ICS4U Culminating 2015

Getting Started

* Download the [starter code and assets](https://www.dropbox.com/sh/ze6kf8ixnmxkxgi/AABBlkVjrjS9OcWoH9pcxSBOa?dl=0) and save to your H drive
* Ensure they are all in the same folder
* Open Netbeans
* Create a “New Project From Sources”
* Select the folder where you saved your work as the site root
* Name your project Battleship\_*yourname*

Introduction

The starter code is essentially a single player Battleship game. Your task will be to modify the game in several ways. The will may involve editing html, css, and JavaScript files. Part of the challenge is just to understand how the game works.

All work must be done individually. You are not expected to work at home on this task, however, I cannot really stop you. You should not use the Internet for help (the exception would be JavaScript references which are ok.) You may look at your previous work. Work that appears to be sourced externally could cause your task to be awarded a grade of zero.

Explore the Source

* Explore Battleship.html and Battleship.js
* You’ll soon notice that the game has a background of the radar screen, however, the grid is really an HTML table laid over top
* The code isn’t all that Object Oriented
* The game has an array called **ships** that holds Objects of a sort to hold the grid locations of each of the ships.
* Ships are set as a length of three - that is, they take up three grid locations

Tasks

**Level 3 Tasks**

Completing the following tasks effectively and with good style earns a Level 3 Grade.

* Currently the locations of the ships is hardcoded. Your task is to modify the empty functions so that the program will randomly place the ships on the board each time the game is played
* **generateShipLocations()** - Creates the locations on the board of all the ships
* **generateShip()** - Creates the location of one ship
* **collision()** - Detects collisions between ships. This is used by generateShipLocations to ensure an added ship is ok

**Level 4 Tasks**

Completing the following tasks in addition to the level 3 tasks can earn a Level 4 Grade (exceeds expectations.). They are listed in order of difficulty (as I see it) and marks are awarded appropriately.

* Add one additional column and row to the game
* Set it as 4 boats in the game.
* One of length two, two of length three, and one of length four
* Restructure the code to a better Object Oriented code. This would include:
* A Ship class
* A GameBoard class
* A Game class

If part 3 is attempted, it should probably be done first as it would make parts 1 and 2 easier (in theory.)

Good morning,

Unfortunately I cannot be there today for you to begin your culminating.  I trust that all of you will be able to start your culminating tasks.  I have every intention to be in school tomorrow.

**ICS3U**

Today's task is a single period task.  That is, you must submit at the end of the period.  The task is in Canvas as Culminating Task - Day 1 in the Summative Activities Module.  You may examine your past assignments, however, you may not search the Internet.  The supply teacher has been instructed not to allow you to access the web.  *Remember that submitting****any****code that is not your own may result in an automatic grade of zero.*

**ICS4U**

Your instructions are here.  You will have the entire week; code will be submitted Friday January 16.

