

Hitori Game

A.Sc.1 - Associate of Science 1

Contents

Subject
Grading Scale

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1. Context

Hitori is a Japanese puzzle logic game played with a grid of squares or cells, with each cell containing a number.

The purpose of the game is to "eliminate" cells, usually by coloring them in black, until there are no duplicates numbers in any row or column.

To transform the grid, it's necessary to follow these three rules :

- no row or column can have more than one occurrence of any given number
- 'eliminated' cells cannot be adjacent, although they can be diagonal to one another.
- the remaining numbered cells must be all connected to each other, horizontally or vertically.

Here are several links you can refer to for more informations :

<http://hitoriconquest.com/>

<https://en.wikipedia.org/wiki/Hitori>

2. What's expected

With only HTML, CSS and JS, create a Hitori game with the following features:

- Create the HTML structure
- Create a CSS style
- Implement a "rules" structure
- Implement a "New" button
- Implement a "Check" button
- Implement a "Reset" button
- Set a timer

2.1. HTML

Create the gameboard (tips : you can use jQuery) and the different buttons.

2.2. CSS

You must implement at least 4 CSS elements (1 point per element) You can not use CSS libraries (like Bootstrap or Materialize for example)

2.3. Implement a 'rules' structure

Implement a 'rules' structure (button, text area, title, whatever you want) and display the Hitori rules when the mouse pass over that structure.

2.4. Implement a "New" button

Generate a new board (different than the current one) and reset timer.

Boards are in index

2.5. Implement a "Check" button

Check if board is completed. If it is, player wins and timer stops. If not, the player get a +15 seconds timer penalty.

2.6. Implement a "Reset" button

Reset the entire board but don't reset the timer.

2.7. Set a timer

Set a timer which starts when the player starts a new game. The timer resets when the player clicks the 'New' button but don't when the player click the 'Reset' button.

3. Deliverables

Students should include the following elements in their final delivery:

- A zip archive with the source code. The source code must also come with the build system used (Project file, autotools...), if any.

4. Evaluation

4.1. No cheating

This is an individual project, therefore you are not allowed to host your project online, use someone else's code, copy and paste code from the internet. If someone is caught cheating, he will receive a 0 mark and be marked as cheater.

4.2. Grading Scale

The delivery will be graded as follows, on a 20/20 scale:

- CSS (4 points)
- HTML (4 points)
- Rules structure (2 points)
- Implement New button (2 points)
- Implement Check button (3 points)
- Implement Reset button (2 points)
- Timer (3 points)
- Bonus : Read board in file (2 points)

5. Annexe

Table 5.1. Board 1

5	4	4	3	4
3	4	2	5	4
2	5	5	1	2
2	2	1	4	5
4	1	5	3	2

Table 5.2. Board 2

4	4	4	2	2
4	2	3	5	1
1	1	2	5	4
1	3	4	1	5
3	5	4	4	1

Table 5.3. Board 3

2	2	2	5	1
5	4	2	3	4
5	1	4	5	2
2	4	5	1	3
3	5	1	1	4

Table 5.4. Board 1 Completed

0	0	1	0	1
0	1	0	0	0
0	0	1	0	1
1	0	0	0	0
0	0	0	1	0

Table 5.5. Board 2 Completed

1	0	1	0	1
0	0	0	0	0
0	1	0	1	0
1	0	0	0	0
0	0	1	0	1

Table 5.6. Board 3 Completed

1	0	1	0	0
0	0	0	0	1
1	0	0	1	0
0	1	0	0	0
0	0	0	1	0