

Exercices cours de Secu sur les clouds

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Résumé

Toto il est beau caca

Table des matières

1	Installation	1
1.1	Docker	1
1.2	Setup	1
1.2.1	General setup	1
1.2.2	Some issues	2
1.2.3	For the Web Part	2
2	Usage	2
2.1	C++ part	2
2.2	Documentation	2
2.3	Web part	2
2.4	Ports	2
3	Useful other commands	3
4	Basis	3
4.1	Resources	3
4.1.1	Board	3
4.1.2	Penguins	3
4.1.3	Angular	3

1 Installation

1.1 Docker

Docker is required in order to set up the development environment, so it can work with VSCode. Toto [1]

Note that for Windows, docker desktop will only work with Windows Pro!

1.2 Setup

1.2.1 General setup

1. Open VSCode and make sure you have the *Remote - Containers* extension installed (`ms-vscode-remote.remote-containers`)
2. Choose (at the bottom left corner) **open folder in container**

3. Let the process finish (sometimes when building the docker image the process can be stuck and you'll need to restart VSCode)

1.2.2 Some issues

- Check you switched and used Linux container in the Docker Desktop
- Check you have enough memory in your disk
- If you are reading this line, you have to change your DNS address to establish the connection with the server

1.2.3 For the Web Part

When developing the angular side of the project, you'll need to go the the `www/` folder and do a `yarn install`.

2 Usage

2.1 Cpp part

- `make` to compile the release with the emscriten compiler
- `make ENV=emscripten MODE=release` to compile the emscripten release version
- `make ENV=emscripten MODE=debug` to compile the emscripten debug version
- `make ENV=native MODE=debug` to compile the release version on the OS
- `make ENV=native MODE=debug` to compile the debug version on the OS
- the executable can be found in `./bin/main`
- `make doc` to compile the Doxygen documentation
- `clean` to clean Note that the attribute `MULTITHREADED` can be set to `true` or `false` to enable it or not (works for both `emscripten` and `native`). Most of these commands are accessible via the `tasks` of VSCode!

2.2 Documentation

Generated documentation (for the cpp part) is put in a generated folder : `doxygen`. To make use of the html format generated, please execute the script `serve_doc.sh`.

2.3 Web part

Everyting is as you are developing normally. - If you have `.env` related errors, type `yarn run env -s` - to serve : `ng serve --host 0.0.0.0` (the host part is needed for the server to be accessible from the host OS)

2.4 Ports

This environnement makes use of different ports : - 4200 for `angular` - 8080 to serve the `doxygen` doc - 5500 to make use of the `go live` extension in VsCode - 9876 is the default test port for test in `angular`

3 Useful other commands

- `c++filt _ZN4game14AbstractPlayer6actionEPNS_17AbstractBoardCellE` gives us `game::AbstractPlayer::action(game::AbstractBoardCell*)`
- to access container from another computer, for DockerWindows :
<https://github.com/docker/for-win/issues/4391#issuecomment-520420942>

4 Basis

- Initial Tutorial¹
- The basis of the project is <https://github.com/eugenp/tutorials/tree/master/algorithms-miscellaneous-1/src/main/java/com/baeldung/algorithms/mcts>
- <https://www.codeflow.site/fr/article/java-monte-carlo-tree-search>
- <https://github.com/memo/ofxMSAmcts/tree/master/src>
- <https://github.com/hayoung-kim/mcts-tic-tac-toe>
- http://codegatherer.com/mcts_tic_tac_toe.php

4.1 Resources

4.1.1 Board

- <https://simblob.blogspot.com/2019/03/improving-hexagon-map-storage-diagram.html#more>
- https://moodle.insa-rennes.fr/pluginfile.php/45332/mod_resource/content/1/bitboards.pdf

4.1.2 Penguins

- <https://gitlab.insa-rennes.fr/francesco-bariatti/pingouins/tree/master>

4.1.3 Angular

- installation came using this resource : <https://github.com/nvm-sh/nvm> (tutorial : <http://redgreenrepeat.com/2018/02/09/setting-up-angular-in-virtualbox/>)
- <https://github.com/nodesource/distributions/tree/master/deb>

Références

- [1] Rick BATTAGLINE : *Game Development with WebAssembly*. Packt, 2019.

1. <https://www.baeldung.com/java-monte-carlo-tree-search>