CMSC 201 Fall 2016
GRS Exercise – Week 6 – Battleship Brainstorming

Battleship:

For much of the rest of this semester, we'll be working on a Battleship game during the weekly GRS meetings. This won't be for a grade, other than counting as part of your participation during GRS.

We'll start off very basic, and will add new pieces to the code each week as we learn new concepts or become more familiar with prior concepts.

Brainstorming:

Today, you should just start by brainstorming and sketching ideas. You can see a partial demo of some of Dr. Gibson's version on the next page. Yours doesn't have to look, play, or behave the same way!

NO COWBOY CODING! You might be excited and want to start coding right away, but you need to put some thought in first, or the effort you expend now will likely be wasted (when you realize you don't need that function, or that the way you wrote it doesn't work with the way you want to store your data).

You can make whatever design choices you want at this point. What do you want your board to look like? How do you want the user to play, or to select where they'll attack next?

This is a partial demo of one version of Dr. Gibson's code for battleship. Again, yours doesn't have to look, play, or behave the same way. You can make whatever design decisions you want when creating your game this semester.

```
bash-4.1$ python battleship_v2.py

        1 2 3 4 5 6 7 8 9 10
      A ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      B ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      D ~ ~ ~ # # # # ~ ~ ~
      E ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      F ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      G ~ ~ ~ ~ ~ ~ ~ X ~ ~
      H ~ ~ X ~ ~ ~ ~ X ~ ~
      I ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      J ~ ~ ~ ~ ~ ~ ~ ~ ~ ~


Please choose your row (A to J): I
Please choose a column: 8
You hit my Destroyer!

        1 2 3 4 5 6 7 8 9 10
      A ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      B ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      D ~ ~ ~ # # # # ~ ~ ~
      E ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      F ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      G ~ ~ ~ ~ ~ ~ ~ X ~ ~
      H ~ ~ X ~ ~ ~ ~ X ~ ~
      I ~ ~ ~ ~ ~ ~ ~ X ~ ~
      J ~ ~ ~ ~ ~ ~ ~ ~ ~ ~


Please choose your row (A to J): J
Please choose a column: 8
You sunk my Destroyer!
```

```
        1  2  3  4  5  6  7  8  9  10
    A   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    B   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    C   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    D   ~  ~  ~  #  #  #  #  ~  ~  ~
    E   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    F   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    G   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
    H   ~  ~  X  ~  ~  ~  ~  #  ~  ~
    I   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
    J   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
```

Please choose your row (A to J): H
Please choose a column: 2
You missed!

```
        1  2  3  4  5  6  7  8  9  10
    A   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    B   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    C   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    D   ~  ~  ~  #  #  #  #  ~  ~  ~
    E   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    F   ~  ~  ~  ~  ~  ~  ~  ~  ~  ~
    G   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
    H   ~  o  X  ~  ~  ~  ~  #  ~  ~
    I   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
    J   ~  ~  ~  ~  ~  ~  ~  #  ~  ~
```

Please choose your row (A to J): G
Please choose a column: 3
You missed!

```
        1 2 3 4 5 6 7 8 9 10
    A ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    B ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    D ~ ~ ~ # # # # ~ ~ ~
    E ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    F ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    G ~ ~ o ~ ~ ~ ~ # ~ ~
    H ~ o X ~ ~ ~ ~ # ~ ~
    I ~ ~ ~ ~ ~ ~ ~ # ~ ~
    J ~ ~ ~ ~ ~ ~ ~ # ~ ~
```

Please choose your row (A to J): H
Please choose a column: 4
You sunk my Submarine!

```
        1 2 3 4 5 6 7 8 9 10
    A ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    B ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    C ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    D ~ ~ ~ # # # # ~ ~ ~
    E ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    F ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
    G ~ ~ o ~ ~ ~ ~ # ~ ~
    H ~ o # # ~ ~ ~ # ~ ~
    I ~ ~ ~ ~ ~ ~ ~ # ~ ~
    J ~ ~ ~ ~ ~ ~ ~ # ~ ~
```

Please choose your row (A to J): A
Please choose a column: 2
You hit my Aircraft Carrier!

```
      1 2 3 4 5 6 7 8 9 10
   A  ~ X ~ ~ ~ ~ ~ ~ ~ ~
   B  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   C  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   D  ~ ~ ~ # # # # ~ ~ ~
   E  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   F  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   G  ~ ~ o ~ ~ ~ ~ # ~ ~
   H  ~ o # # ~ ~ ~ # ~ ~
   I  ~ ~ ~ ~ ~ ~ ~ # ~ ~
   J  ~ ~ ~ ~ ~ ~ ~ # ~ ~
```

Please choose your row (A to J): B
Please choose a column: 2
You hit my Aircraft Carrier!

```
      1 2 3 4 5 6 7 8 9 10
   A  ~ X ~ ~ ~ ~ ~ ~ ~ ~
   B  ~ X ~ ~ ~ ~ ~ ~ ~ ~
   C  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   D  ~ ~ ~ # # # # ~ ~ ~
   E  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   F  ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
   G  ~ ~ o ~ ~ ~ ~ # ~ ~
   H  ~ o # # ~ ~ ~ # ~ ~
   I  ~ ~ ~ ~ ~ ~ ~ # ~ ~
   J  ~ ~ ~ ~ ~ ~ ~ # ~ ~
```

Please choose your row (A to J): C
Please choose a column: 2
You hit my Aircraft Carrier!

```
          1 2 3 4 5 6 7 8 9 10
      A ~ X ~ ~ ~ ~ ~ ~ ~ ~
      B ~ X ~ ~ ~ ~ ~ ~ ~ ~
      C ~ X ~ ~ ~ ~ ~ ~ ~ ~
      D ~ ~ ~ # # # # ~ ~ ~
      E ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      F ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
      G ~ ~ o ~ ~ ~ ~ # ~ ~
      H ~ o # # ~ ~ ~ # ~ ~
      I ~ ~ ~ ~ ~ ~ ~ # ~ ~
      J ~ ~ ~ ~ ~ ~ ~ # ~ ~
```

Please choose your row (A to J):