

## Assignment 3 INFO 2323 2D Game Programming

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### Setup

We are going to make a simplified version of the game Battleship.

### HTML Code

Start with the base HTML code.

Change the title tag to say "Assignment 3 by Your Name"

The base code should look like the following.

```
<!doctype html>
<html lang="en">
<head>
  <meta charset="ut-8">
  <title>Assignment 3 by Jayson McCune</title>
  <link rel="stylesheet" href="main.css">
</head>
<body>
  <div id="stage">
  </div>
  <script src="scripts.js"></script>
</body>
</html>
```

Add a div tag with an id of input after the stage div tag and before the script tag. Then add two input tags with id's of inputX and inputY. Then add a button with the text fire and an id of the same inside the input div tag.

```
<body>
  <div id="stage"></div>
  <div id="input">
    <input id="inputX" type="text" placeholder="X...">
    <input id="inputY" type="text" placeholder="Y...">
    <button id="fire">Fire</button>
  </div>
  <script src="scripts.js"></script>
</body>
```

Lastly, we will add a div tag inside the stage to hold the image of the ship that we are trying to hit.

```
<div id="stage">
  <div id="ship"></div>
</div>
```

The finalized HTML will look like the following:

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```
<!doctype html>
<html lang="en">
<head>
  <meta charset="ut-8">
  <title>Assignment 3 by Jayson McCune</title>
  <link rel="stylesheet" href="main.css">
</head>
<body>
  <div id="stage">
    <div id="ship"></div>
  </div>
  <div id="input">
    <input id="inputX" type="text" placeholder="X...">
    <input id="inputY" type="text" placeholder="Y...">
    <button id="fire">Fire</button>
  </div>
  <script src="scripts.js"></script>
</body>
</html>
```

### CSS Code

We are going to create a new CSS file. Name the file main.css.

In the CSS file we will have the stage CSS identifier with the following values.

```
#stage
{
  position: relative;
  margin: 0px auto;
  width: 400px;
  height: 300px;
  border: 1px dashed;
}
```

Then add the input identifier CSS.

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```
#input
{
    position: relative;
    margin: 0px auto;
    width: 405px;
    height: 20px;
}
```

Then add the ship identifier CSS.

```
#ship
{
    position: absolute;
    width: 14px;
    height: 55px;
    top: 200px;
    left: 150px;
    background-image: url(images/ShipPatrolHull.png)
}
```

To make the background-image URL work you will need to add an images folder to the same location that the main.css file is in. Then copy the ShipPatrolHull.png image to the folder. You can find the image in Canvas under the Module Resources page.

We are going to initially hide the ship image so that the player does not see it on the screen. The ship will still be there, but it will be invisible.

```
visibility: hidden;
```

The whole complete ship CSS will look like this.

```
#ship
{
    position: absolute;
    width: 14px;
    height: 55px;
    top: 200px;
    left: 150px;
    visibility: hidden;
    background-image: url(images/ShipPatrolHull.png)
}
```

Then add the three button CSS sections from the alien attack example in the text book.

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```
button {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 14px;
    transition-duration: 0.5s;
    color: #fff;
    cursor: pointer;

    -webkit-border-radius: 10px;
    -moz-border-radius: 10px;
    border-radius: 10px;

    background: -webkit-linear-gradient(top, #a3a3a3, #000);
    background: -moz-linear-gradient(top, #a3a3a3, #000);
    background: linear-gradient(top, #a3a3a3, #000);

    -webkit-box-shadow: 5px 5px 3px rgba(0,0,0,0.5);
    -moz-box-shadow: 5px 5px 3px rgba(0,0,0,0.5);
    box-shadow: 5px 5px 3px rgba(0,0,0,0.5);

    -webkit-user-select: none;
    -moz-user-select: none;
    user-select: none;
}

button:hover {
    background: -webkit-linear-gradient(top, #acc7a3, #506651);
    background: -moz-linear-gradient(top, #acc7a3, #506651);
    background: linear-gradient(top, #acc7a3, #506651);
}

button:active
{
    background: -webkit-linear-gradient(top, #858565, #c5c9a9);
    background: -moz-linear-gradient(top, #858565, #c5c9a9);
    background: linear-gradient(top, #858565, #c5c9a9);
}
```

### JavaScript Code

We are going to have all the JavaScript in a file named scripts.js.

### Additional Changes

Use the JavaScript from the alien attack example in the text book to make the fire button shoot at the patrol ship using the x and y inputs that the player enters. When the user guesses where the ship is it will show the ship and output that the game is over, the player won, and how many guesses it took. The ship is 13 by 55 pixels.

You will need this size to find the area that the ship takes up.

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Add an output text field to display this message. You can put instructions for the game initially inside the output text field if you would like.

### Submission

Put all three files, HTML, CSS, and JavaScript, and the images folder into a single folder. Zip the folder and submit it through the Canvas assignment.