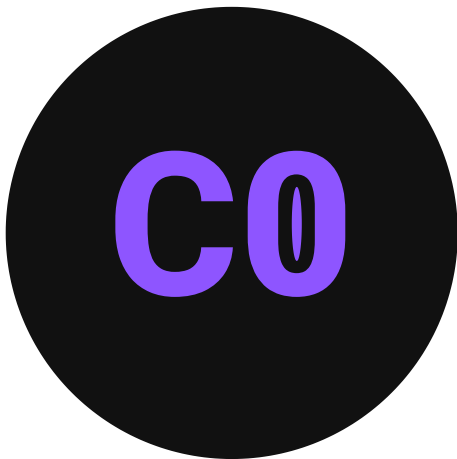
C0 - Project proposal

Subject: Individual project - Fontys Semester 2 ICT & Software Engineering
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Git: https://github.com/daki4/C0

Purpose

C0 is a platform allowing teachers and students...

to create and solve exercises and problems the modern way! The aim of this site is to allow teachers to create exercises for students to try and solve. As a student, maybe one of the most boring things we can do is to be told to "Solve this exercise by tomorrow", and then as a teacher, get overwhelmed by submissions numbering gigabytes in the inbox, most of it being **build Artefacts** and endless amount of **.zip** files. The other thing is, encouraging students to compete over a leaderboard spot is also a big contributing factor to engagement, and would be also very useful.

What a wonderful world would it be if we could have a platform that allows a teacher to create an exercise, mark who can see it, and let people submit solution the way the teacher wants it:

- as code (when possible),
- as a plain simple answer to the problem,

Aim

The main feature aims of this site will be to:

- allow a teacher to create exercises for students
- allow the teachers to see who has submitted solutions
- difficulty system set by the teachers rewarding points
- points system to reward solvers
- a leaderboard system
- have different types of submissions:
  - as plain-simple answer (example: How much is 1+ 1? -> "2")
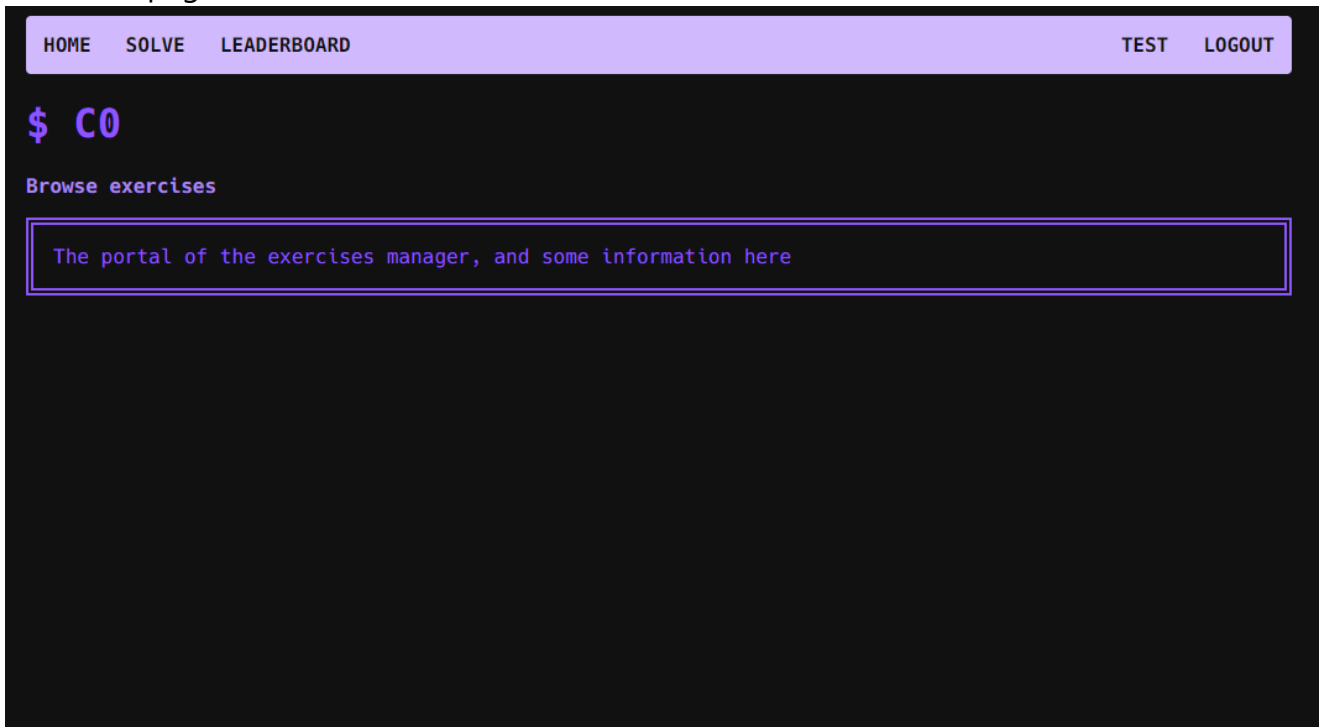 - as a code submission (example: Write "Hello world!" in Python. `print("Hello world!")`)
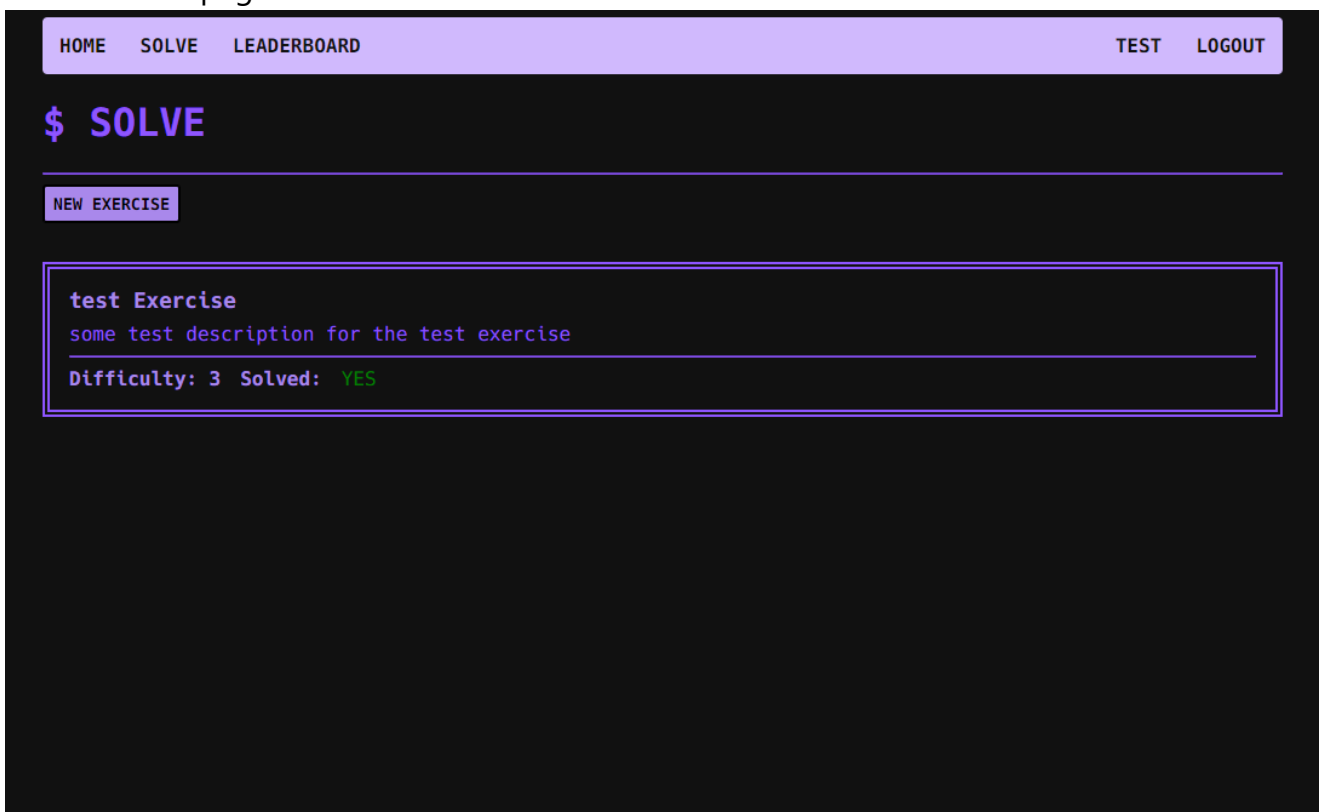
Sitemap

Home Page

- Page with information about the aplication and institution
- Exercises page with a list of the exercises
  - if logged in, also a status if you have already solved the exercise
- Exercise page with the problem description, difficulty, and a link to the input
  - if logged in, also a history of previous solutions
  - if logged in also a status if you have already solved the exercise
- Input page, plain-text version of the input that is to be used for the exercise
- Leaderboard page with the points of the different students/users
- User page to see and edit personal information

Wireframes

The homepage:

$ C0

Browse exercises

The portal of the exercises manager, and some information here

The exercises page:

$ SOLVE

NEW EXERCISE

test Exercise
some test description for the test exercise

Difficulty: 3 Solved: YES

The exercise page:

$ SOLVE: test Exercise

some test description for the test exercise

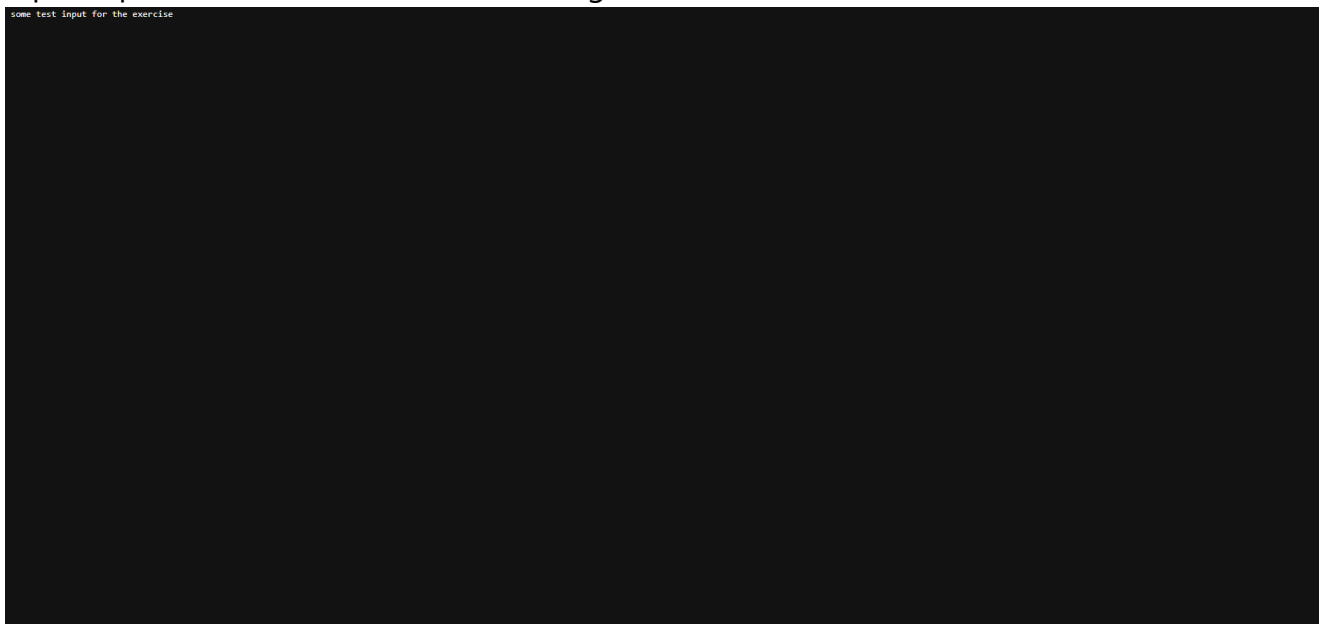Solution: [   ] SOLVE

Get your input

▼ Your solutions

- X asdasd
- X test answer
- X some answer
- X some asdasd
- X some test

Difficulty: 3 Solved: NO

Input is plain text that is accessable through a link:

some test input for the exercise

The leaderboard:

$ LEADERBOARD

1. **test** (15 score)
2. **admin** (0 score)

The user page:

$ USER: test█

➜ **Username**
   test

➜ **Email**
   test@protonmail.com

➜ **Permission**
   AuthAuthor

➜ **Score**
   15

➜ **Created**
   2023-02-1221:17:00