Project 2
Game Development using HTML5

Menatallah Moh. Essam El-Din (1201)
Nancy Rafik Ibrahim (1219)

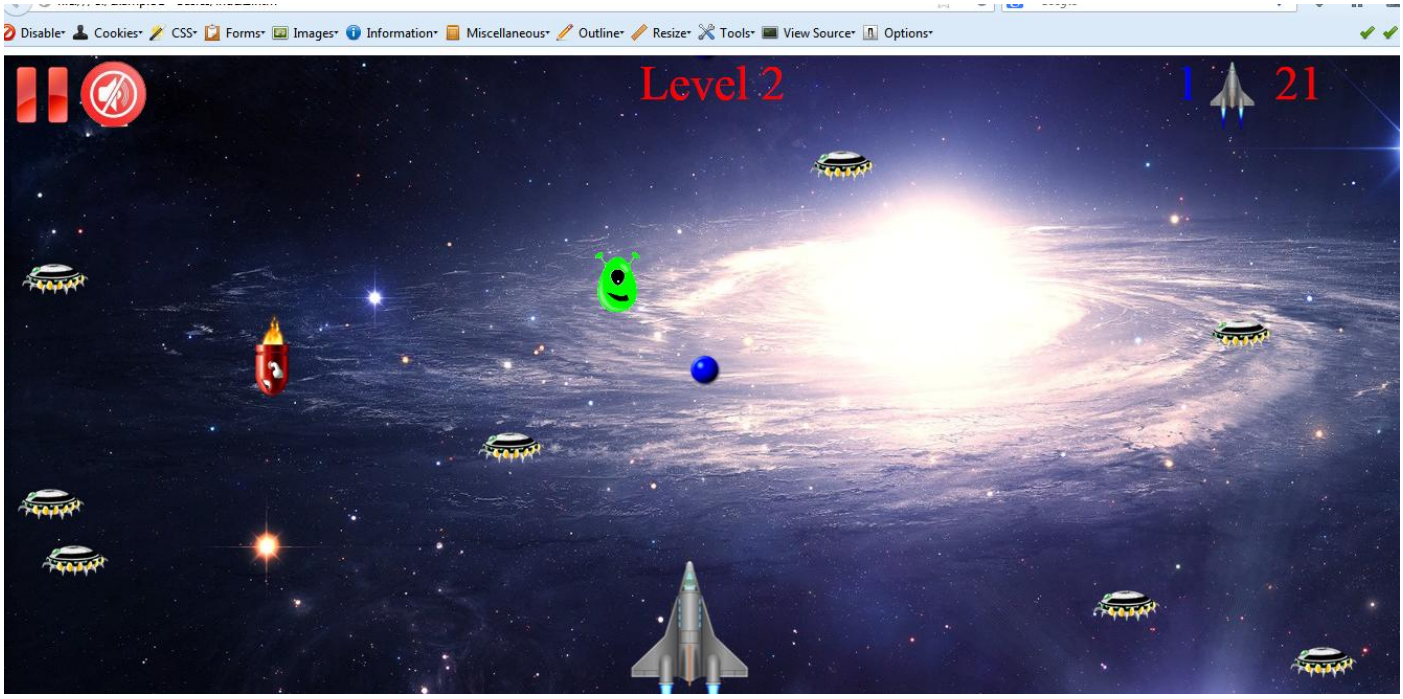
Game Logic:

The game starts with 3 lives and endless number of bullets. Player starts shooting invaders and gains one point for each spaceship and 5 points for the falling alien. The player enters Level 2 after he/she reaches score of 20. Level 2 introduces a new type of invaders which is faster. The player loses one life if he/she is hit three times by the spaceship or 1 time by the falling alien or the new invader in level 2. The player wins if he/she reaches score of 50 in level 2.
Background music is played and control buttons (Pause, Mute) are added as well.

Technologies used:

- PIXI.JS
- HTML5
- NotePad++
- Photoshop

Screenshots from Firefox/ Google Chrome Browsers:


Disable
Cookies
CSS
Forms
Images
Information
Miscellaneous
Outline
Resize
Tools
View Source
Options
Level 2
1
21


Level 1
0
7
GAME
OVER


Level 2
3
30

Code Snippets:

Creating Alien:

```
var aliens2 = [];
        function addalien2()
        {
        if(flag == 0){
                var texture4 = PIXI.Texture.fromImage("alien1.png");
                // create a new Sprite using the texture
                    var alien2 = new PIXI.Sprite(texture4);
                    alien2.position.x = Math.floor((Math.random())*renderer.width);
                    alien2.position.y = 0;
                    aliens2.push(alien2);
                    stage.addChild(alien2);
                    }
}
```

Colliding and detecting the collision:

```
var collision_counts=0;
        function collision()   // collision between bullets and enemies
        {
        for ( var i=0;i<Bullet.length;i++){
        for ( var j=0;j<aliens.length;j++) {
        if (detectcollision(Bullet[i],aliens[j])){
        collision3_counts_SCORE = collision3_counts_SCORE +1;
        document.getElementById("score").innerHTML =  collision3_counts_SCORE;
          stage.removeChild(Bullet[i]);
          stage.removeChild(aliens[j]);
          collision_counts++;
          Bullet.splice(i,1);
          aliens.splice(j,1);
        } }
        } }
        function detectcollision(a, b)    // detect collision between bullets and enemies
      {
       return a.position.x < b.position.x + b.width &&
       a.position.x + a.width > b.position.x &&
       a.position.y < b.position.y + b.height &&
       a.position.y + a.height > b.position.y;
      }
```