

CROSSED

Event structure:

Participants will work in teams of two. The event will be 50 minutes long.

Description:

The participants will be provided with a web-based crossword puzzle game written in Javascript and jQuery. The game will not be functional -- some operations will be broken, and some will be missing altogether. The game will come with a small API, parts of which are unfinished or unused. The task is to implement the desired functionality. The problem will be divided into subproblems, each increasing in difficulty, allowing the participants to gradually get familiar with the code. Each subproblem will have some point value. An important factor in the grading will be how the solutions are implemented -- participants should follow the style and conventions in the provided code. In keeping with the ideals of Code Golf, shorter solutions may be scored more highly.

This problem effectively emulates a typical scenario at a tech company where the software engineer is presented with some code and has to make it better. It will be designed so that it can be solved within 20 minutes by an experienced coder.

Samples Problems:

Here is an example list of subproblems:

1. Make the game grid appear when the player presses the "start" button.
2. Add a "restart" button which gives the player a new empty crossword.
3. Make player answers display at the correct coordinates in the grid.
4. Add a timer to the page which starts when the game starts and ends when the player has the correct solution to the crossword.
5. Fix the "check answers" button so that it highlights all squares which contain incorrect letters.
6. Enable the player to change which square is selected using the arrow keys.
7. Allow the player to input a letter just by typing that letter, rather than by typing the letter into the input box and then pressing "submit".
8. Finishing implementing the "upload puzzle" button so that the player can change which puzzle will appear when "start" or "restart" is pressed, provided that the uploaded file represents a legal puzzle.

Contact:

This event is designed by Collin Stedman (email contact: cstedman@princeton.edu).

All email inquiries about the event should have the subject line: "PEO Event Inquiry – CROSSED."