



Go Piscine

Rush 01

*Summary: This document is the subject for Rush01 of the Go Piscine @ 42Tokyo.*

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# Chapter I

## Instructions


- Each member of the group can register the whole group to defense.
- The group MUST be registered to defense.
- Any question concerning the subject would complicate the subject.
- You have to follow the submission procedures for all your exercises.
- This subject could change up to an hour before submission.
- You will have to handle errors coherently. Feel free to either print an error message, or simply return control to the user.
- Rushes exercises have to be carried out by group of 2, 3 or 4.
- You must therefore do the project with the imposed team and show up at Your defense slot, with all of your teammates.
- Your project must be done by the time you get to defense. The purpose of defense is for you to present and explain your work.
- Each member of your group must be fully aware of the works of the project. Should you choose to split the workload, make sure you all understand what everybody's done. During the defense, you'll be asked questions and the final grade will be based on the worst explanations.
- It goes without saying, but gathering the group is your responsibility. You've got all the means to get in contact with your teammates: phone, email, carrier pigeon, spiritism, etc. So don't bother blurping up excuses. Life isn't fair, that's just the way it is.
- However, if you've really tried everything one of your teammates remains unreachable: do the project anyway, and we'll try and see what we can do about it during the defense. Even if the group leader is missing, you still have access to the submission directory.
- You must use the latest version of Go.



Make sure the subject that was originally assigned to your group works perfectly before considering bonuses: If a bonus subject works, but the original one fails the tests, you'll get 0.

# Chapter II

## Rush01

	Exercise 00
Rush01	
Turn-in directory : <i>ex00/</i>	
Files to turn in : *	
Allowed packages : <a href="https://github.com/42tokyo/ft">github.com/42tokyo/ft</a>	
Allowed builtin functions : <code>append, cap, copy, delete, len, make, new</code>	

Create a program that place some black squares('B'), so as to meet the following conditions:

- No two black squares are orthogonally adjacent.
- No group of white squares is separated from the rest of the grid by black squares.
- Each numbered cell can see precisely that many white squares in total by looking in all four orthogonal directions, counting itself. (Black squares block the view. So, for example, a 2 clue must be adjacent to three black squares or grid edges, and in the fourth direction there must be one white square and then a black one beyond it.)
- Grid will be passed by commandline arguments.

```
$> go run *.go "...2." "..6.4" "5....6" "7.6.." ".3..." | cat -e
.B.2B$
..6B4$
5B..6$
7.6B.$
.3B..$
```

- you should only print one solution if the grid is solvable.
- Your function should never crash or loop indefinitely.
- Whenever an invalid arguments are given or a grid isn't solvable you should return an error message or prints nothing and gives back control.

```
$> go run *.go | cat -e
Error$
$> go run *.go "..." | cat -e
Error$
$> go run *.go "...A." "..6.4" "5....6" "7.6.." ".3..." | cat -e
Error$
```


Other tests:

```
$> go run *.go "...." "8.8.." ".7.7." "..8.5" "...." | cat -e
.B.B.$
8.8..$
.7.7B$
..8.5$
B.B.B$
```

```
$> go run *.go 37...." "..8.." "...." "..8.." "...69" | cat -e
37.B.$
B.8..$
...B.$
B.8..$
...69$
```

# Chapter III

## Bonus

	Exercise 01
Bonus	
Turn-in directory : <i>ex01/</i>	
Files to turn in : *	
Allowed packages : <b>Everything except external packages</b>	
Allowed builtin functions : *	

Add more functionality to ex00.  
For example:

- Grid generation functionality.
- Visualization of the solver.
- Able to solve bigger/smaller map.

Other (creative) functionality will be graded too.  
For each functionality, 5 points are given. (Max 25points)