



# Project 2

Game Development using HTML5

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- Game Logic:

- a) Overview:

The player controls a plane by the mouse or keyboard over the screen and the enemies appears from the other side at random positions the player can defend himself by shooting the enemies. The player should avoid the enemies or he will lose a life or the game if his lives run out. The score is the number of enemies the player kills at the game.

- b) Interface:

- 1) Main Menu:

The player has 2 buttons one to start el game and it takes him to a new page to choose the difficulty of the game (Easy or Hard) and number of players (1 Player or 2 Players), the other one exit the game.

- 2) Easy Level:

The player has 4 lives to end game and his plane shots 2 bullets at a time, enemies speed to approach the player is slow and an enemy appears every 3 seconds.

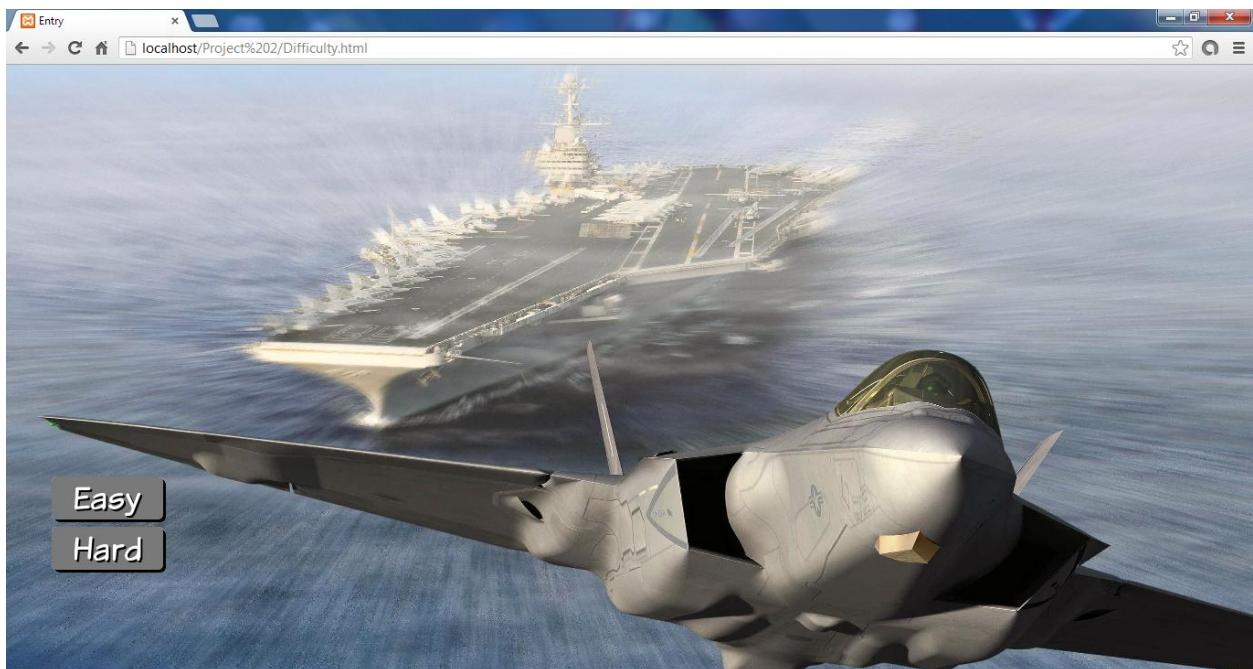
- 3) Hard Level:

The player has 2 lives to end game and his plane shots 1 bullet at a time, enemies speed to approach the player is high and an enemy appears every half second.

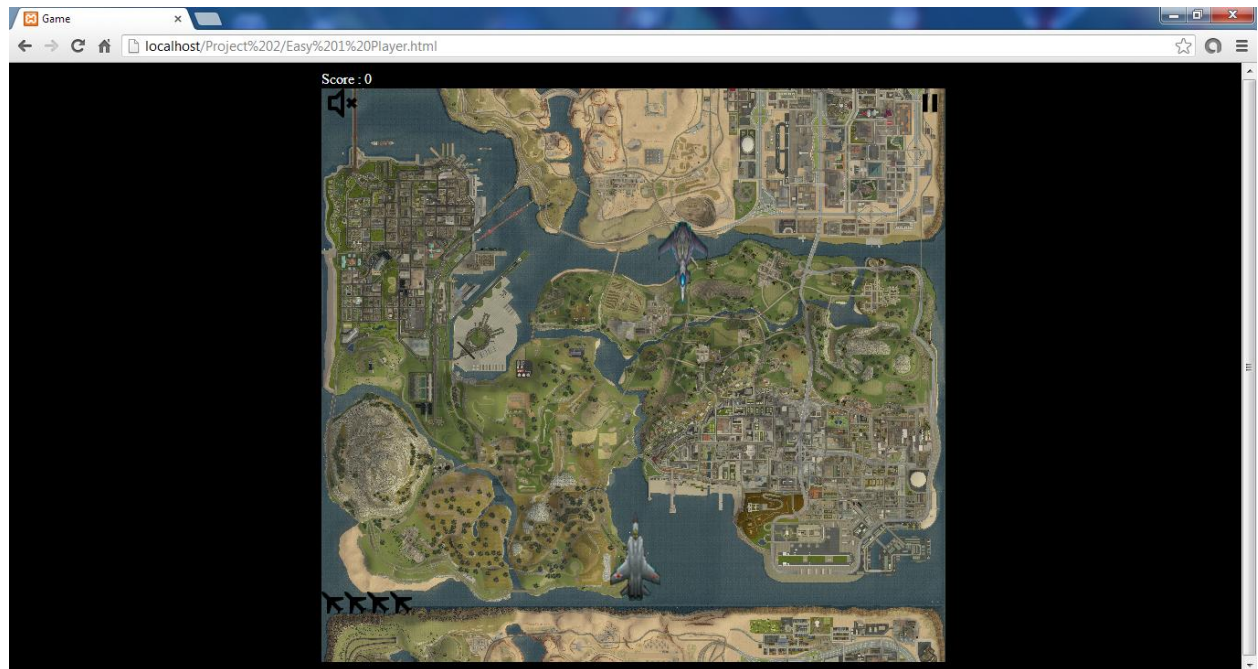
- 4) Game Over:

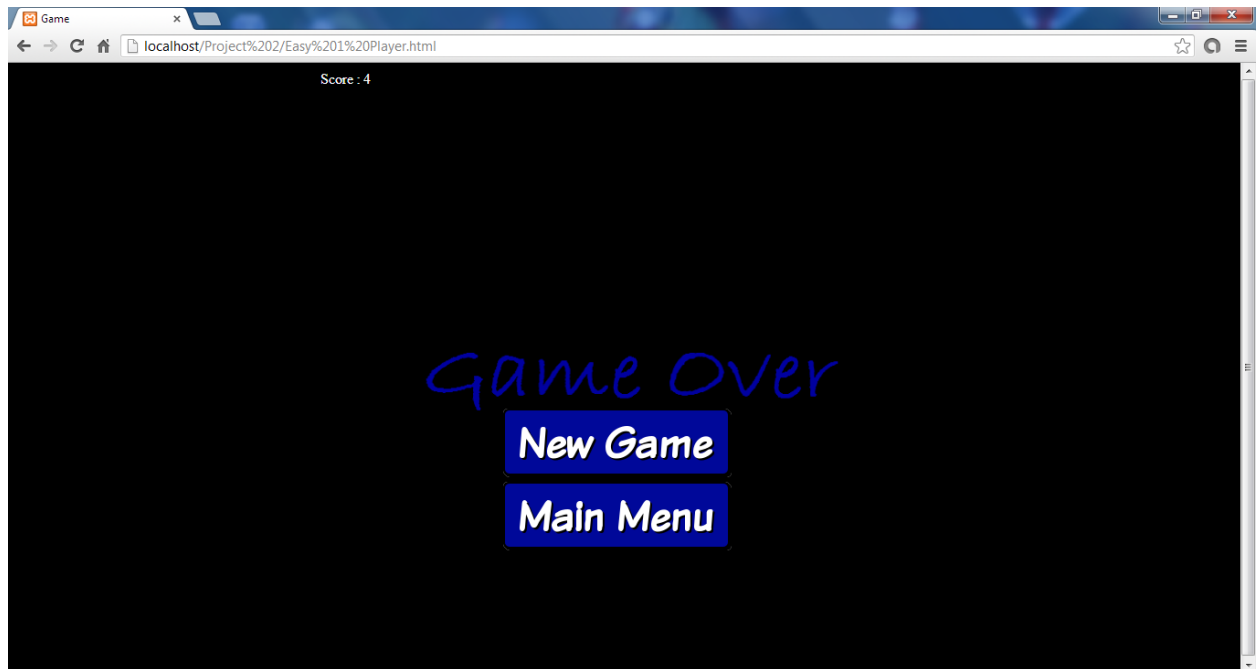
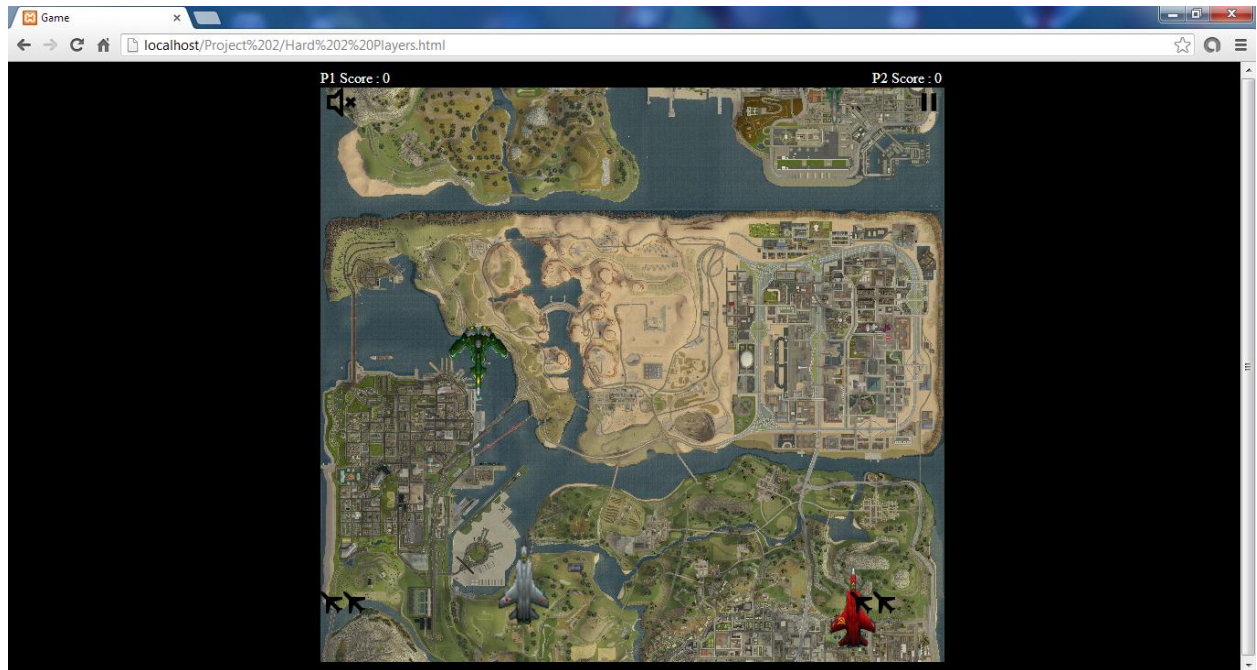
If it is a 1 player game the game ends displaying the score of the player. If it is a 2 players game the game ends displaying the scores of the two players and writes which player wins. Also the player will have two buttons to play a new game and another one to return to the main menu.

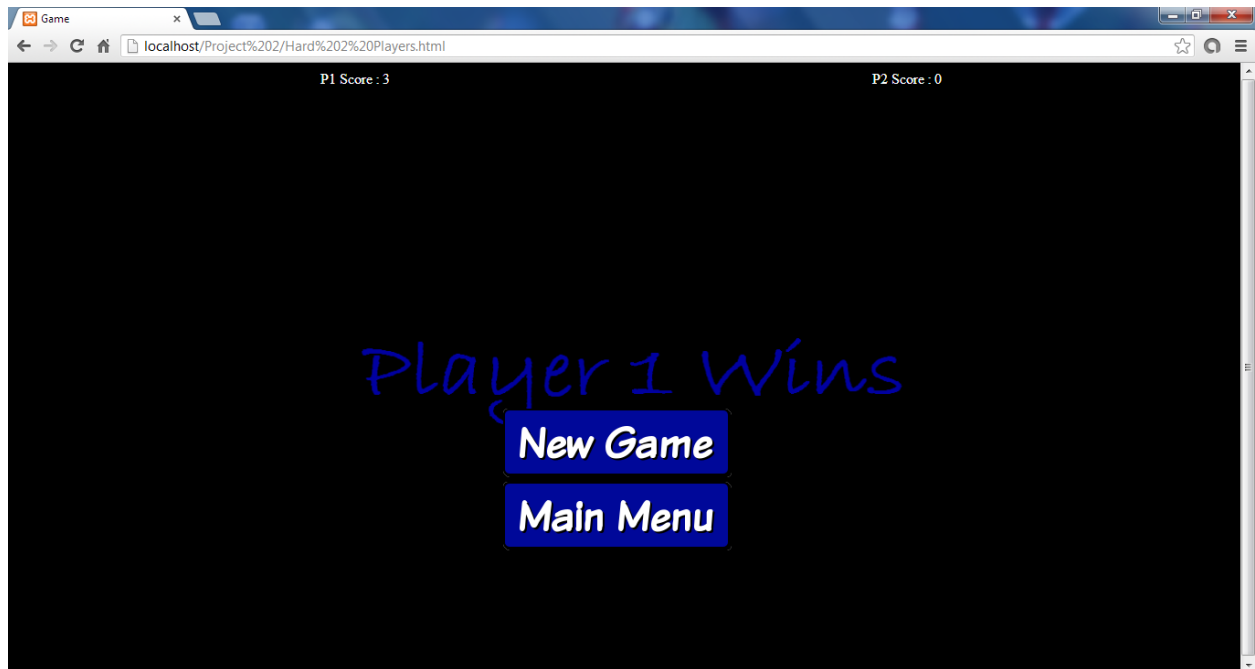
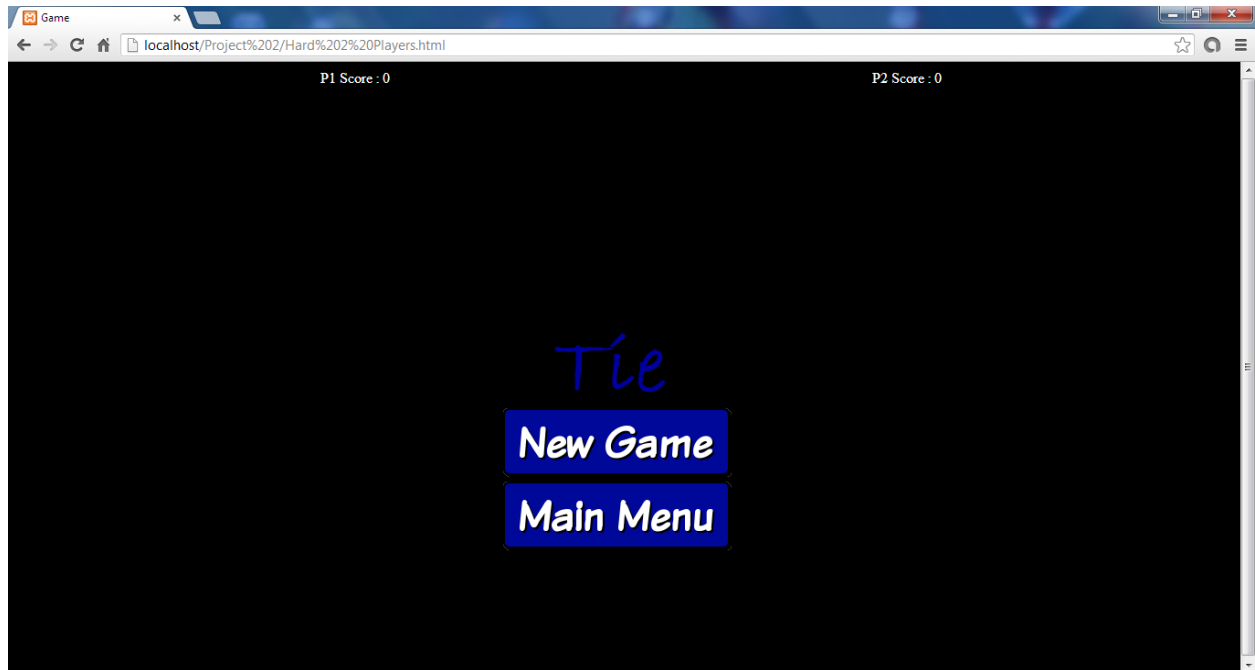
- Technology Used:
  - a) HTML5.
  - b) PIXI.
  - c) JavaScript.
- Screenshots:
  - a) Google Chrome:

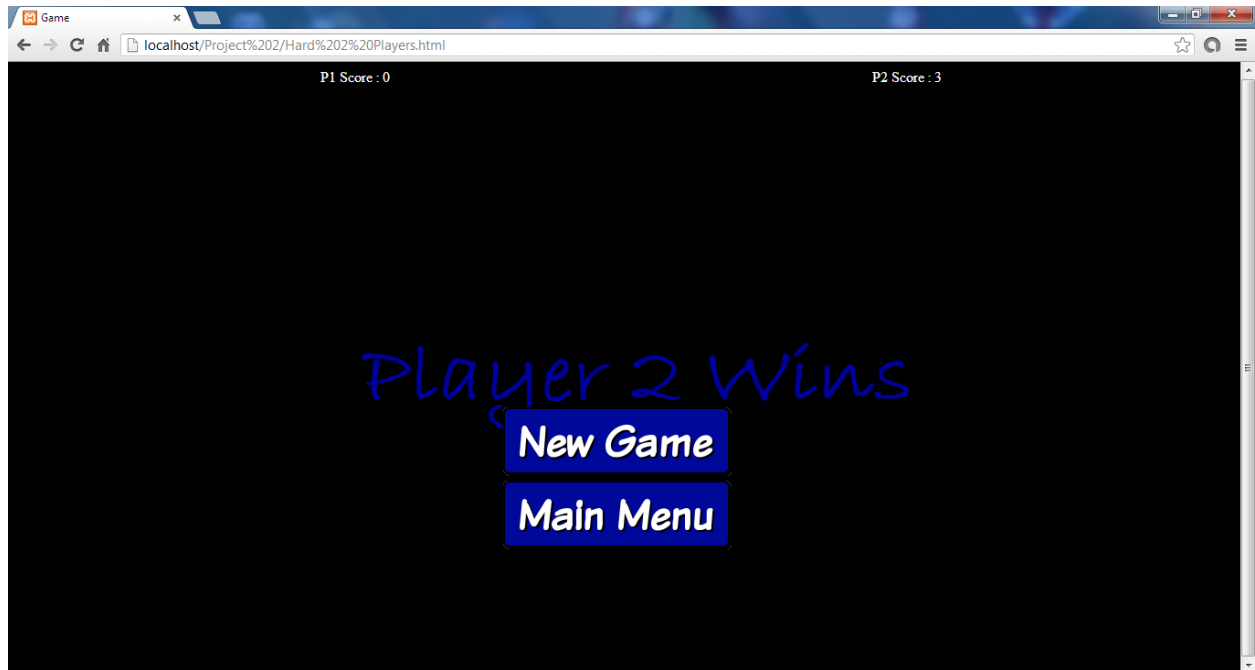










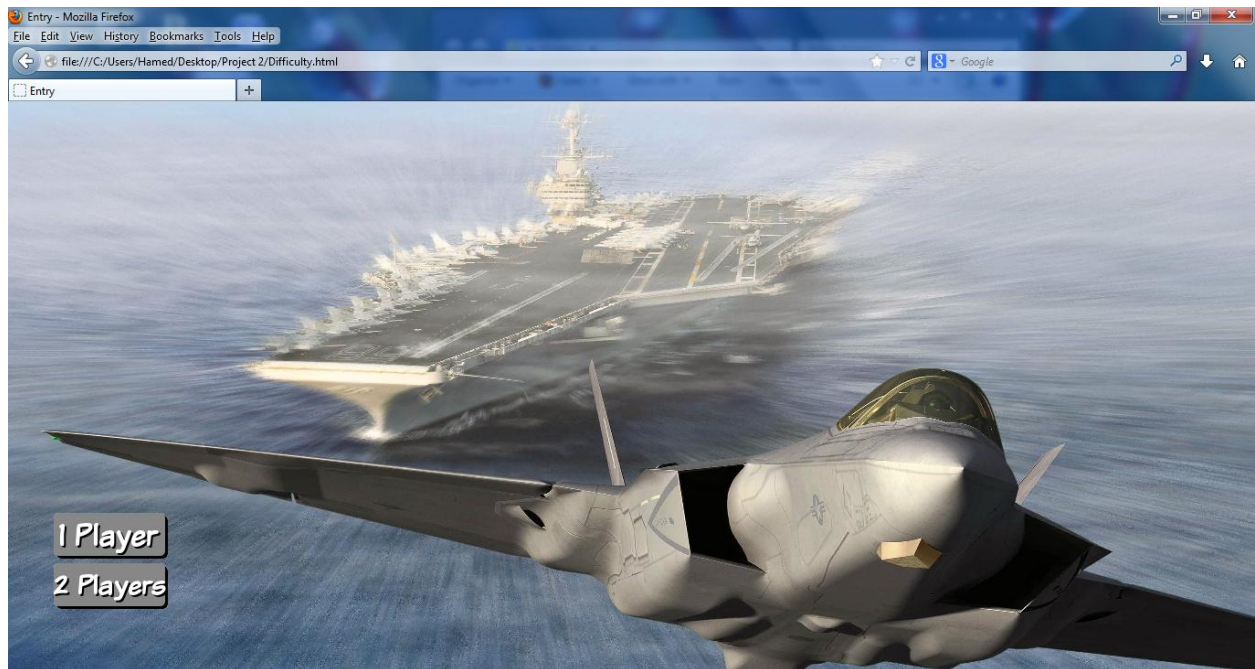
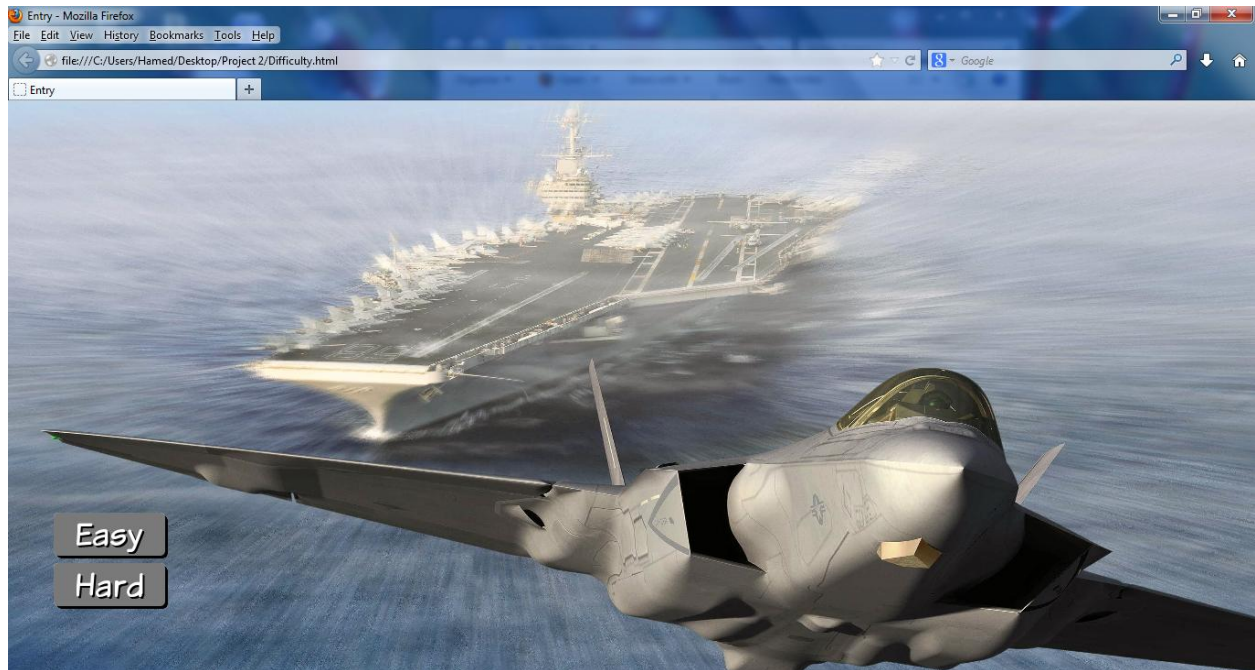


## b) Firefox:



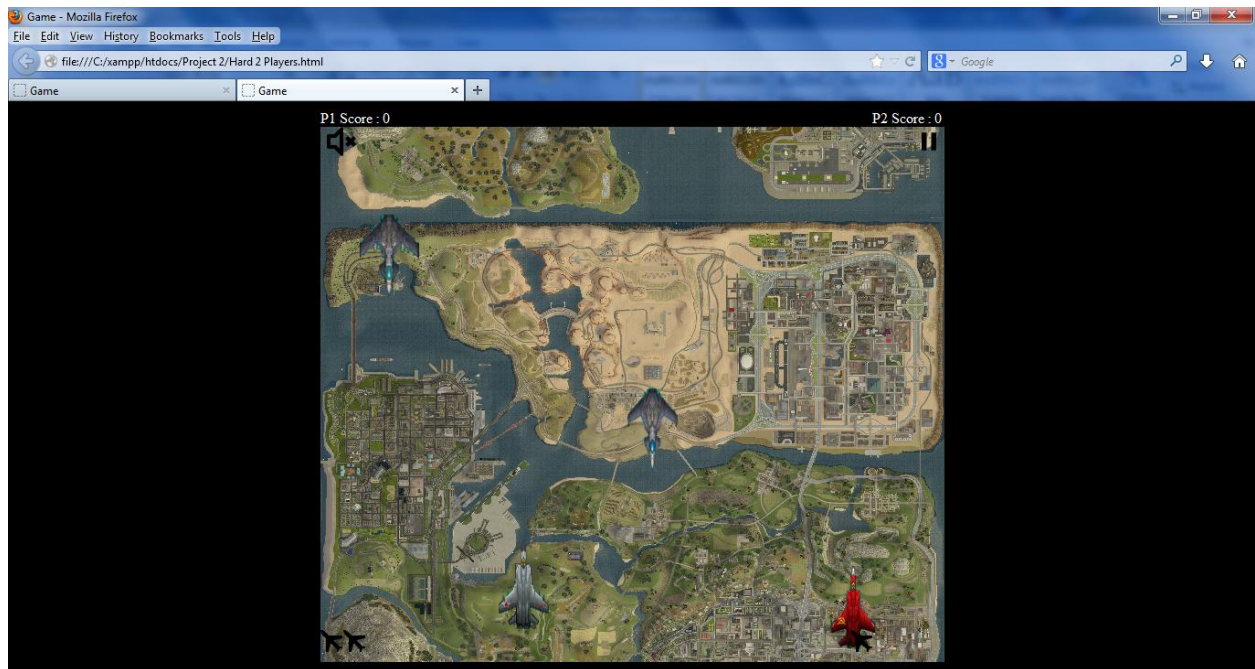
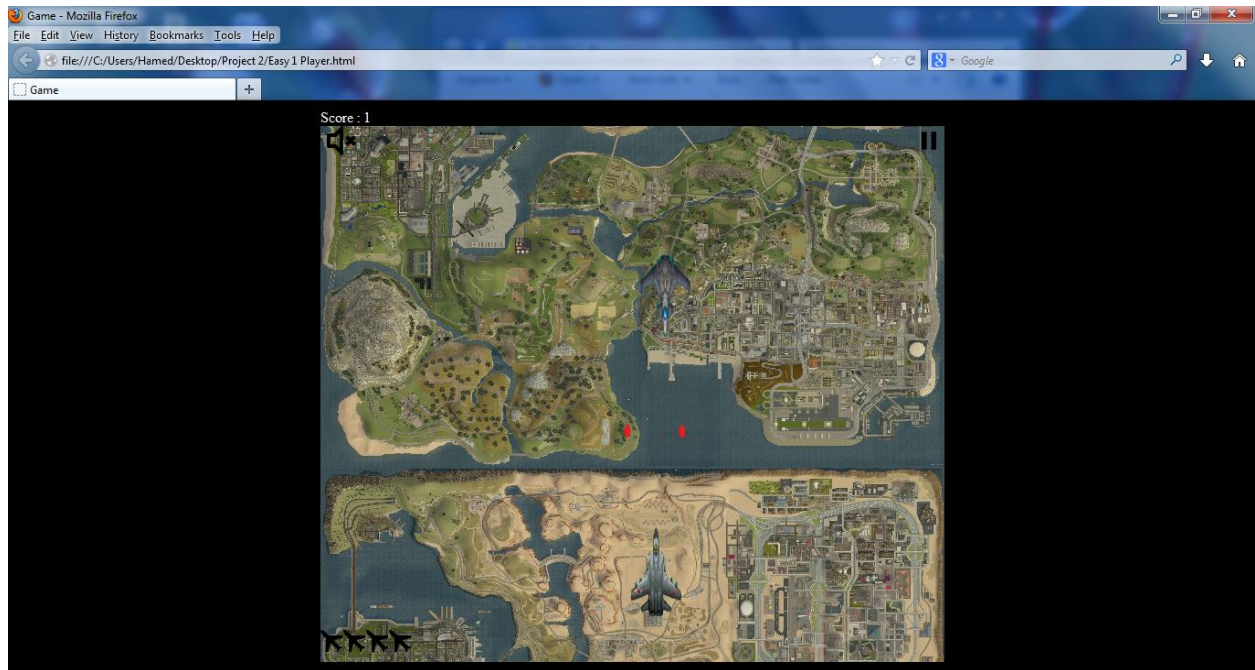


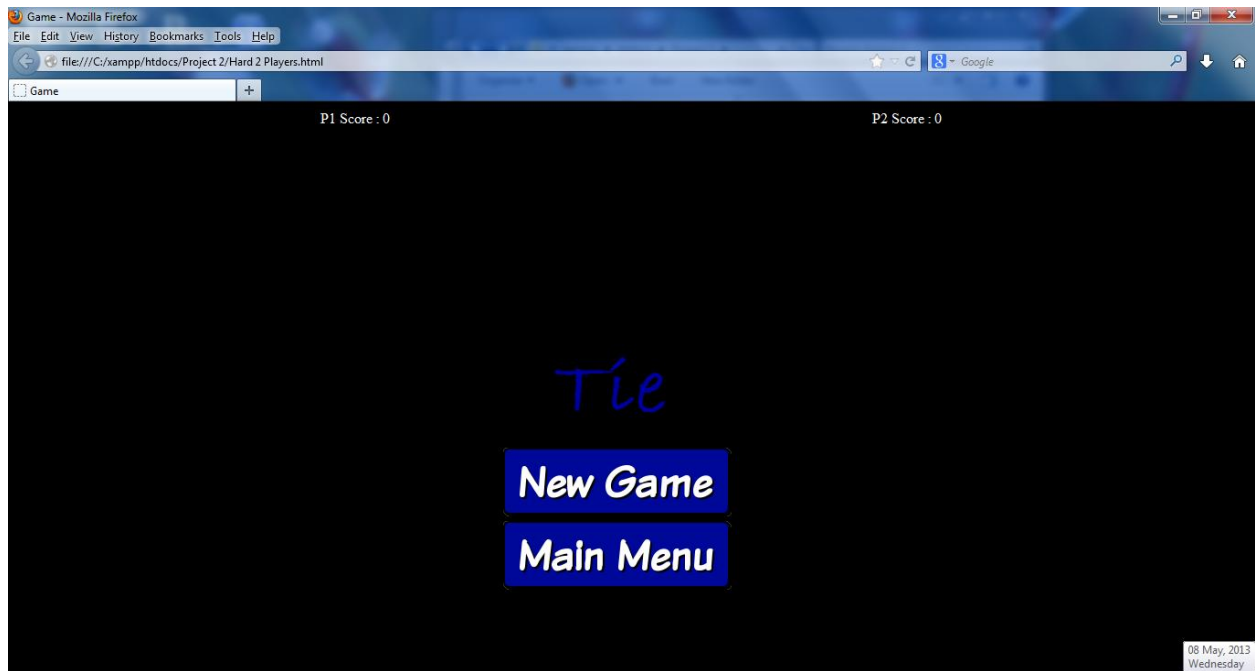
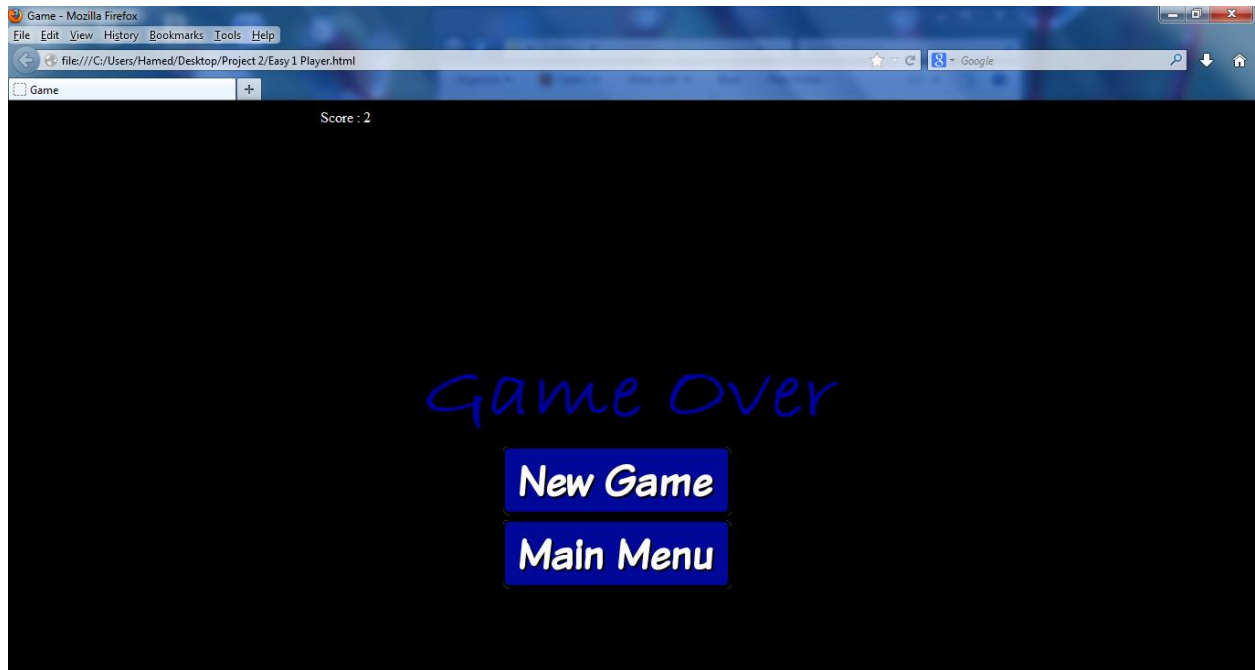
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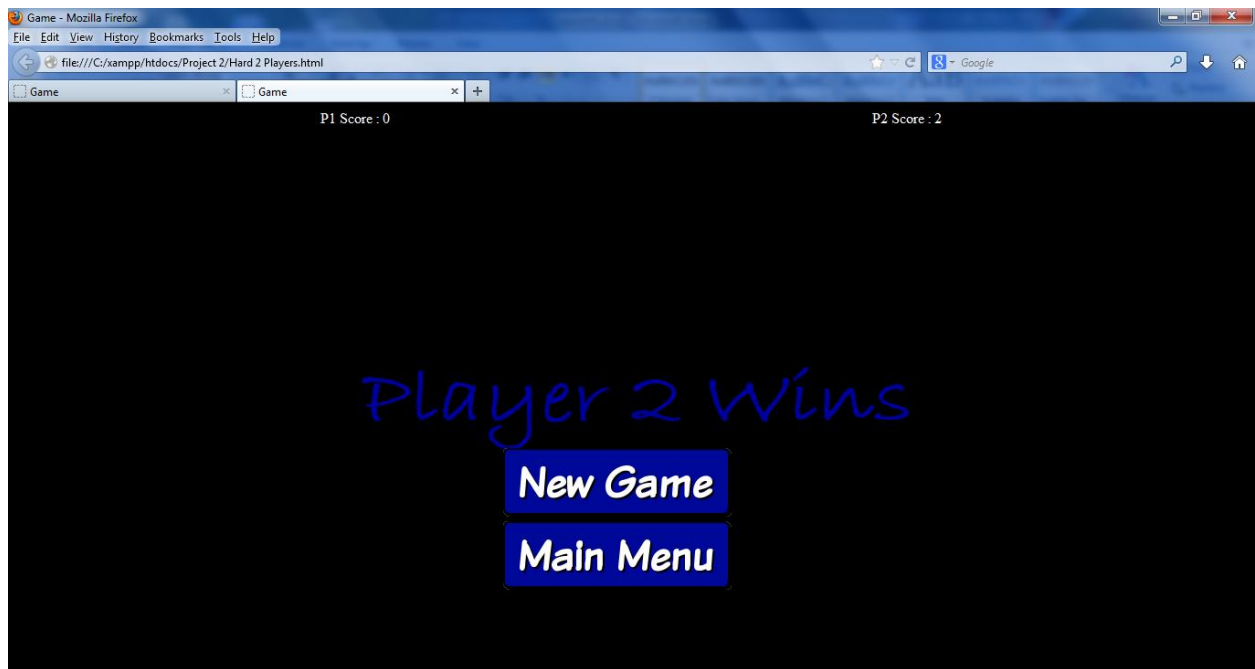
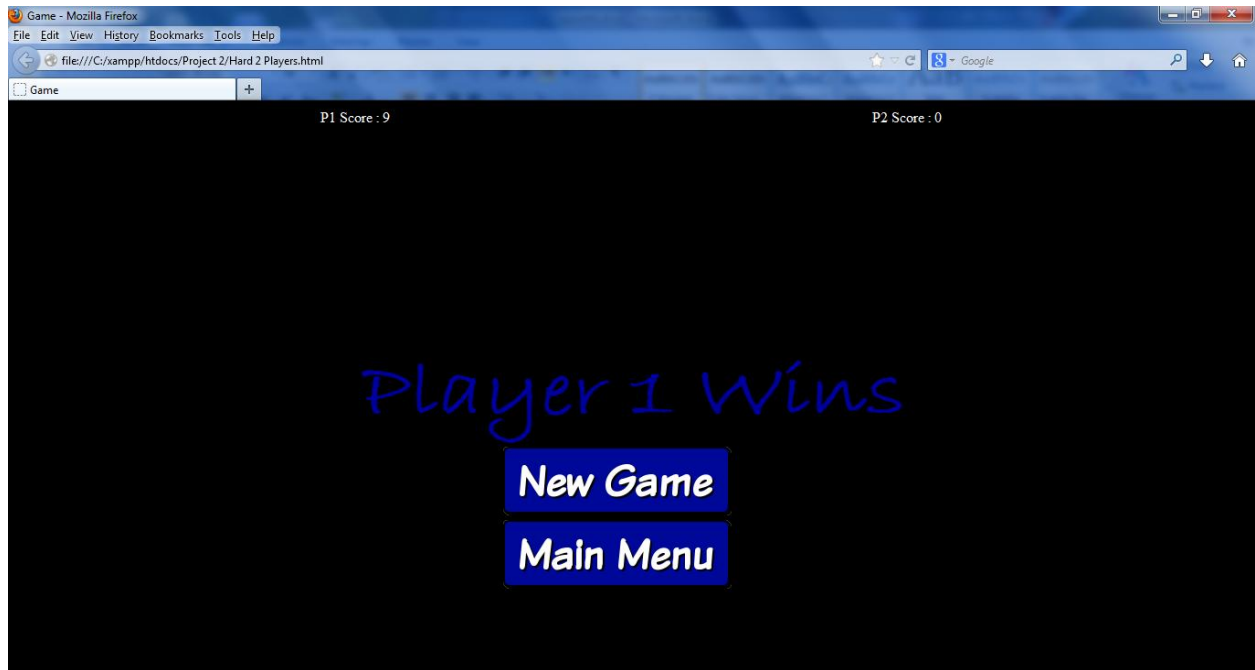




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## • Code Snippets:

```

C:\xampp\htdocs\Project 2\Easy 2 Players.html - Sublime Text 2 (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

Easy 2 Players.html
var plane1 = PIXI.Sprite.fromImage('planes/plane1.png');
plane1.setInteractive(true);
plane1.position.x = (window.innerWidth / 2) + 100;
plane1.position.y = window.innerHeight - 100;
plane1.anchor.x = 0.5;
plane1.anchor.y = 0.5;
stage.addChild(plane1);
plane1.mousemove = function (data)
{
    if(continuity == 1)
    {
        this.data = data;
        plane1.position.x = this.data.getLocalPosition(this.parent).x;
        plane1.position.y = this.data.getLocalPosition(this.parent).y;
    }
}
plane1.mousedown = function(data)
{
    if(continuity == 1)
    {
        if(volume == 1)
        {
            document.getElementById('Sho').play();
            shotsRight[shotsRightCounter] = PIXI.Sprite.fromImage("Shots/shot.png");
            shotsLeft[shotsLeftCounter] = PIXI.Sprite.fromImage("Shots/shot.png");
            shotsRight[shotsRightCounter].position.x = plane1.position.x + 25;
            shotsRight[shotsRightCounter].position.y = plane1.position.y;
            shotsLeft[shotsLeftCounter].position.x = plane1.position.x - 35;
            shotsLeft[shotsLeftCounter].position.y = plane1.position.y;
            stage.addChild(shotsRight[shotsRightCounter]);
            stage.addChild(shotsLeft[shotsLeftCounter]);
            shotsRightCounter++;
            shotsLeftCounter++;
        }
    }
}
plane1.mouseover = function (data)
{
    setInterval(function(){
        if(continuity == 1)
        {
            enemies[enemyCounter] = new PIXI.Sprite(enemyTextures[enemyTextureCounter % 6]);
            enemies[enemyCounter].position.x = Math.random() * (window.innerWidth / 2);
            enemies[enemyCounter].position.y = -10;
            enemies[enemyCounter].anchor.x = 0.5;
            enemies[enemyCounter].anchor.y = 0.5;
            stage.addChild(enemies[enemyCounter]);
            enemyCounter++;
            enemyTextureCounter++;
        }
    }, 3000);
}
}
Line 1, Column 1
Spaces: 4
HTML

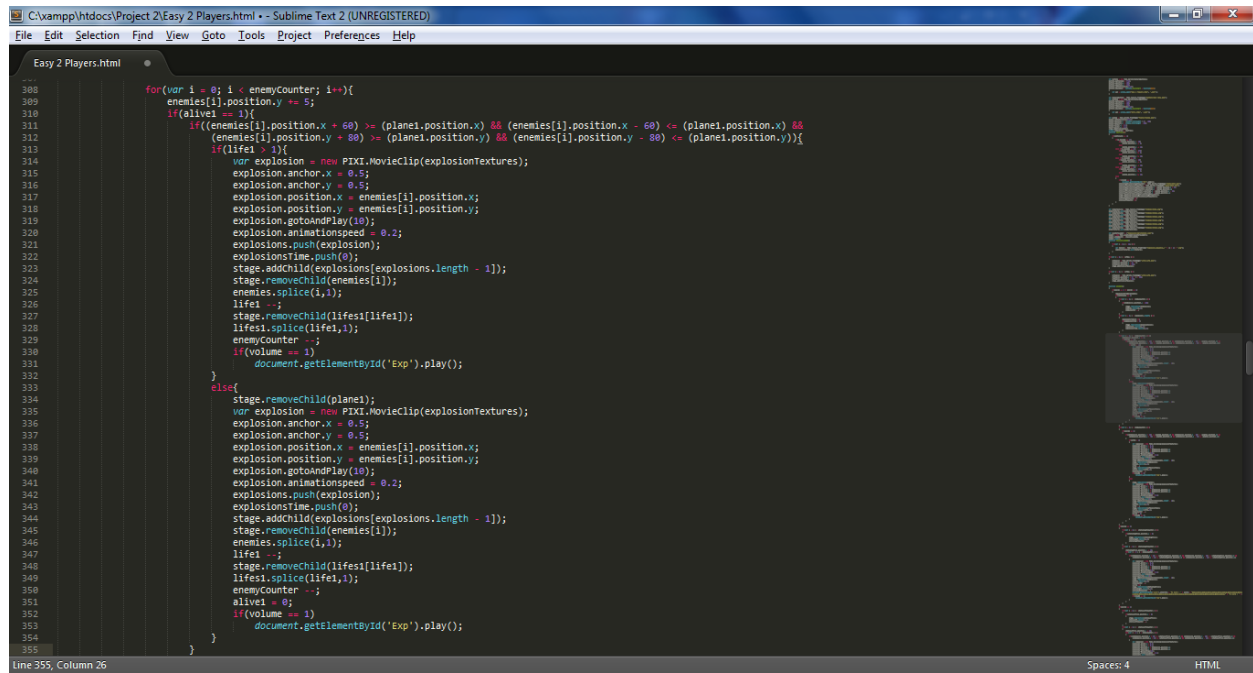
```

```

C:\xampp\htdocs\Project 2\Easy 2 Players.html - Sublime Text 2 (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

Easy 2 Players.html
var plane2 = PIXI.Sprite.fromImage('planes/plane2.png');
plane2.setInteractive(true);
plane2.position.x = (window.innerWidth / 2) - 100;
plane2.position.y = window.innerHeight - 100;
plane2.anchor.x = 0.5;
plane2.anchor.y = 0.5;
stage.addChild(plane2);
window.onKeyPress = keyPress;
function keyPress(e)
{
    if(continuity == 1)
    {
        if(e.keyCode == 37)
        {
            if(plane2.position.x < 20)
            {
                plane2.position.x -= 0;
            }
            else
            {
                plane2.position.x -= 20;
            }
        }
        else if(e.keyCode == 39)
        {
            if(plane2.position.x > 670)
            {
                plane2.position.x += 0;
            }
            else
            {
                plane2.position.x += 20;
            }
        }
        else if(e.keyCode == 38)
        {
            if(plane2.position.y < 20)
            {
                plane2.position.y -= 0;
            }
            else
            {
                plane2.position.y -= 20;
            }
        }
        else if(e.keyCode == 40)
        {
            if(plane2.position.y > 550)
            {
                plane2.position.y += 0;
            }
            else
            {
                plane2.position.y += 20;
            }
        }
        else
        {
            if(volume == 1)
            {
                document.getElementById('Sho').play();
                shots2Right[shots2RightCounter] = PIXI.Sprite.fromImage("Shots/shot.png");
                shots2Left[shots2LeftCounter] = PIXI.Sprite.fromImage("Shots/shot.png");
                shots2Right[shots2RightCounter].position.x = plane2.position.x + 25;
                shots2Right[shots2RightCounter].position.y = plane2.position.y;
                shots2Left[shots2LeftCounter].position.x = plane2.position.x - 35;
                shots2Left[shots2LeftCounter].position.y = plane2.position.y;
                stage.addChild(shots2Right[shots2RightCounter]);
                stage.addChild(shots2Left[shots2LeftCounter]);
                shots2RightCounter++;
                shots2LeftCounter++;
            }
        }
    }
}
}
Line 1, Column 1
Spaces: 4
HTML

```



```
...
308 for(var i = 0; i < enemyCounter; i++){
309     enemies[i].position.y += 5;
310     if(alive == 1){
311         if((enemies[i].position.x + 60) >= (plane1.position.x) && (enemies[i].position.x - 60) <= (plane1.position.x) &&
312             (enemies[i].position.y + 80) >= (plane1.position.y) && (enemies[i].position.y - 80) <= (plane1.position.y)){
313             if(life1 > 1){
314                 var explosion = new PIXI.MovieClip(explosionTextures);
315                 explosion.anchor.x = 0.5;
316                 explosion.anchor.y = 0.5;
317                 explosion.position.x = enemies[i].position.x;
318                 explosion.position.y = enemies[i].position.y;
319                 explosion.gotoAndPlay(10);
320                 explosion.animationspeed = 0.2;
321                 explosions.push(explosion);
322                 explosionsTime.push(0);
323                 stage.addChild(explosions[explosions.length - 1]);
324                 stage.removeChild(enemies[i]);
325                 enemies.splice(i,1);
326                 life1 --;
327                 stage.removeChild(lifesi[life1]);
328                 lifesi.splice(life1,1);
329                 enemyCounter --;
330                 if(volume == 1)
331                     document.getElementById("Exp").play();
332             }
333             else{
334                 stage.removeChild(plane1);
335                 var explosion = new PIXI.MovieClip(explosionTextures);
336                 explosion.anchor.x = 0.5;
337                 explosion.anchor.y = 0.5;
338                 explosion.position.x = enemies[i].position.x;
339                 explosion.position.y = enemies[i].position.y;
340                 explosion.gotoAndPlay(10);
341                 explosion.animationspeed = 0.2;
342                 explosions.push(explosion);
343                 explosionsTime.push(0);
344                 stage.addChild(explosions[explosions.length - 1]);
345                 stage.removeChild(enemies[i]);
346                 enemies.splice(i,1);
347                 life1 --;
348                 stage.removeChild(lifesi[life1]);
349                 lifesi.splice(life1,1);
350                 enemyCounter --;
351                 alive1 = 0;
352                 if(volume == 1)
353                     document.getElementById("Exp").play();
354             }
355         }
    }
}
Line 355, Column 26
Spaces: 4
HTML
```