

Базы данных

Введение

Арьков Валентин Юльевич

- профессор кафедры АСУ
- кабинет 6-215А
- приемная каф. АСУ 6-322

<https://github.com/Valentin-Arkov>

Email: arkov.vyu@ugatu.su

Классификация БД

- SQL
 - Табличные/реляционные
- NoSQL (Not only SQL)
 - Иерархические (JSON)
 - Сетевые
- MongoDB
- Redis
- ...

Машинный перевод сайта

The image displays two browser windows side-by-side, illustrating the process of machine translation for a website. Both windows show the same URL: `cs50.harvard.edu` and the page title: `Week 0 Querying - CS50's Introduction to Databases with SQL`.

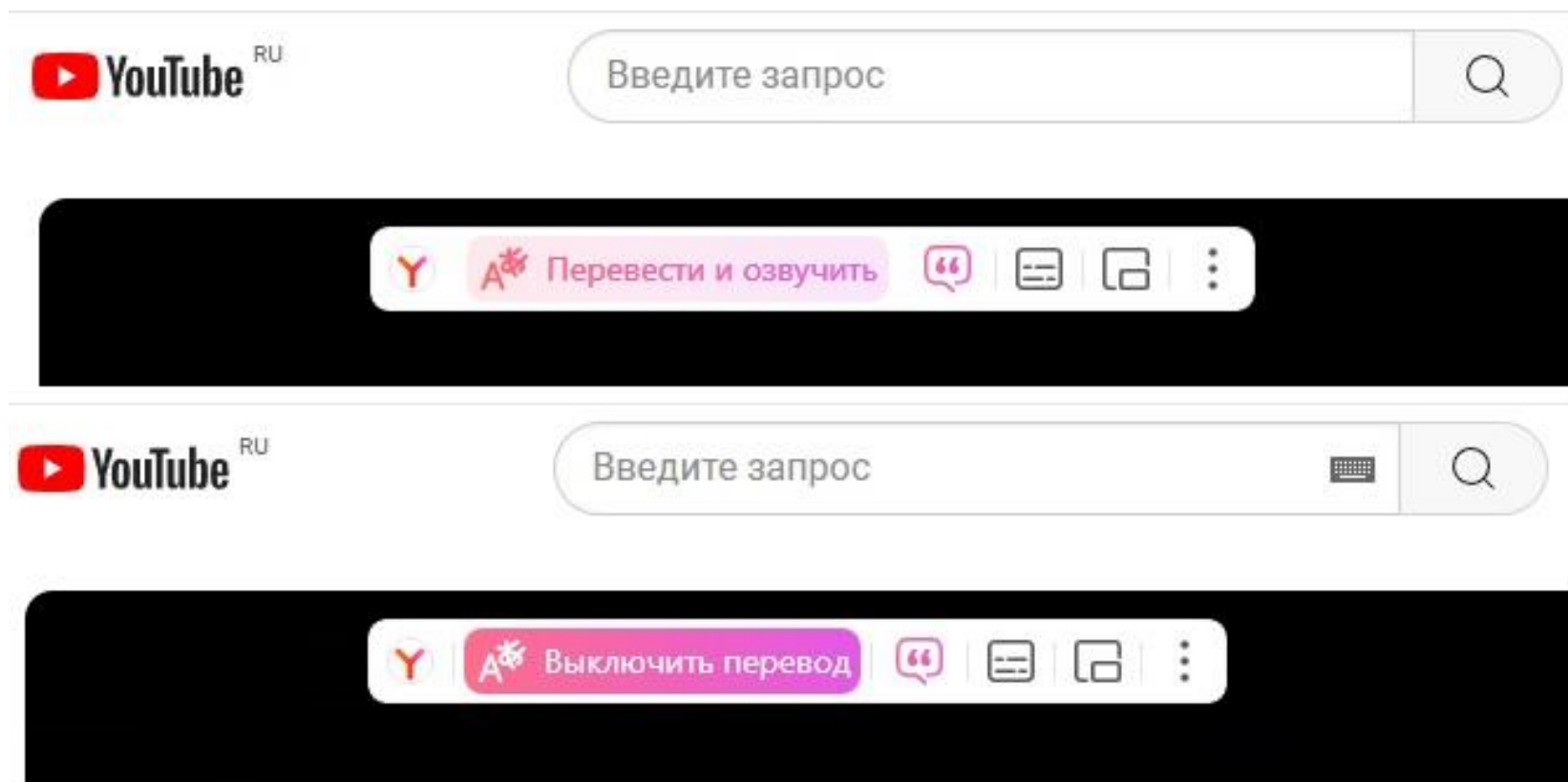
Top Window (Original English Page):

- Left Sidebar:** Contains the text "CS50's Introduction to Databases with SQL", "OpenCourseWare", a "Donate" button with an external link icon, and the name "Carter Zenke".
- Main Content:** The heading is "Week 0 Querying". Below it, a list of topics is shown: "Tables. Databases. Database Management Systems. SQL. SQLite. SELECT. LIMIT. OFFSET. WHERE. Comparisons. NOT. NULL. Pattern Matching. LIKE. Compound Conditions. Range Conditions. Ordering. Aggregate Functions. ROUND. DISTINCT."
- Browser UI:** The address bar shows the URL. A pink button labeled "перевести" (translate) is visible in the top right corner of the browser window.

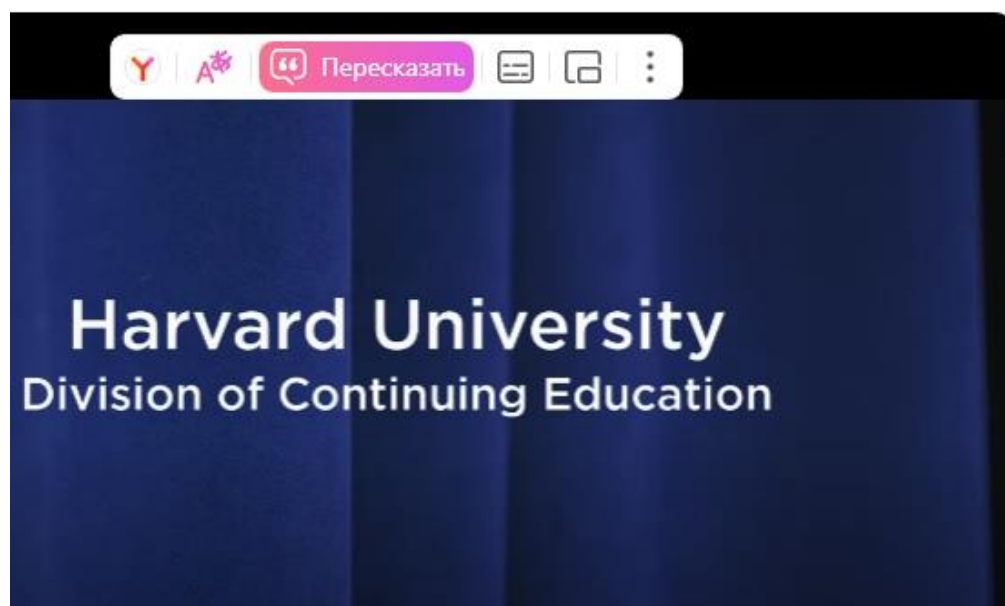
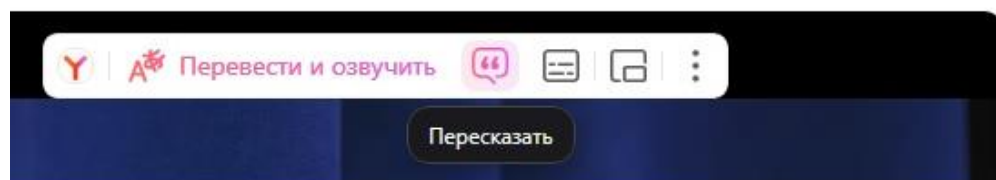
Bottom Window (Machine Translated Russian Page):

- Left Sidebar:** The text is translated into Russian: "Введение CS50 в базы данных с использованием SQL", "Программное обеспечение OpenCourseWare".
- Main Content:** The heading is translated to "Неделя 0 Выполнение запросов". The list of topics is translated: "Таблицы. Базы данных. Системы управления базами данных. SQL. SQLite. SELECT. LIMIT. OFFSET. WHERE. Сравнения. NOT. NULL. Сопоставление с образцом. LIKE. Составные условия. Условия диапазона. Упорядочивание. Агрегатные функции. ROUND. DISTINCT."
- Browser UI:** The address bar shows the same URL. The pink button is now labeled "переведено" (translated).

Машинный перевод видео



Краткое содержание видео



Краткий пересказ видео
сделан нейросетью YandexGPT

CS50 SQL - Лекция 1 - Относящаяся

00:16 Введение в базы данных с
использованием SQL

Видео начинается с обзора базы данных, содержащей несколько таблиц, представляющих авторов, книги, издателей и другие элементы книжной индустрии.

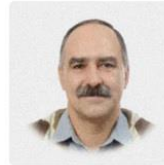
Обсуждаются различные типы отношений между таблицами, включая "один к одному", "один ко многим" и "многие ко многим".

Harvard CS50 SQL: Certificate



Harvard CS50 SQL: Gradebook

CS50 SQL



Gradebook for Valentin-Arkov

edX Account: valentinarkov

View submissions on <https://submit.cs50.io/courses/1997>

Congratulations! You've completed CS50 SQL! [Click here](#) for your CS50 Certificate. If you signed up for a [verified certificate](#) from edX, it should appear at <https://edx.org/dashboard> within 30 days. Email certificates@cs50.harvard.edu with any questions!

Current Progress

8 of 8 weeks complete.

0 Week 0

Complete Cyberchase, 36 Views or Normals, and Players.

- ✓ Cyberchase
- ✓ 36 Views or Normals
- ✓ Players

■ ■ ■

FP Final Project

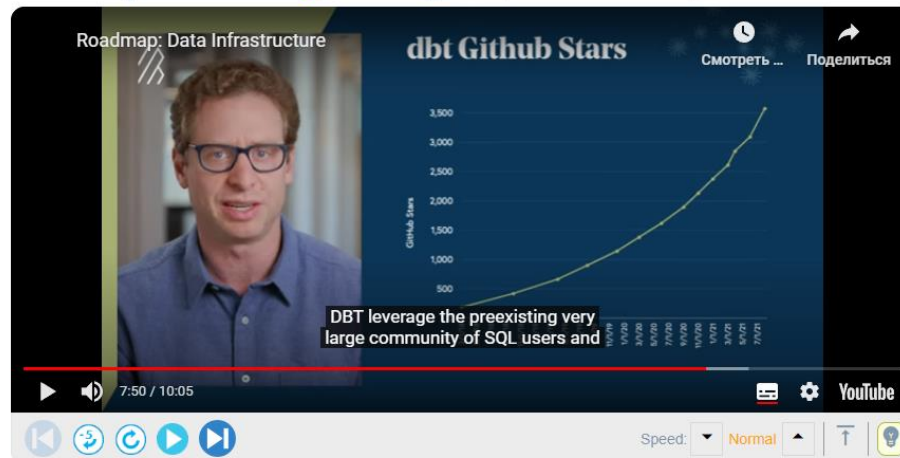
- ✓ Final Project

Произношение носителей

- YouGlish.com = Youtube + English



How to pronounce **SQL** in English (1 out of 4883):



DBT leverage the preexisting very large
community of **SQL** users and

Консультация чат-бота

- <https://www.perplexity.ai/>

Your role is an experienced IT specialist. Please could you explain to a beginner how to pronounce "SQL" and why it is done this way.

✱ Answer

How to Pronounce "SQL" and Why

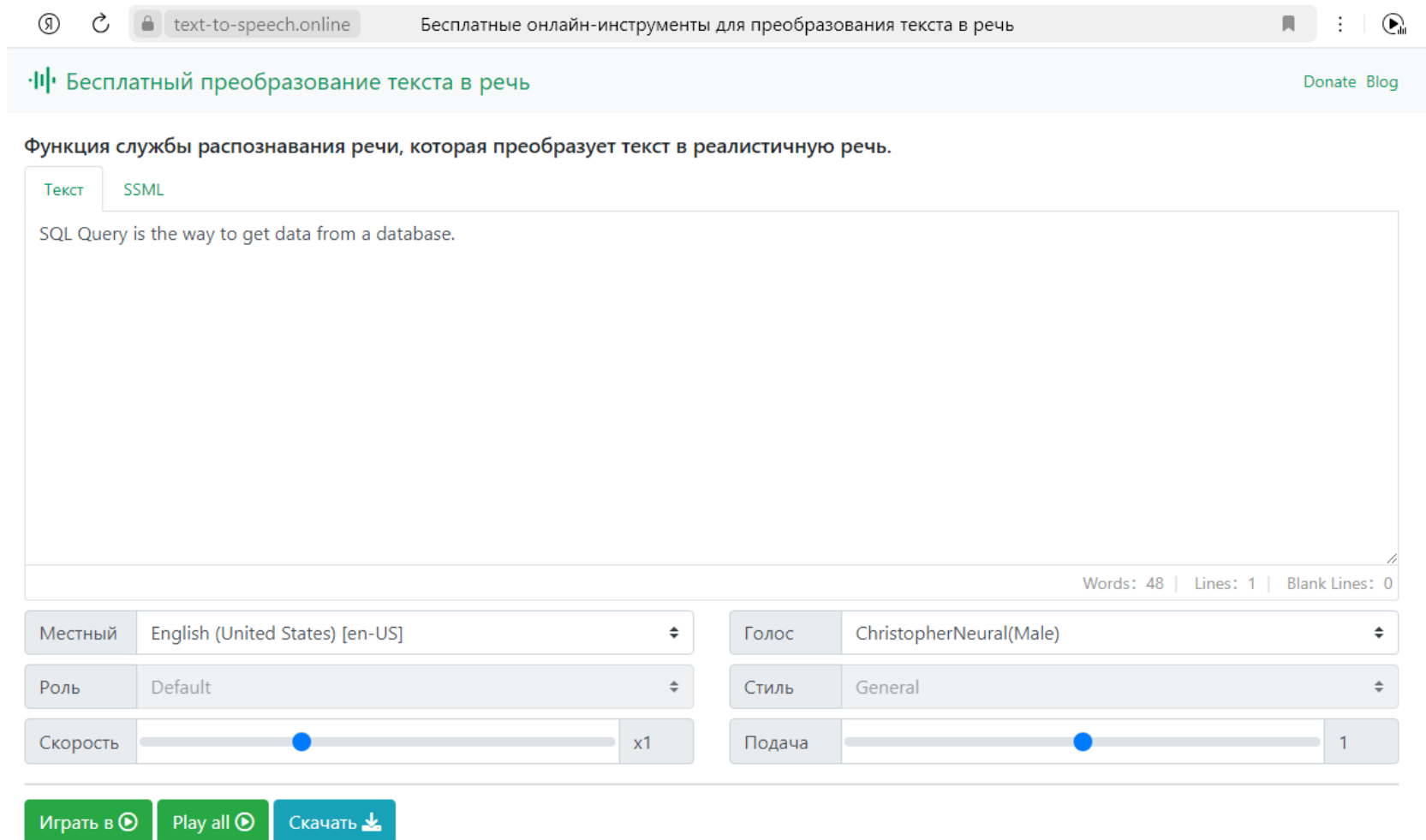
Pronunciation:

- "SQL" is pronounced as either "ess-cue-el" or "sequel."
- The most common pronunciation is "sequel," which is widely accepted in the tech industry.

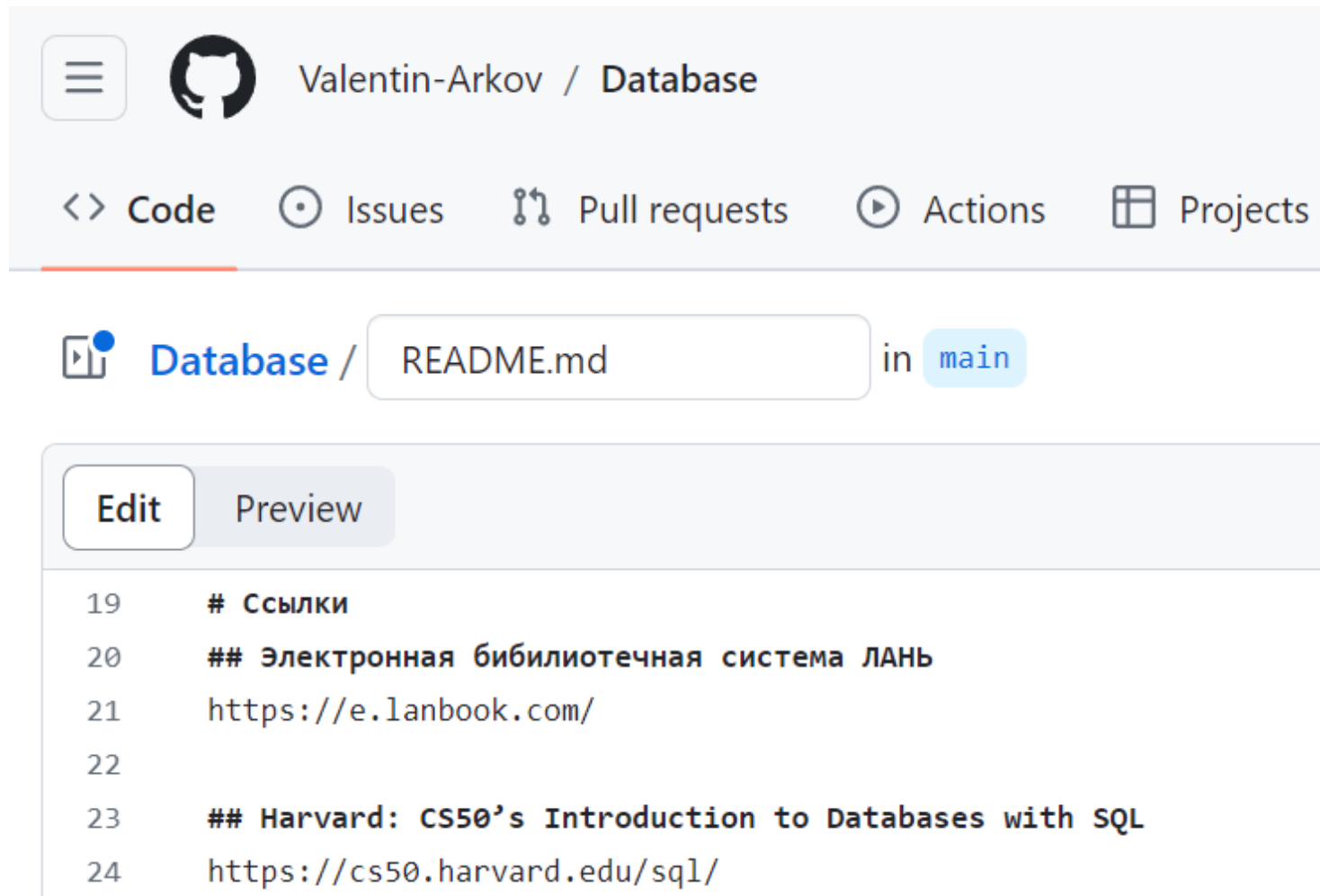
Reason for Pronunciation:

- The term "SQL" stands for "Structured Query Language," which is a standard language for managing and manipulating databases.
- The pronunciation as "sequel" is derived from the original name "SEQUEL" (Structured English QUERY Language), which was later shortened to SQL.
- Over time, "sequel" became the preferred pronunciation due to its ease of use and widespread adoption in the IT community.

Text to speech free online converter



Markdown: DESIGN.md



The screenshot displays the GitHub interface for a repository named 'Database' by user 'Valentin-Arkov'. The repository is on the 'main' branch. The file 'README.md' is selected, and the 'Edit' tab is active. The content of the README.md file is shown in a code editor with line numbers 19 through 24. The content includes a section header '# Ссылки' and two entries: '## Электронная библиотечная система ЛАНЬ' with the URL 'https://e.lanbook.com/' and '## Harvard: CS50's Introduction to Databases with SQL' with the URL 'https://cs50.harvard.edu/sql/'.

Valentin-Arkov / Database

<> Code Issues Pull requests Actions Projects

Database / README.md in main

Edit Preview

```
19  # Ссылки
20  ## Электронная библиотечная система ЛАНЬ
21  https://e.lanbook.com/
22
23  ## Harvard: CS50's Introduction to Databases with SQL
24  https://cs50.harvard.edu/sql/
```

SQLite

- <https://www.sqlite.org/>



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SQLite Download Page

Precompiled Binaries for Windows

sqlite-dll-win-x86-3450200.zip (1.00 MiB)	32-bit DLL (x86) for SQLite version 3.45.2. (SHA3-256: 7385e36417a2b660f4630c39045202b77eae79588e)
sqlite-dll-win-x64-3450200.zip (1.26 MiB)	64-bit DLL (x64) for SQLite version 3.45.2. (SHA3-256: 9a8c9e0580f722ce51ef89766c35e55713d81ed1c44)
sqlite-tools-win-x64-3450200.zip (4.77 MiB)	A bundle of command-line tools for managing SQLite (SHA3-256: 3b35d5c27cbd4ee3f5cc91669cad273ea46dec89ec4)

CMD: SQLite

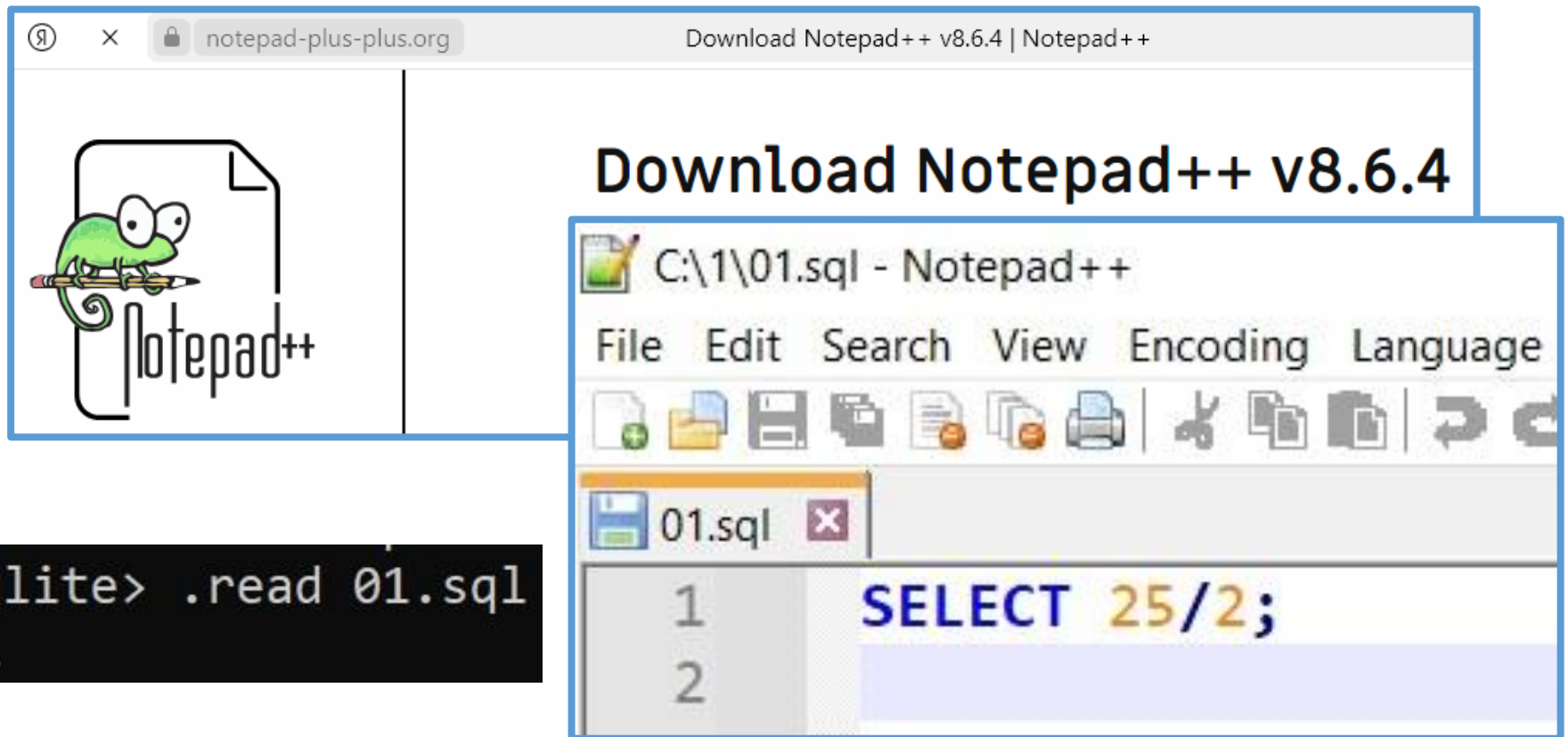
```
E:\2024 DB\SQLite>sqlite3 longlist.db
SQLite version 3.45.2 2024-03-12 11:06:23 (UTF-16 console I/O)
Enter ".help" for usage hints.
sqlite> .mode table
sqlite> .tables
longlist
sqlite> SELECT title, author FROM longlist LIMIT 5;
```

title	author
Boulder	Eva Baltasar
Whale	Cheon Myeong-Kwan
The Gospel According to the New World	Maryse Condé
Standing Heavy	Gauz
Time Shelter	Georgi Gospodinov

```
sqlite> .exit
```

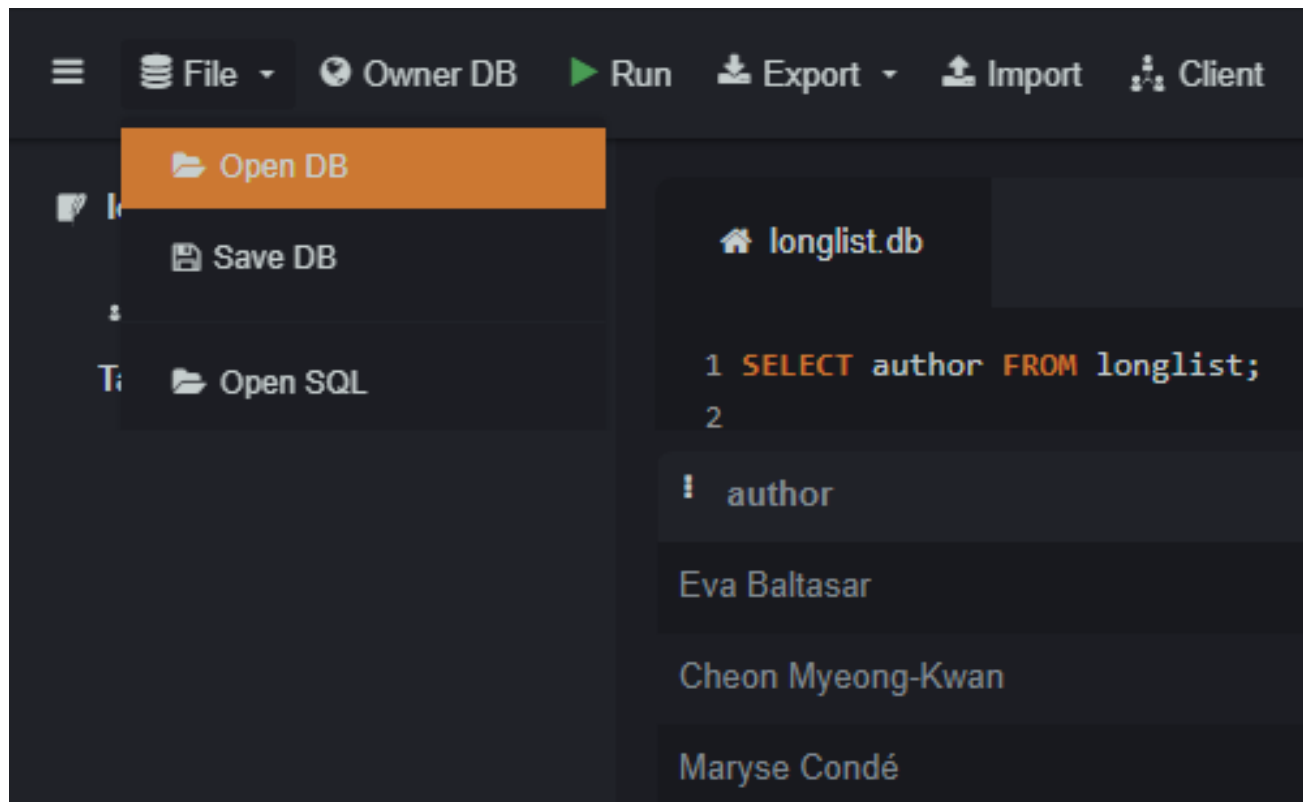
Notepad++

- <https://notepad-plus-plus.org/>



SQLite Online

- <https://sqliteonline.com/>



SQLite in Google Co-Laboratory

- <https://colab.research.google.com/>
 - Mount Google Drive
 - `drive.mount()`
 - Connect to SQLite Database
 - `sqlite3.connect()`
 - Query the Database
 - `pd.read_sql_query()`
 - Execute SQL Statements
 - `%%sql` magic
 - Load CSV & Save Table
 - `pd.read_csv()`
 - `df.to_sql()`

Diagram as Code

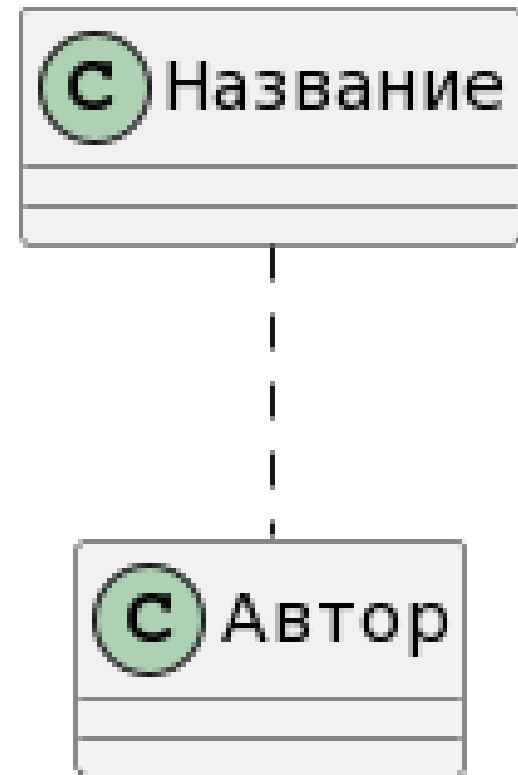
- Бесплатные онлайн редакторы
 - PlantUML
 - Mermaid
- Текстовый формат
 - Управление версиями
 - Совместная работа

PlantUML: Class Diagram

- <https://plantuml.com/class-diagram>



```
@startuml
class Название
class Автор
Название .. Автор
@enduml
```



Mermaid ER Diagram

- <https://mermaid.js.org/syntax/entityRelationshipDiagram.html>

