Assignment 4 – HeliAttack

For this assignment, you will be creating a side-scrolling helicopter piloting game using HTML5, CSS3, and JavaScript.

# Due Date

This homework assignment is due **Monday, October 27 by 2:30pm** (Just before class).

# Requirements

You will need to:

1. Implement the**GUI** class’s **render** function to display information to the player on the status of the game. These should be implemented as HTML elements overlaying the game canvas, and include:
   1. The current game score (10 points).
   2. The number of lives remaining to the player (10 points)
   3. The number of missiles remaining to the player (10 points)
   4. The health of the player (10 points)
2. Implement additional functionality of the **Helicopter** class:
   1. Aim turret and missiles at mouse cursor (10 points)
   2. Render targeting reticule (mouse cursor) on screen (10 points)
   3. Fire bullets when the left mouse button is down (10 points)
   4. Fire missiles when the right mouse button is clicked (10 points)
3. Implement the Bullet class in a new javascript file bullet.js, which:
   1. Renders on-screen as a simple circle (10 points)
   2. Damages any enemies it hits (10 points)
4. Implement the **Missile** class in a new javascript file missile.js, which:
   1. Renders on-screen with a fire trail using the sprite sheet (10 points)
   2. Travels towards the targeted location (10 points)
   3. Explodes upon reading the targeted location (10 points)
   4. Damages any enemies in the radius of the explosion (10 points)
5. Implement side-scrolling in the **game** class within heli\_attack.js:
   1. Use at least 3 parallax layers that scroll at different speeds (20 points)
   2. Rubber-band the helicopter (i.e. allow it to move to the middle of the screen before scrolling begins) Keep the helicopter within the left side of the screen. (10 points)
6. Implement a **target** class that:
   1. Renders a hovering balloon (circle) on screen. (10 points)
   2. Moves up and down slightly in a bobbing motion (10 points)
   3. Explodes when hit with a bullet or missile (10 points)

**Extra Credit**

1. Add a mini-map to your gui which displays the full level and the player’s position in it (20 points).

# Turning Your Work In

To turn your work in, you must:

1. Post your working solution on your personal CIS web space (or your own website). Supply the direct url to KSOL. *Make sure that your site is publicly visible!*
2. Zip your project files and attach them to your KSOL submission.

Failing to do one or the other will result in a 50% reduction in your grade