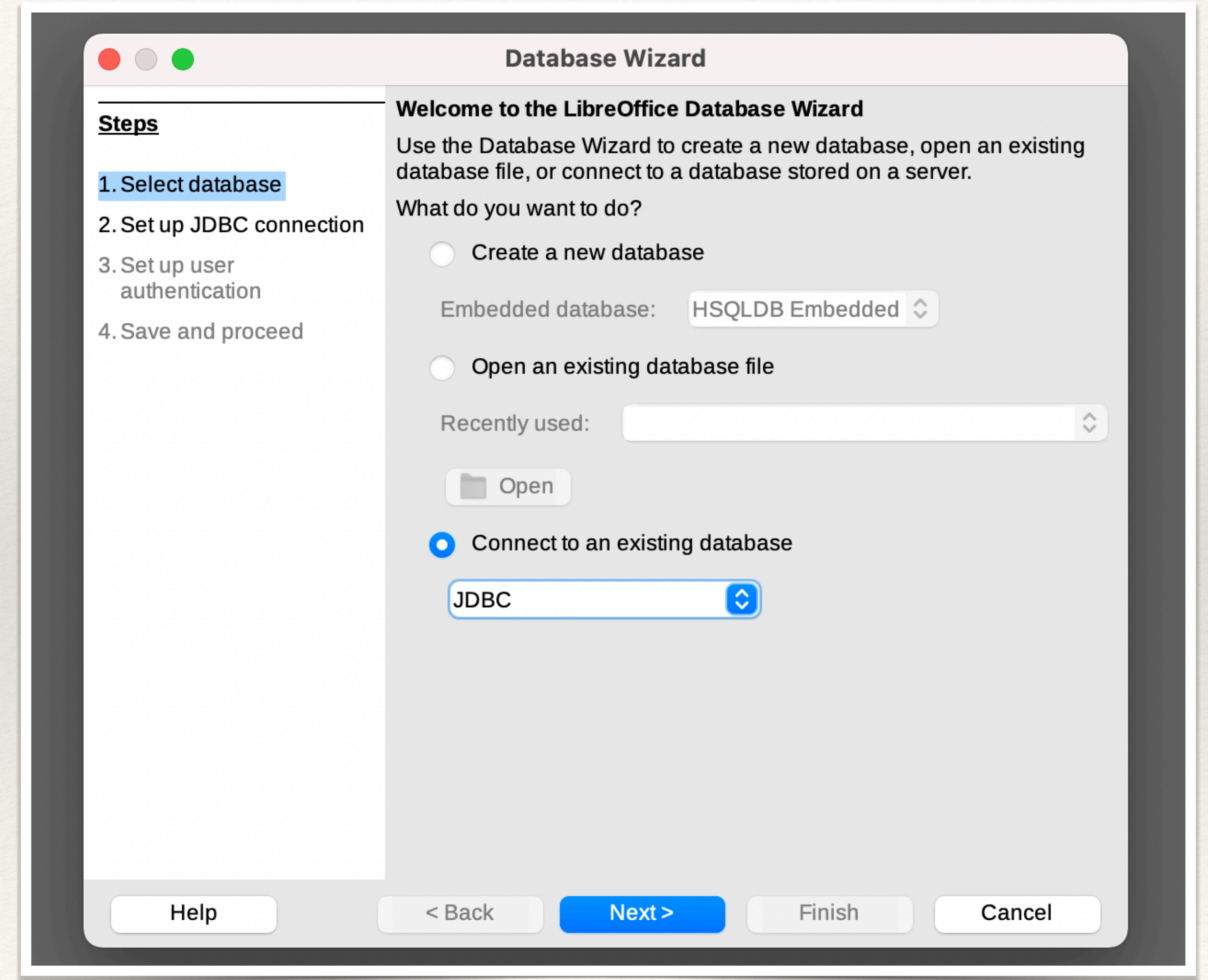
❖ LibreOffice > Advanced

❖ Class Path...



Base / Database Wizard 1

- ❖ 1. Select database
 - ❖ Connect to an existing database
 - ❖ JDBC



Base / Database Wizard 2

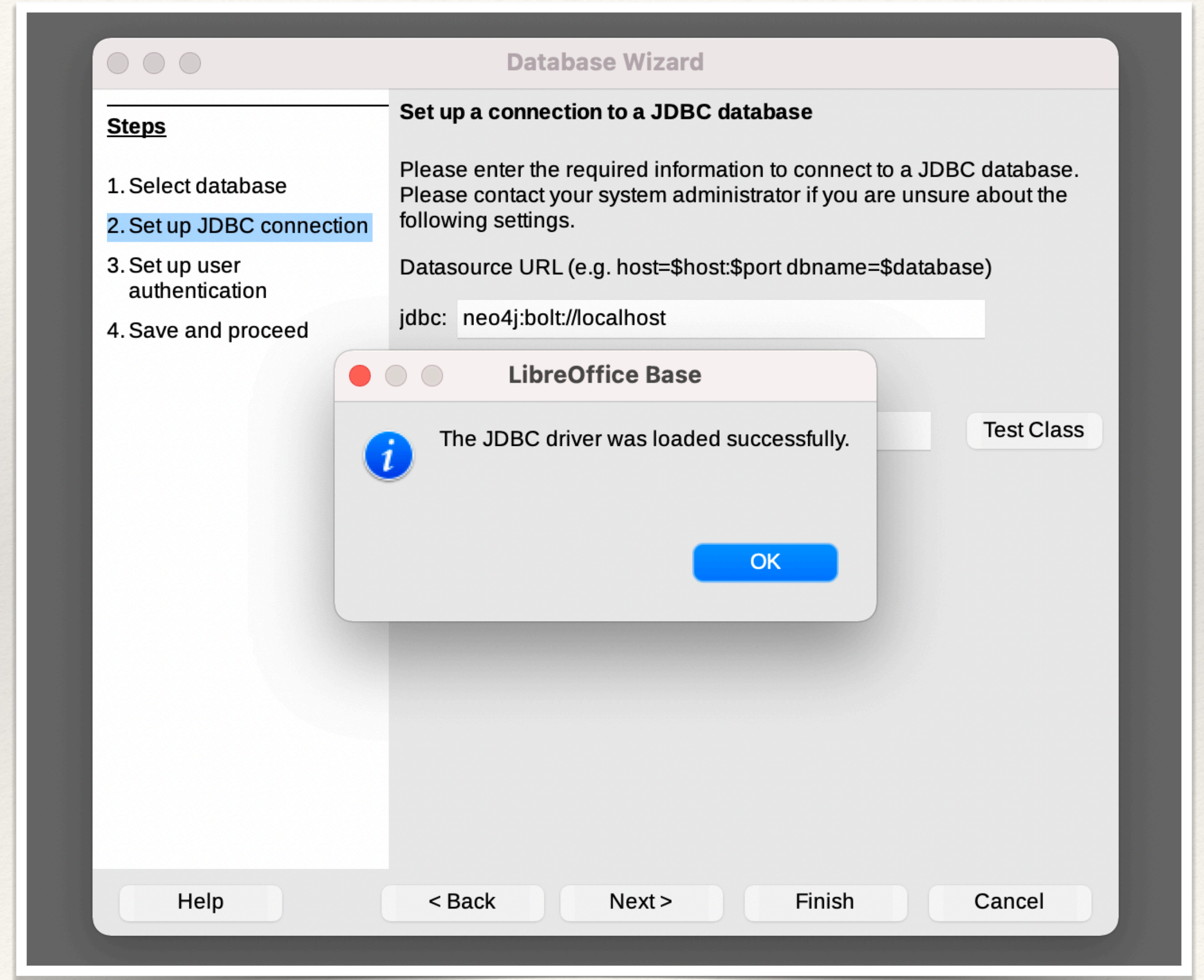
❖ 2. Setup JDBC connection

❖ JDBC

❖ `jdbc:neo4j:bolt://localhost`

❖ JDBC driver class

❖ `org.neo4j.jdbc.bolt.BoltDriver`



Base / Database Wizard 3

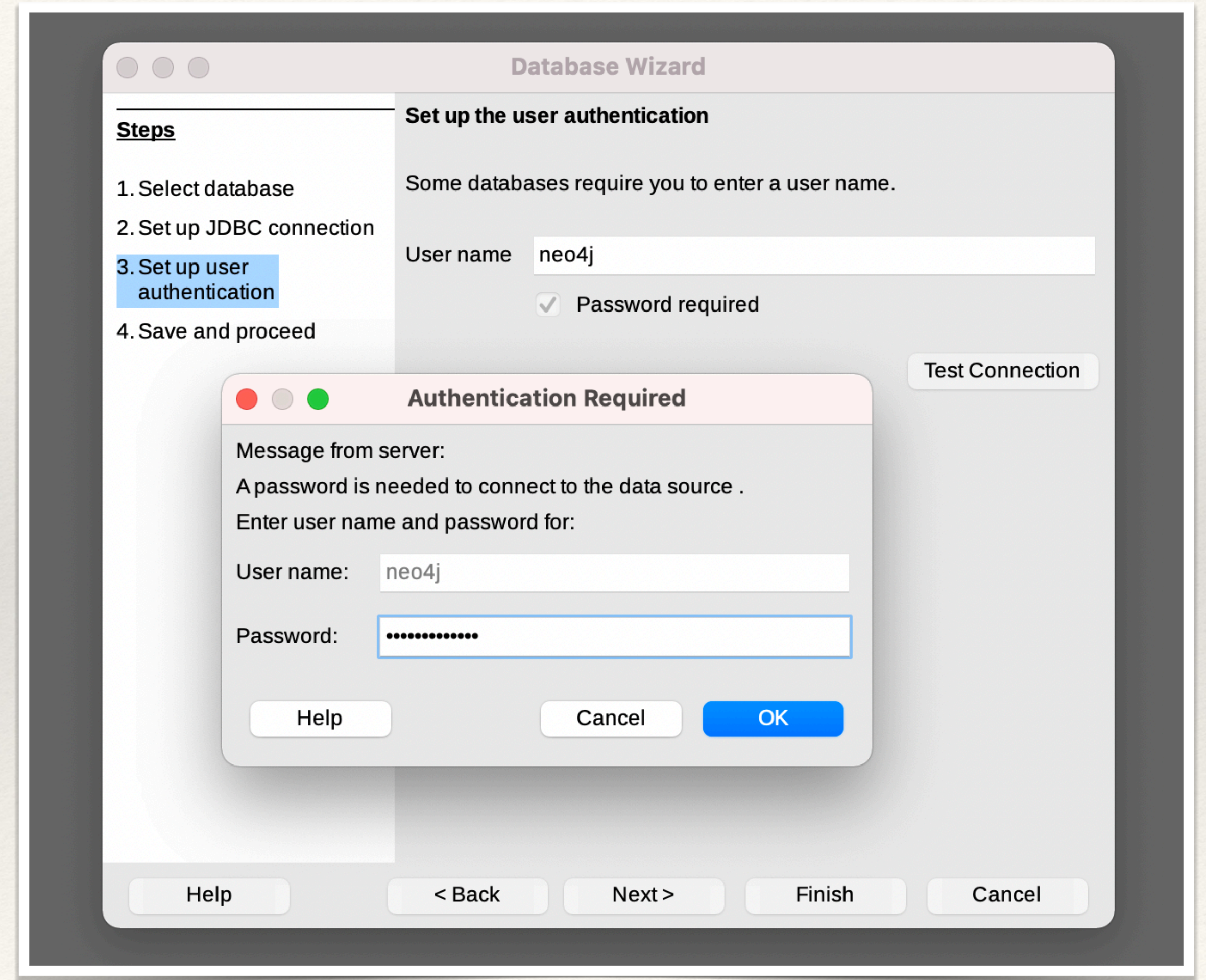
❖ 3. Setup user authentication

❖ User name

❖ Neo4j

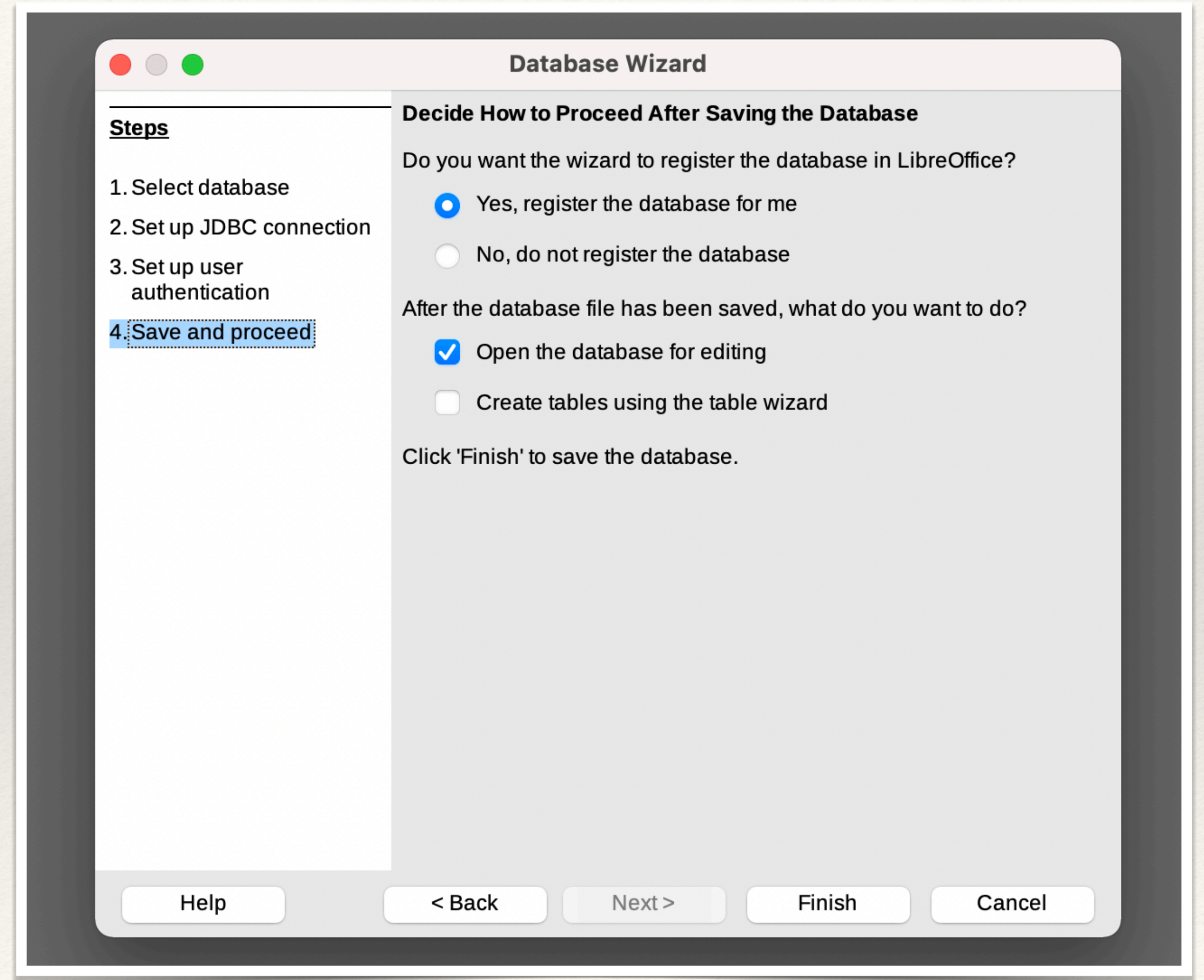
❖ Password required

❖ Check



Base / Database Wizard 4

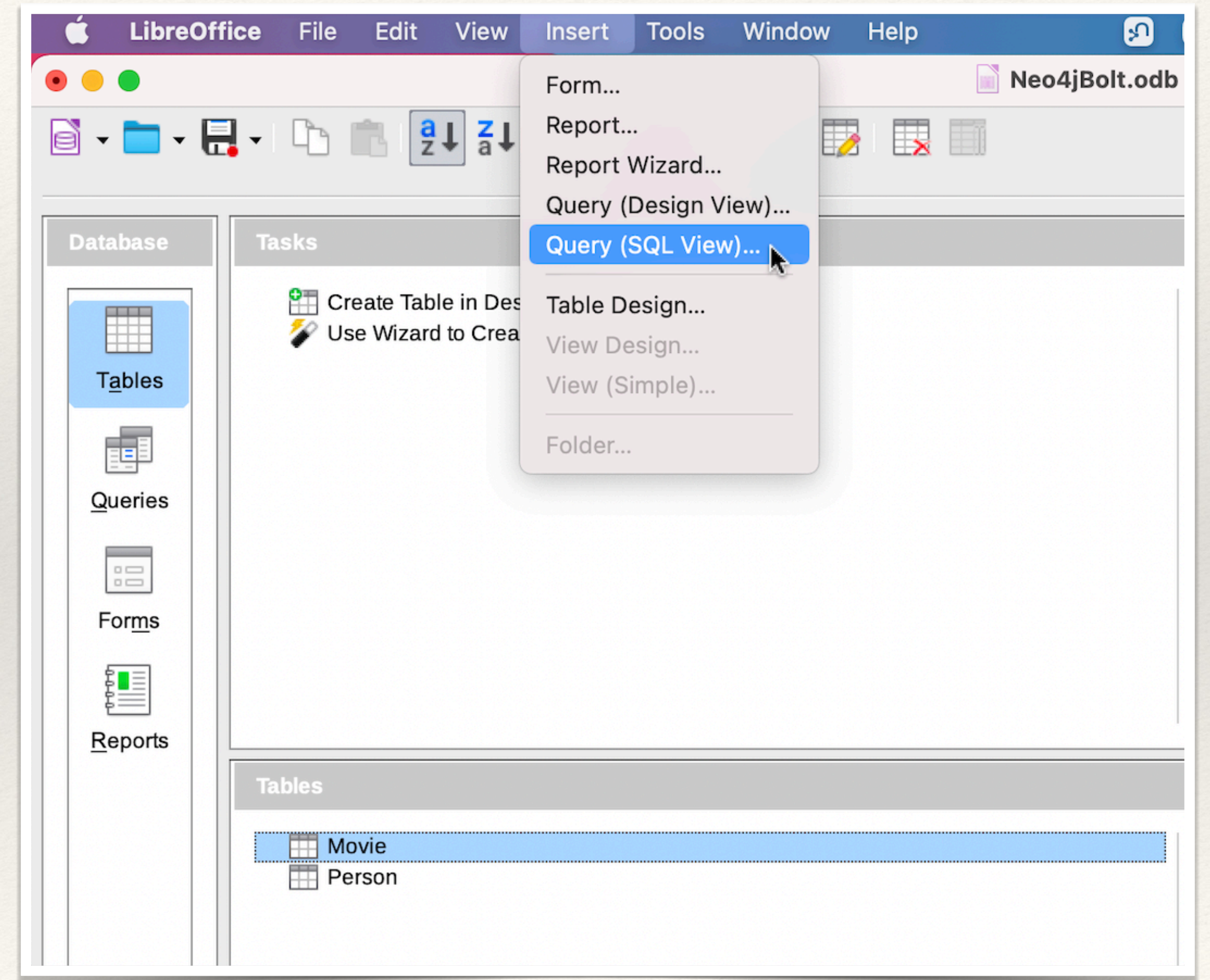
❖ 4. Save and proceed



Base / Query

❖ Query

❖ Insert > Query (SQL View)...



Base / Query / Person

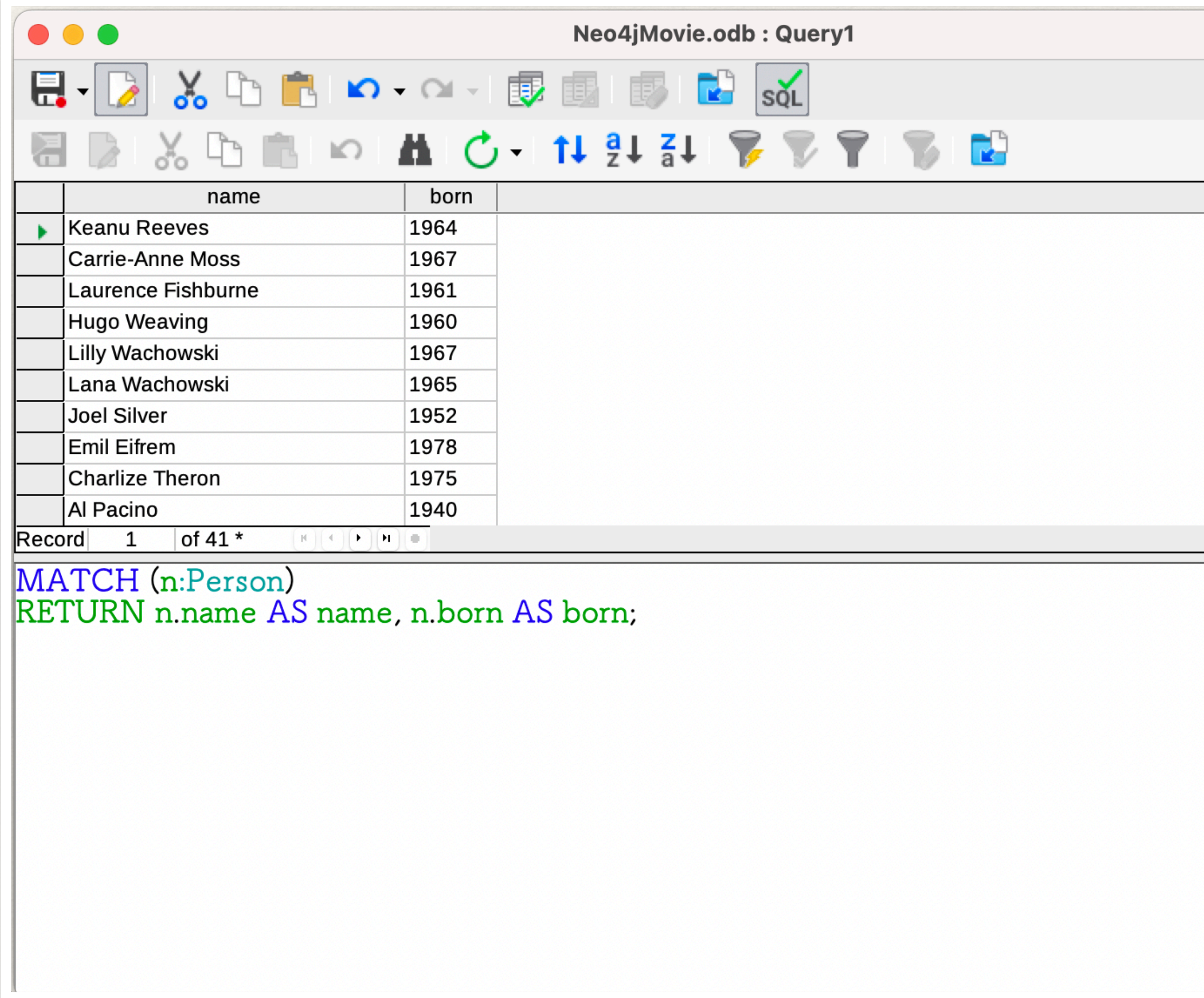
- ❖ Run SQL command directory

- ❖ Select

- ❖ Cypher

- ❖ MATCH (n:Person)

- RETURN n.name AS name,
n.born AS born;



The screenshot shows the Neo4jMovie.odb : Query1 interface. The top toolbar includes icons for file operations, navigation, and execution. Below the toolbar is a table with two columns: 'name' and 'born'. The table contains the following data:

	name	born
▶	Keanu Reeves	1964
	Carrie-Anne Moss	1967
	Laurence Fishburne	1961
	Hugo Weaving	1960
	Lilly Wachowski	1967
	Lana Wachowski	1965
	Joel Silver	1952
	Emil Eifrem	1978
	Charlize Theron	1975
	Al Pacino	1940

Record 1 of 41 * | Navigation icons

```
MATCH (n:Person)
RETURN n.name AS name, n.born AS born;
```

Base / Query / Movie

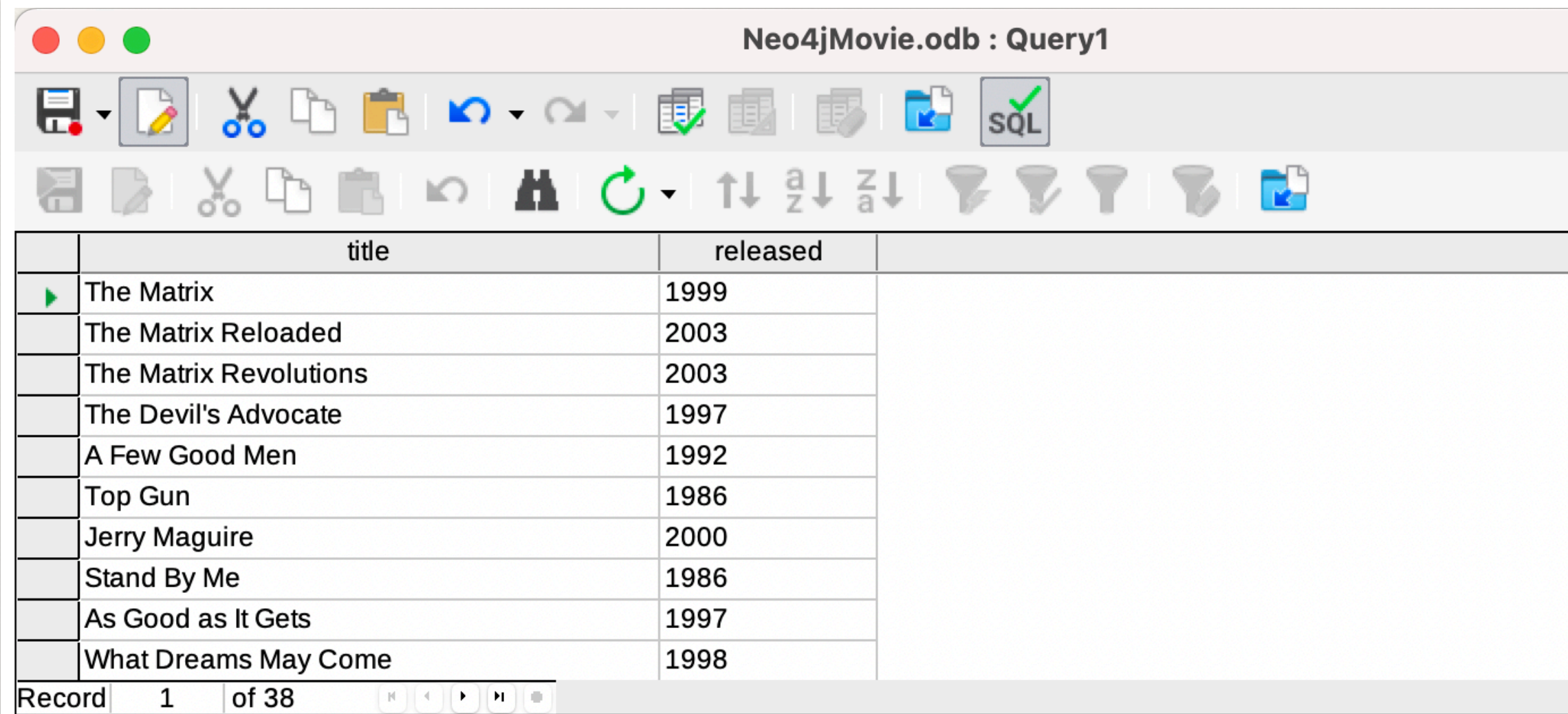
- ❖ Run SQL command directory

- ❖ Select

- ❖ Cypher

- ❖ MATCH (n:Movie)

- RETURN n.title AS title,
n.released as released;



The screenshot shows a Neo4j database query interface. The title bar reads "Neo4jMovie.odb : Query1". The interface includes a toolbar with various icons for file operations and a "SQL" button. Below the toolbar is a table with two columns: "title" and "released". The table contains the following data:

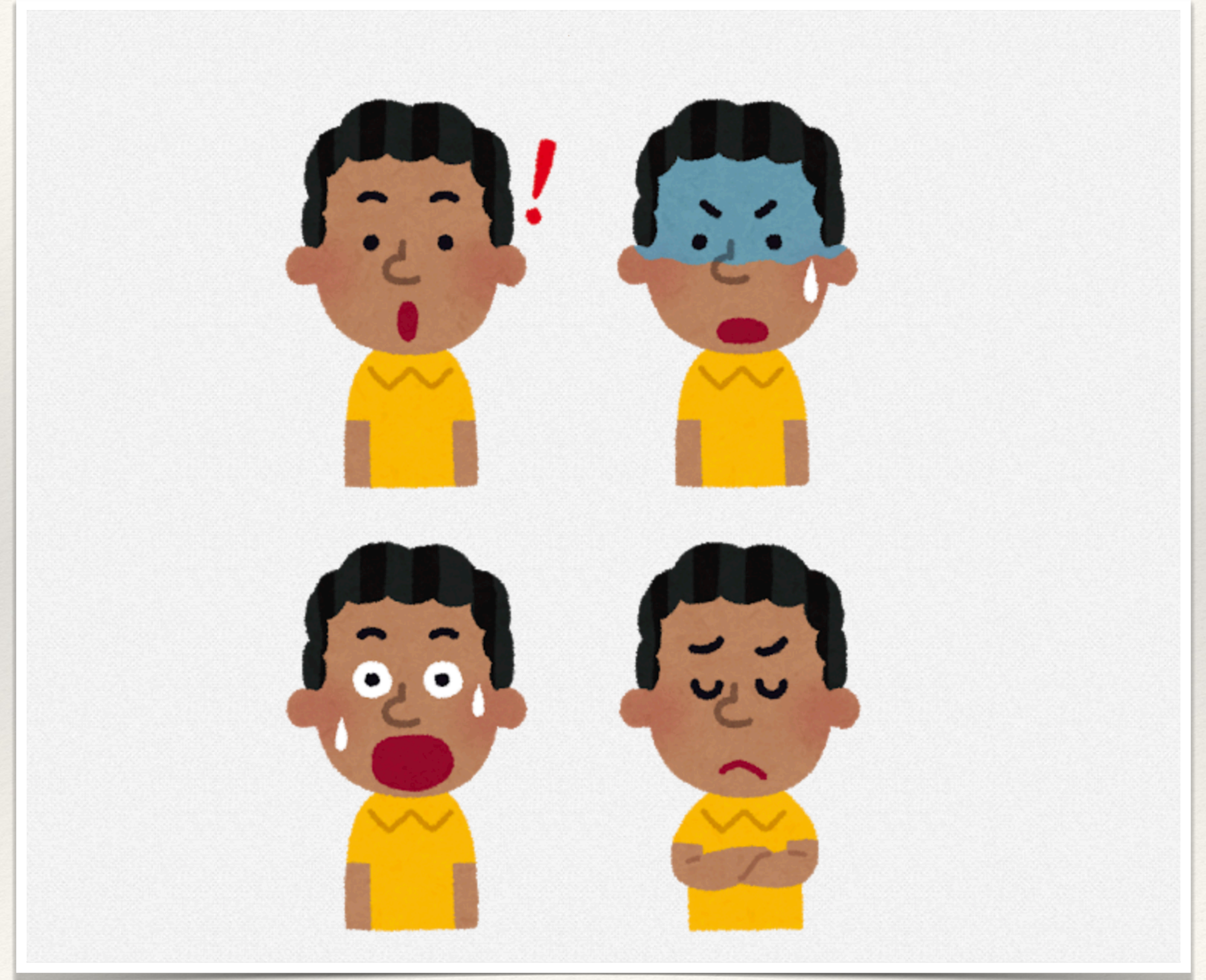
	title	released
▶	The Matrix	1999
	The Matrix Reloaded	2003
	The Matrix Revolutions	2003
	The Devil's Advocate	1997
	A Few Good Men	1992
	Top Gun	1986
	Jerry Maguire	2000
	Stand By Me	1986
	As Good as It Gets	1997
	What Dreams May Come	1998

Below the table, the status bar indicates "Record 1 of 38". The query editor at the bottom contains the following Cypher query:

```
MATCH (n:Movie)
RETURN n.title AS title, n.released as released;
```

Problem

- ❖ バージョンが微妙
 - ❖ Neo4j 3.5系
 - ❖ Java 8
 - ❖ Neo4j 4系
 - ❖ Java 11
- ❖ Baseが何かとSQLを発行する



ありがとうございました

❖ ご質問があれば、koji@annoura.com まで