How to create tests cases for judge42

Problem statement [1/2]

Write a program that reads two integer numbers and output the result of they product and they addition.

INPUTS

Two lines each one with an integer number.

OUTPUTS

Two lines, first one must show «**A x B = C**» where **A** and **B** are the integer numbers readed and **C** is result of they product. Second line must show «**A + B = C**», where **A** and **B** are the integer numbers readed and **C** is result of they addition.

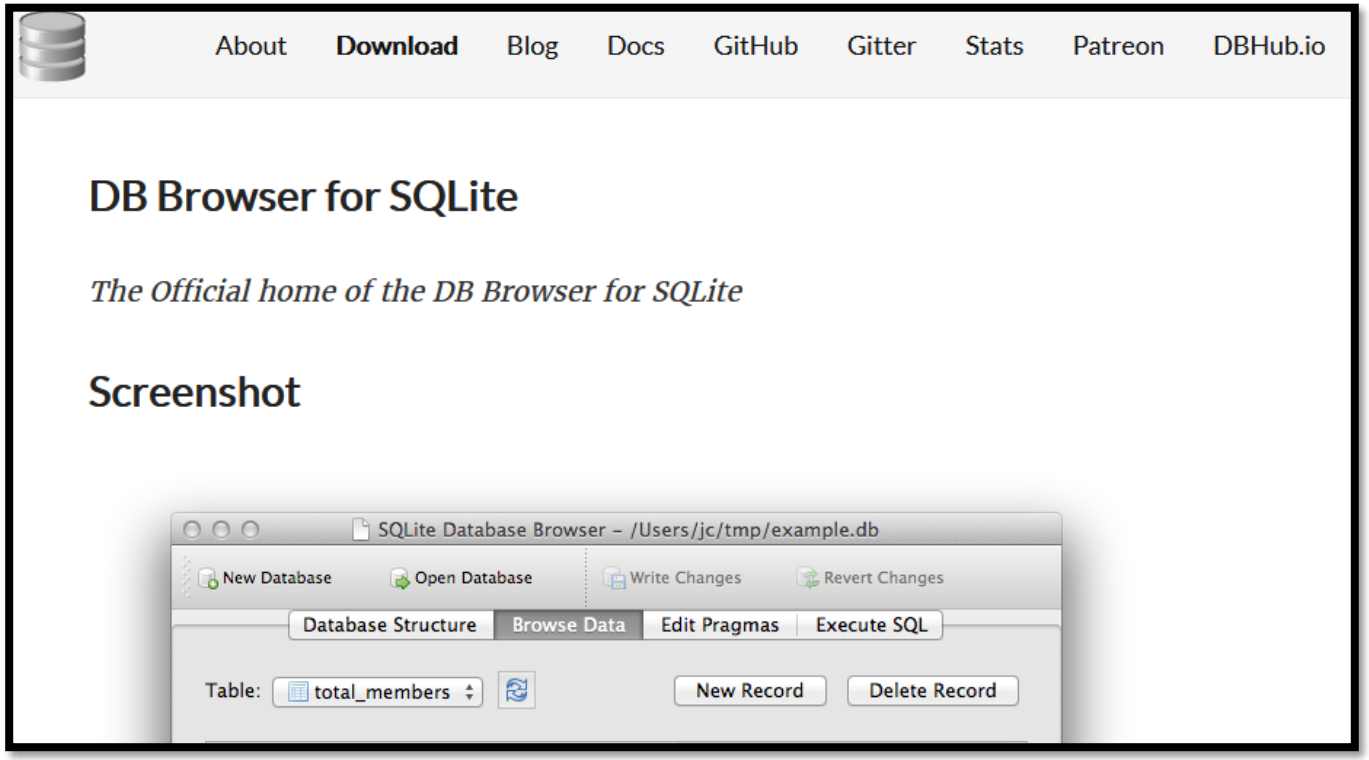
Problem statement [2/2]

INPUTS AND OUTPUTS EXAMPLES

INPUT	OUTPUT
2 3	2 x 3 = 6 2 + 3 = 5
9 9	9 x 9 = 81 9 + 9 = 18
30 20	30 x 20 = 60 30 + 20 = 50

Create a tests cases [1/]

1. Download and install (or unzip) SQLiteDatabaseBrowser:
   - https://sqlitebrowser.org/



Create a tests cases [2/]

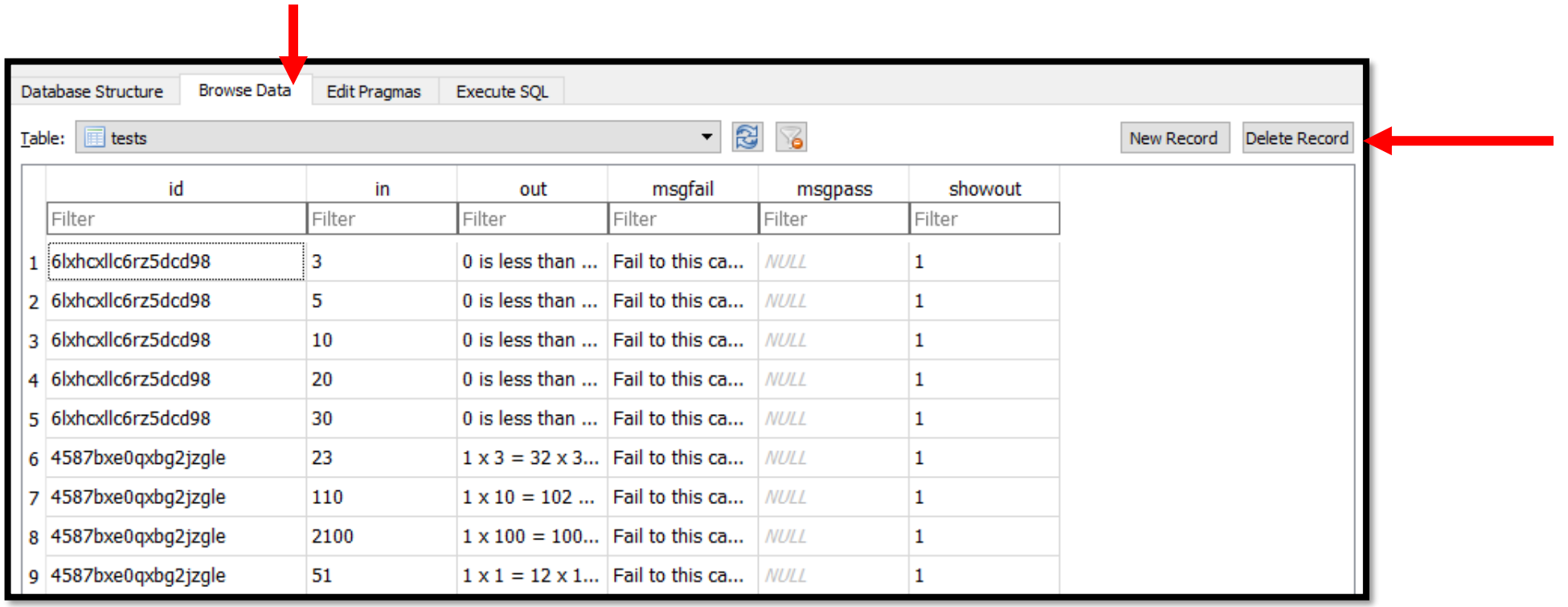
2. Download **`judge42.db`** from GitHub repo of **judge42** project
   - https://github.com/jfmunozf/judge42

3. Open DB Browser for SQLite
   - Click File
   - Click Open Database…

4. Open database **`judge42.db`**

Create a tests cases [2/]

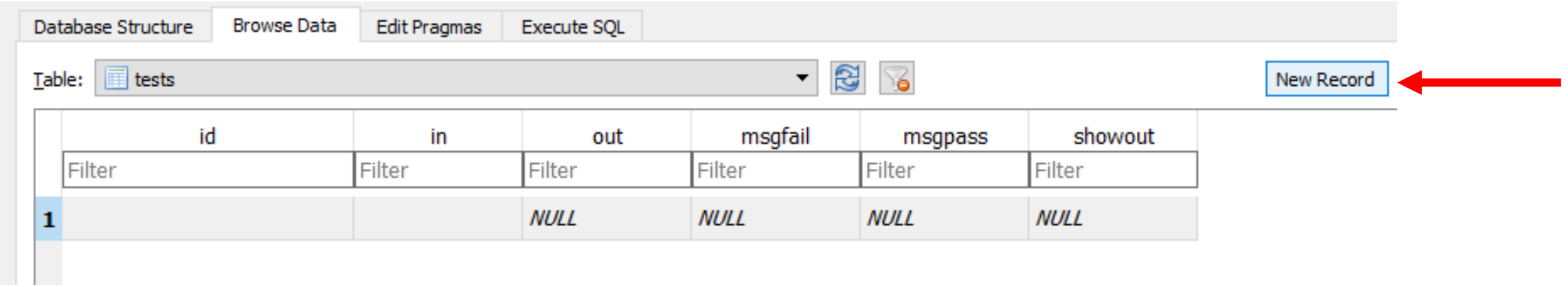
5. Clic on **Browse Data** tab
   - You can (and want) delete demo tests cases in a database



	id	in	out	msgfail	msgpass	showout
	Filter	Filter	Filter	Filter	Filter	Filter
1	6lxhcxllc6rz5dcd98	3	0 is less than ...	Fail to this ca...	NULL	1
2	6lxhcxllc6rz5dcd98	5	0 is less than ...	Fail to this ca...	NULL	1
3	6lxhcxllc6rz5dcd98	10	0 is less than ...	Fail to this ca...	NULL	1
4	6lxhcxllc6rz5dcd98	20	0 is less than ...	Fail to this ca...	NULL	1
5	6lxhcxllc6rz5dcd98	30	0 is less than ...	Fail to this ca...	NULL	1
6	4587bxe0qxbg2jzgle	23	1 x 3 = 32 x 3...	Fail to this ca...	NULL	1
7	4587bxe0qxbg2jzgle	110	1 x 10 = 102 ...	Fail to this ca...	NULL	1
8	4587bxe0qxbg2jzgle	2100	1 x 100 = 100...	Fail to this ca...	NULL	1
9	4587bxe0qxbg2jzgle	51	1 x 1 = 12 x 1...	Fail to this ca...	NULL	1

Create a tests cases [2/]

6. Begin with an empty **`tests`** table and clic in **New Record** to create a new blank record in a **`tests`** table.



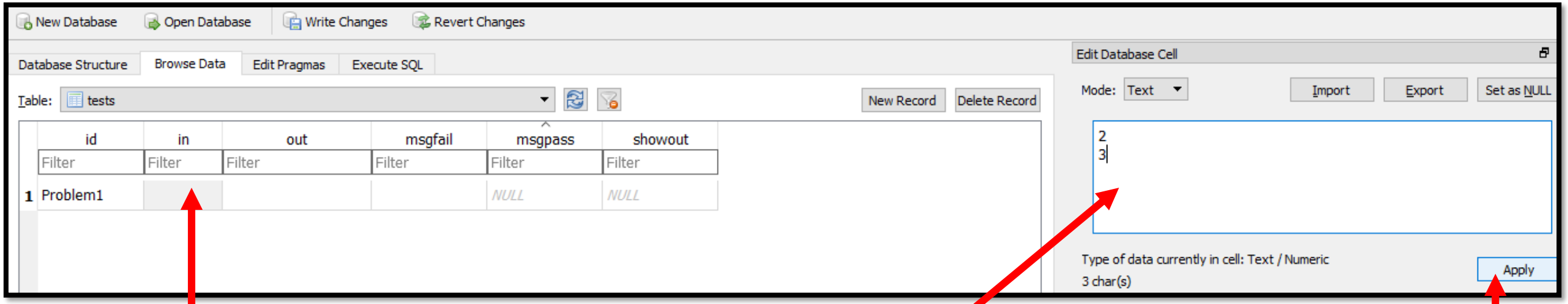
Database fields description

- **`id:`** Unique ID of this problem statement. Every problem statement can contains multiple tests cases, every test case is a record in a table. You could record multiple tests cases for multiple problem statements.
- **`in:`** Inputs of the this test case
- **`out:`** Expected outputs for this test case
- `msgfail:` A message that show to student when this test case fails.
- `msgpass:` A message that show to student when this test case pass.
- `showout`
  - **`1`**: Show expected output for this case when this test case fails.
  - **`NULL`**: Don’t show expected output for this case when this test case fails.

Create a tests cases [2/]

7. Create a first test case according to Inputs and Outputs examples in a problem statement at the begining of this document.

- To record first test case use right panel of DB Browser for SQLite to edit cell. For example, to record Inputs of the first test case:
  - Clic on **`in`** cell
  - Type data: one line for each input according to problem statement
  - Clic **Apply** button to set this entry in cell.



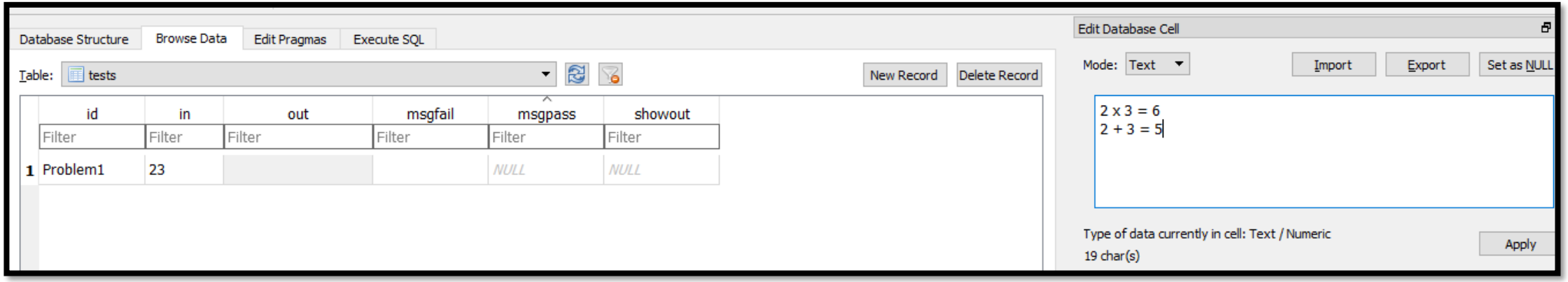
Clic on **`in`** cell

Clic **Apply**

Write inputs of this test case: one input per line according to problem statement. No more breaklines at the end: just two lines.

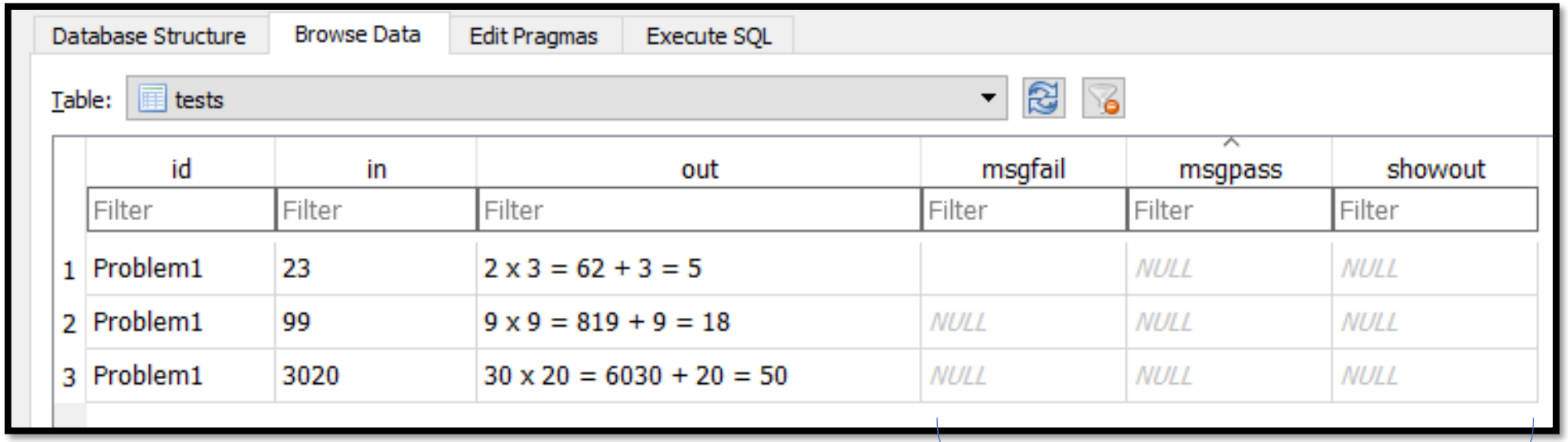
Create a tests cases [2/]

8. Example of outputs for this test case: just two lines according to (format) problem statement



Create a tests cases [2/]

- At the end, the three test cases for problem statement:

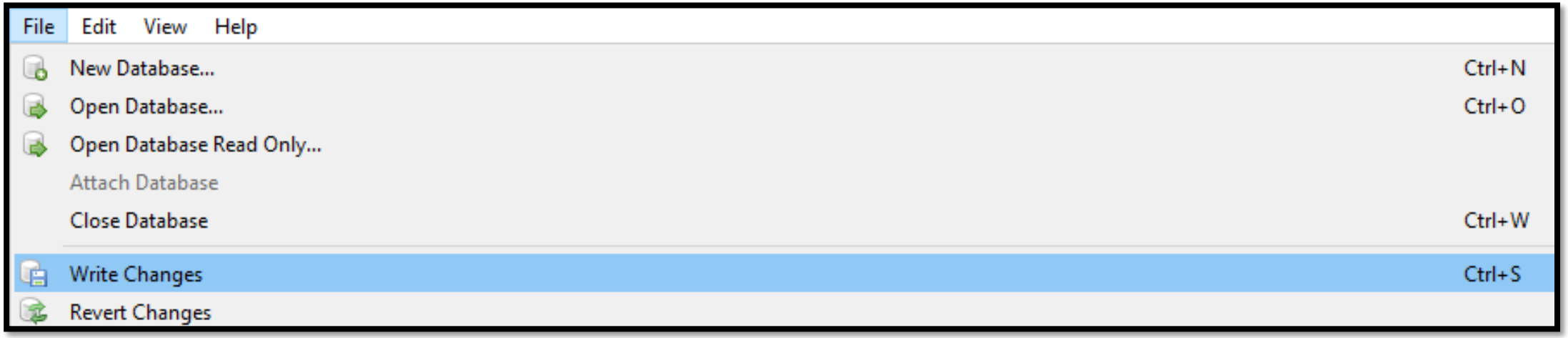


	id	in	out	msgfail	msgpass	showout
	Filter	Filter	Filter	Filter	Filter	Filter
1	Problem1	23	2 x 3 = 62 + 3 = 5		NULL	NULL
2	Problem1	99	9 x 9 = 819 + 9 = 18	NULL	NULL	NULL
3	Problem1	3020	30 x 20 = 6030 + 20 = 50	NULL	NULL	NULL

This fields are optional

Write changes to a database

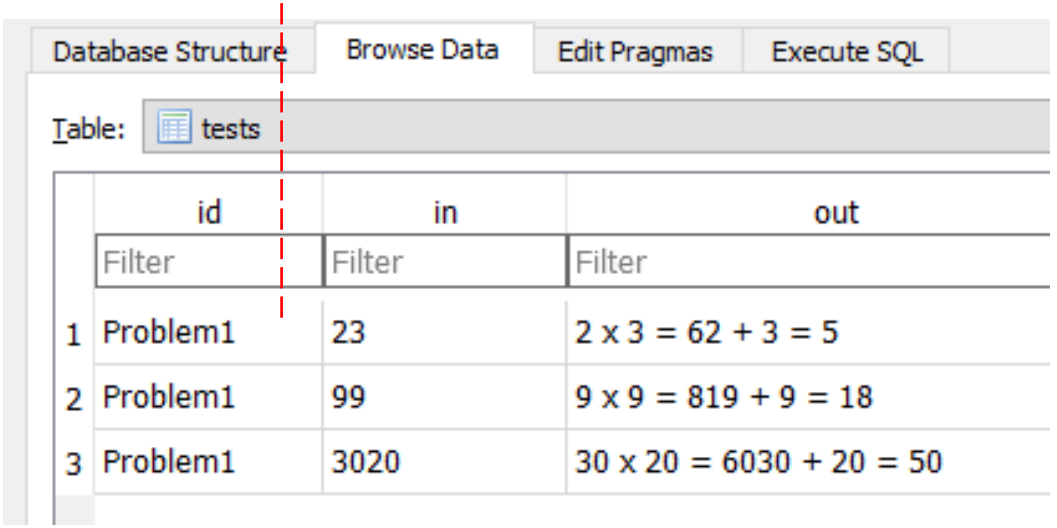
- Clic on File
- Select Write Changes or CTRL + S



Thats all

- Deploy **`judge42.py`** and **`judge42.db`**
- In this example, first line of code to test with this tests cases must be (exacly)

```
# __judge42__id__ = Problem1
```



Deployments examples

- https://github.com/jfmunozf/judge42
    - Google Colab
    - Replit in a Console aplication (fork the deployment to your account)
    - Replit in a Web application (fork the deployment to your account)
    - Python anywhere in a Web application

https://github.com/jfmunozf/judge42

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