# Programming Test: Battle ships

The purpose of this test is primarily to examine your problem solving skills.

**Please follow this spec carefully**!

You must write the game as a simple console application in the language requested.

You are expected to make your code elegant / beautiful and the best you can do. It’s not sufficient that it works please ensure separation of logic / object oriented abstraction. Comment your code as necessary.

### The Problem

Implement a simple game of battleships <http://en.wikipedia.org/wiki/Battleship_(game)> Please see example of this spec here <http://www.techhuddle.com/tests/Battleships.php>

You must create a simple console application to allow a single human player to play a **one-sided** **game** of battleships against the computer.

The program should create a 10x10 grid, and place a number of ships on the grid at **random** with the following sizes:

* 1 x Battleship (5 squares)
* 2 x Destroyers (4 squares)

Ships **can touch** but they must **not overlap**.

The console application should accept input from the user in the format “A5” to signify a square to target, and feedback to the user whether the shot was success, miss, and additionally **report on the sinking** of any vessels.

. = no shot

- = miss

X = hit

Example output

Miss

1234567890

A -.........

B ..........

C ..........

D ..........

E ..........

F ..........

G ..........

H ..........

I ..........

J ..........

Enter coordinates (row, col), e.g. A5 =

You should implement a **show** command to aid debugging and backdoor cheat. Example output after entering **show**

1234567890

A X

B X

C X X

D X X

E X X

F X

G

H

I XXXX

J

Enter coordinates (row, col), e.g. A5 =

Please report the number of shots taken once game complete, e.g.

Sunk

1234567890

A ......X...

B ......X...

C ..X...X...

D ..X...X...

E ..X...X...

F ..X.......

G ..........

H ..........

I .....-XXXX

J ..........

Well done! You completed the game in 14 shots

Please email your finished solution zipped up (**without binaries and in .zip format not .rar, .7z, etc.**)