

# Enrolling to CS50 Course - Introduction to Databases with SQL and Submitting a Problem Set

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# First Enroll to the Course

- Go to <https://pll.harvard.edu/course/cs50s-introduction-databases-sql>



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## CS50's Introduction to Databases with SQL

Learn how to create, read, update, and delete data with relational databases.

LEARN MORE on 

 October 1, 2023 - December 31, 2025

 Free\*

 Online 

### What you'll learn

- CREATE TABLE
- INSERT
- DELETE

- SELECT
- UPDATE
- DROP



CS50SQL

CS50SQL


CS50SQL

CS50SQL

|   |                       |
|---|-----------------------|
|  DURATION        | 7 weeks long          |
|  TIME COMMITMENT | 6 - 12 hours per week |
|  PACE            | Self-paced            |
|  SUBJECT         | Computer Science      |
|  COURSE LANGUAGE | English               |


Click **LEARN MORE** and on the new page opened, click **ENROLL!**






## HarvardX: CS50's Introduction to Databases with SQL


An introduction to databases using a language called SQL.




CS50 SQL  
CS50 SQL  
CS50 SQL  
CS50 SQL



**7 weeks**  
6–12 hours per week




**Self-paced**  
Progress at your own speed



**Free**  
Optional upgrade available

**There is one session available:**

80,933 already enrolled! After a course session ends, it will be [archived](#) .

**Starts Dec 6**


**Enroll**

# edX Platform


- Enroll will direct you to the edX platform. You can see course materials and submit problem sets using edX!
- If you already registered to edX, just login. Otherwise, you need to register. Register with ciu student email addresses!

[Register](#) [Sign in](#)

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Country/Region


Turkey 


☒ I agree that edX may send me marketing messages.


By creating an account, you agree to the [Terms of Service and Honor Code](#) and you acknowledge that edX and each Member process your personal data in accordance with the [Privacy Policy](#).


Create an account for free

Or register with:

 Apple


 Facebook

 Google

 Microsoft

# After registering and login to edX, click continue under 'Access this course'

Choose a path for your course in CS50's Introduction to Databases with SQL




\$299 USD

### Earn a certificate

- Showcase a **verified certificate** of completion on your resumé to advance your career
- Support our **mission** to increase access to high-quality education for everyone, everywhere

Upgrade Now

 Studies show that those who choose this option are **more engaged and motivated** to complete their courses

FREE

### Access this course

- Get access to the course material, including videos and readings

Continue

# Access to CS50 Course Lectures and Problem Sets

- In the lab, we will submit **Problem Set 0 – Cyberchase problem set** (in the week of 16-20 December)

1. Watch [Week 0's](#) lecture on Querying. Submit [Problem Set 0](#).
2. Watch [Week 1's](#) lecture on Relating. Submit [Problem Set 1](#).
3. Watch [Week 2's](#) lecture on Designing. Submit [Problem Set 2](#).
4. Watch [Week 3's](#) lecture on Writing. Submit [Problem Set 3](#).
5. Watch [Week 4's](#) lecture on Viewing. Submit [Problem Set 4](#).
6. Watch [Week 5's](#) lecture on Optimizing. Submit [Problem Set 5](#).
7. Watch [Week 6's](#) lecture on Scaling. Submit [Problem Set 6](#).
8. Submit the [Final Project](#).

And if you have any questions, start a [discussion](#) with classmates!


► Looking for other courses to take before or after this one?



► Looking for accreditation, transfer credit, and/or TA support?

# Problem Set 0 – First preparation!



## CS50's Introduction to Databases with SQL




OpenCourseWare

Donate 

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 CS50x Puzzle Day 2025...  
 Zoom Meetings

 CS50.ai  
 Ed Discussion for Q&A  
 Visual Studio Code

What's new for 2024?

- 0. Querying
- 1. Relating
- 2. Designing
- 3. Writing
- 4. Viewing
- 5. Optimizing
- 6. Scaling

Final Project

## Problem Set 0

Collaboration on problem sets is not permitted except to the extent that you may ask classmates and others for help so long as that help does not reduce to another doing your work for you, per the course's policy on [academic honesty](#).

## What to Do

### Preparation

Before you begin this week's problems, you'll need to take a few preparatory steps. Rest assured that future weeks will have a much faster setup!

1. Visit [this link](#), log in with your GitHub account, and choose **Authorize CS50**
2. Check the box indicating that you'd like to grant course staff access to your submissions, and click **Join course**.
3. Log into [cs50.dev](#) using your GitHub account
4. Run `update50` in your codespace's terminal window to ensure your codespace is up-to-date and, when prompted, click **Rebuild now**

### Problems

1. Submit [Cyberchase](#)
2. Submit one of:
  - [36 Views](#)
  - [Normals](#)
3. Submit [Players](#)

If you submit both 36 Views and Normals, we'll record the higher of your two scores.

## When to Do It

By [Thursday, January 1, 2026 at 6:59 AM GMT+2](#).



# Cyberchase problem set (<https://cs50.harvard.edu/sql/2024/psets/0/cyberchase/> )

← ↻ 🔒 <https://cs50.harvard.edu/sql/2024/psets/0/cyberchase/> A 🗖

Interested in [a verified certificate or transfer credit and accreditation?](#)

## CS50's Introduction to Databases with SQL

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💬 Ed Discussion for Q&A  
💻 Visual Studio Code

What's new for 2024?

0. Querying
1. Relating
2. Designing
3. Writing
4. Viewing
5. Optimizing
6. Scaling

Final Project

## Cyberchase



## Problem to Solve

Welcome to Cyberspace! *Cyberchase* is an animated, educational kid's television series, aired by the United States' [Public Broadcasting Service \(PBS\)](#) since 2002. Originally designed to "show kids that math is everywhere and everyone can be good at it," the world of *Cyberchase* centers on Jackie, Matt, and Inez as they team up with Digit—a "cybird"—to stop Hacker from taking over Cyberspace and infecting Motherboard. Along the way, the quartet learn math, science, and problem-solving skills to thwart Hacker in his attempts.

In a database called `cyberchase.db`, using a table called `episodes`, chase answers to PBS's questions about *Cyberchase's* episodes thus far.

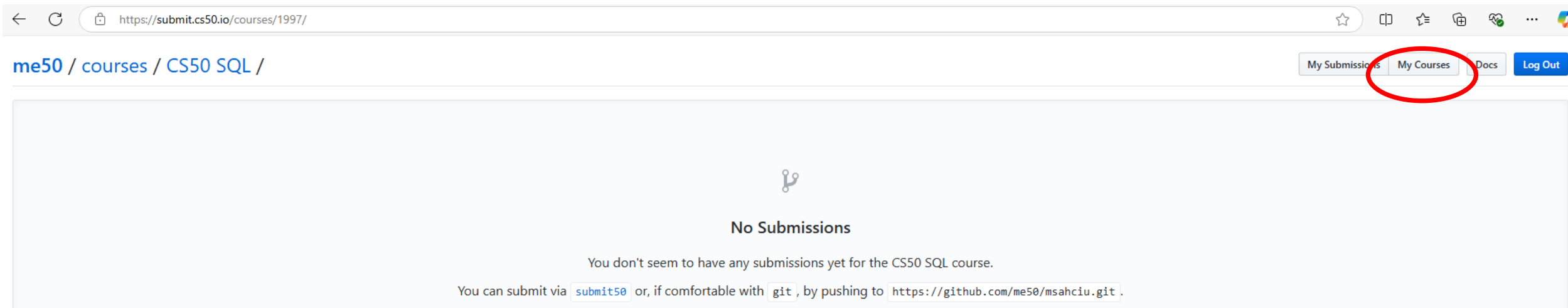
## Demo

```
$ sqlite3 cyberchase.db
sqlite> 
```



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4. Run `update50` in your codespace's terminal window to ensure your codespace is up-to-date and, when prompted, click **Rebuild now**

- **Step 1 - Register and then Login to GitHub using 'this link'**
- **Step 2 - After logging to GitHub, it will ask you to grant access to CS50. Confirm it (I cannot see these steps since I have already done it before)**
- Then you will see the page below. Click my courses!

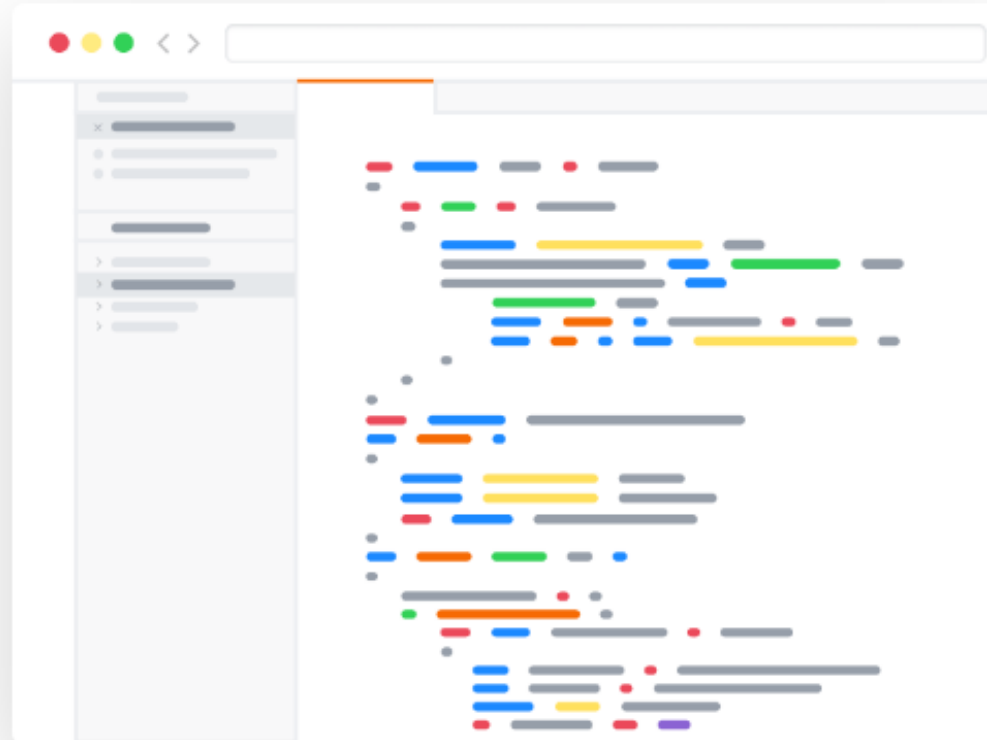
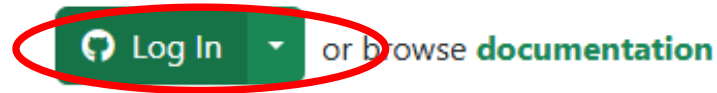


- **Step 3 – Login to cs50.dev using your GitHub account**

## Visual Studio Code for CS50

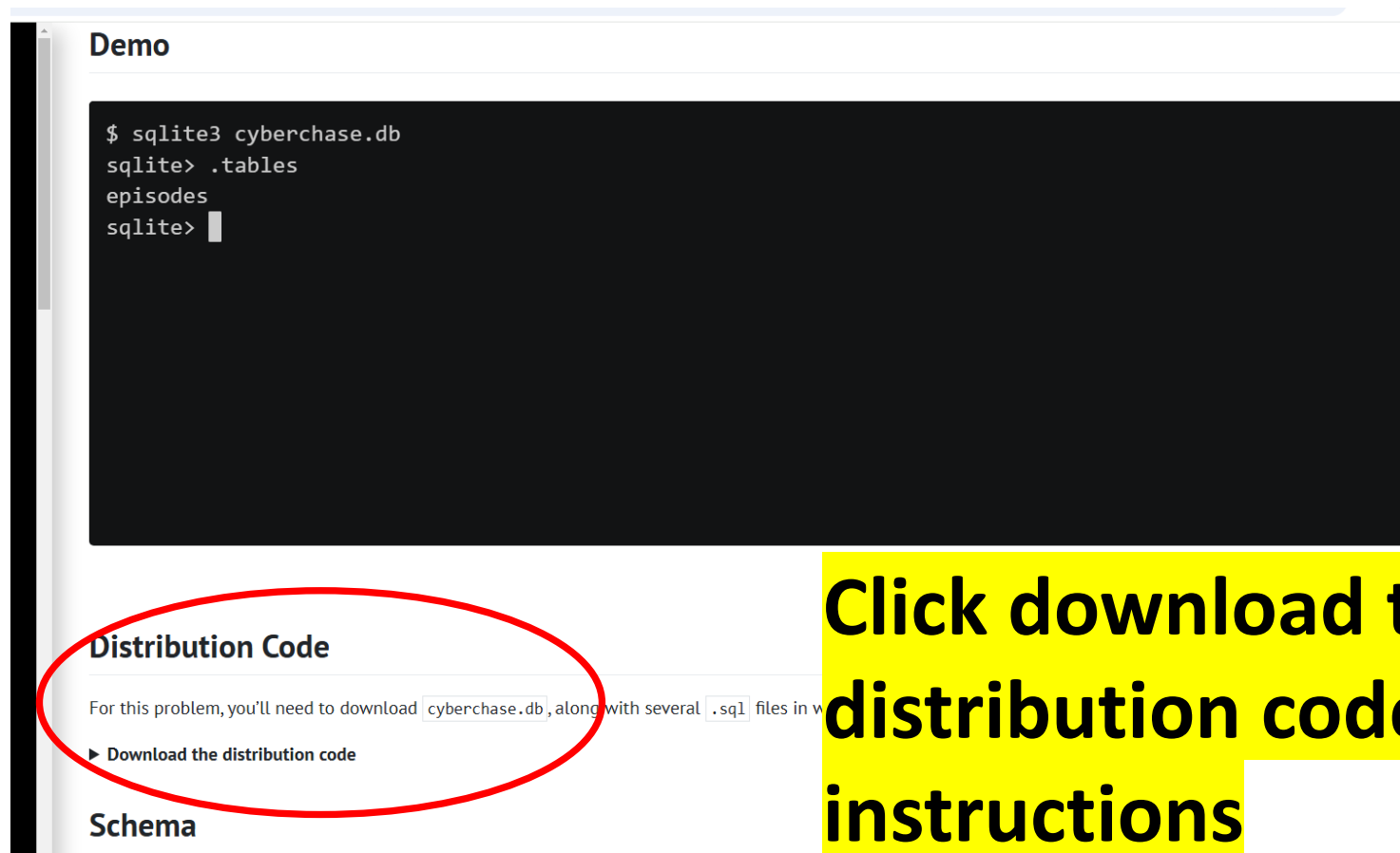
CS50's adaptation of **Codespaces** for students and teachers

► with these features



# After you logged in, initially cyberchase.db and sql files cannot be seen!

- Follow the steps on cyberchase problem set as follows:



**Demo**

```
$ sqlite3 cyberchase.db
sqlite> .tables
episodes
sqlite> 
```

**Distribution Code**

For this problem, you'll need to download `cyberchase.db`, along with several `.sql` files in w

► [Download the distribution code](#)

**Schema**

**Click download the  
distribution code for  
instructions**

# Go and login to codespaces (cs50.dev)

- In the terminal below, copy and paste these commands!

```
$
```

Next execute

```
wget https://cdn.cs50.net/sql/2024/x/psets/0/cyberchase.zip
```

in order to download a ZIP called `cyberchase.zip` into your codespace.

Then execute

```
unzip cyberchase.zip
```

to create a folder called `cyberchase`. You no longer need the ZIP file, so you can execute

```
rm cyberchase.zip
```

and respond with “y” followed by Enter at the prompt to remove the ZIP file you downloaded.

Now type

```
cd cyberchase
```

followed by Enter to move yourself into (i.e., open) that directory. Your prompt should now resemble the below.

```
cyberchase/ $
```

If all was successful, you should execute

```
ls
```

# Now you can access to cyberchase.db and write your SQL queries to the given .sql files!

cyberchase.db - 182630454 [Codespaces: opulent waddle] - Visual Studio Code

EXPLORER

182630454 [CODESPACES: OPULENT WADDLE]

- cyberchase
- cyberchase.db

1

Walkthrough: Setup VS Code Web

cyberchase.db

1

EXPLORER

182630454 [CODESPACES: OPULENT WADDLE]

- cyberchase
  - 1.sql
  - 2.sql
  - 3.sql
  - 4.sql
  - 5.sql
  - 6.sql
  - 7.sql
  - 8.sql
  - 9.sql
  - 10.sql
  - 11.sql
  - 12.sql
  - 13.sql
  - cyberchase.db
  - cyberchase.db

1 select \*  
2 from ...  
3

Click query files to edit in the editor

TEXT EDITOR


Unfold your cyberchase folder. You will see 13 queries in the format of 1.sql etc. Click one of them, it is empty! You will write the sql queries according to the question in problem set 0 – Cyberchase problem!

# Before writing queries, finally, register to CMPE343 CS50 course to finalize all process!

- Click to register CMPE343 CS50 course below so that I can see your submissions!
- <https://submit.cs50.io/invites/3ab2c078e26e4db2984b94f264e84ffe>

You are invited to **CMPE343 Fall 2024-2025**  
CMPE343 Database Management Systems and Programming I  
taught by msahciu

You will join this course with your GitHub account:



username: msahciu

☐ I understand this will grant the teachers of this course access to my submissions.

Join course

# Now write your queries in codespaces (cs50.dev)

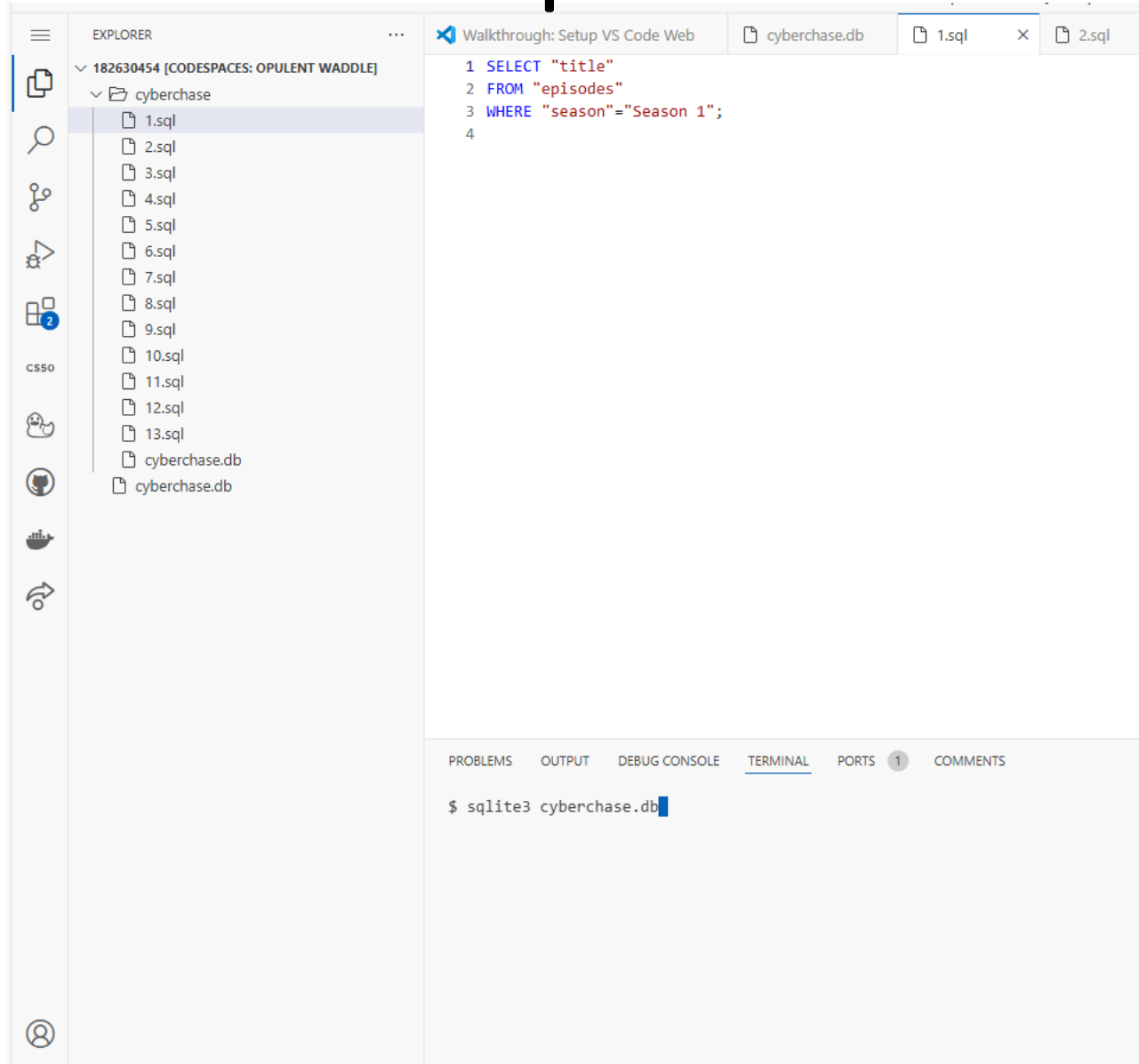
- Edit 1.sql in the editor. Use the answer at the right!
- Then at the terminal below, first update cs50 by writing and using cyberchase.db

**\$ update50**

**\$ sqlite3 cyberchase.db**

**Will change the folder to  
sqlite \$**

- Then edit the queries and test the results using the instructions on <https://cs50.harvard.edu/sql/2024/psets/0/cyberchase/>





# Checking and submitting your queries

- After writing 1.sql in the terminal write the following command (.quit)
- **Sqlite \$ .quit**
- **That will change to \$**
- **In the \$, write command cd cyberchase**
- **\$ cd cyberchase**
- **Now,** you can check the correctness of your queries using following:
- **cyberchase \$ check50 cs50/problems/2024/sql/cyberchase**

- Smiley faces indicate that your query is correct.
- Continue writing the rest of the queries in the lab (16-20 December)!

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS 2 COMMENTS

```
$ cd cyberchase
cyberchase/ $ check50 cs50/problems/2024/sql/cyberchase
Connecting.....
Authenticating...
Verifying.....
Preparing.....
Uploading.....
Waiting for results.....
Results for cs50/problems/2024/sql/cyberchase generated by check50 v3.3.11
:) SQL files exist
:) 1.sql produces correct result
:( 2.sql produces correct result
    Error when executing query: missing statement
:( 3.sql produces correct result
    Error when executing query: missing statement
```

Finally, after completing all queries “in the lab”, submit the problem set

- `cyberchase $ submit50 cs50/problems/2024/sql/cyberchase`
- **MAKE SURE YOU REGISTER TO CMPE343 COURSE IN CS50 BEFORE SUBMITTING!**