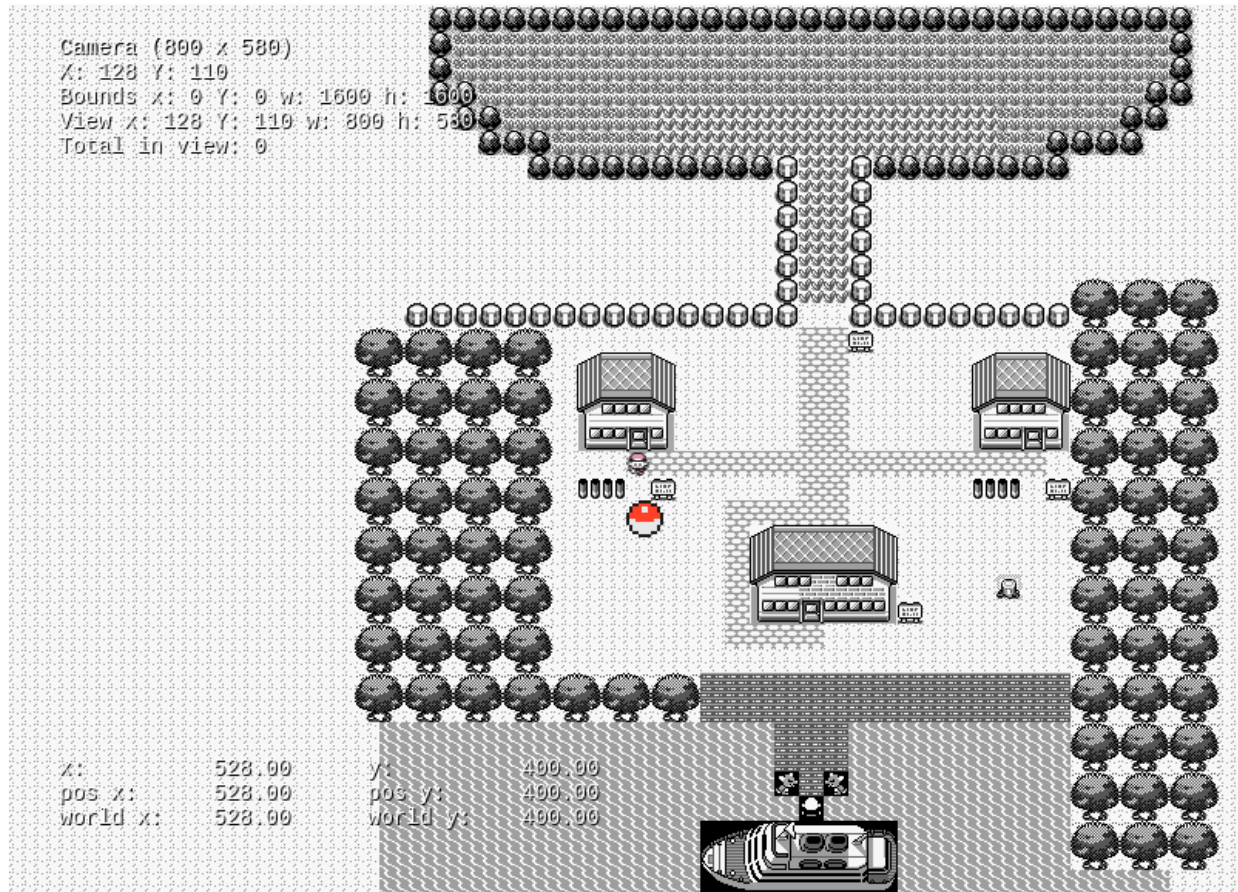Group Members:
Abhinav Ralhan, U101115FCS039

REPORT, 13/11/2017
Pokemon Game

Layout

The idea was to create a classic Desktop version of the Pokemon game with improved and additional features, which led me to creating a similar layout of the game. Game Development in JavaScript has various libraries/framework and tools for development, and I chose Phasor, a JavaScript Framework for the same. I have attached screenshots for better understanding of the current progress of the project. All work is done using Sublime Text 3.

Modules

Initializing variables, loading external files and creating necessary layers:

```
 1   var player,
 2       platform,
 3       blocks,
 4       map,
 5       sprite,
 6       layer,
 7       collisionMap,
 8       movement,
 9       musicTown,
10       musicBattle,
11       townEnabled,
12       itemArray = [],
13       it,
14       allItem,
15       ball;
16
17   |
18   var preload = function () {
19       game.load.tilemap('map', 'assets/map.json', null, Phaser.Tilemap.TILED_JSON);
20       game.load.image('Retro_Tileset_RBG', 'assets/Retro_Tileset_RBG.png', 16, 16);
21       game.load.spritesheet('red', 'assets/red.png', 32, 32);
22       game.load.audio('town', 'assets/town.mp3');
23       game.load.audio('battle', 'assets/battle.mp3');
24       game.load.spritesheet('item', 'assets/ball.png');
25   };
26
27   var create = function () {
28       musicTown = game.add.audio('town');
29       musicTown.loop = true;
30       musicTown.play();
31       townEnabled = true;
32
33       musicBattle = game.add.audio('battle');
34       musicBattle.loop = true;
35
36       game.physics.startSystem(Phaser.Physics.ARCADE);
37
38       map = game.add.tilemap('map');
39       map.addTilesetImage('Retro_Tileset_RBG');
40
41       collide = map.createLayer('collision');
42       collide.resizeWorld();
43
44       layer = map.createLayer('calque');
45       layer.resizeWorld();
46
47       danger = map.createLayer('danger');
48       danger.resizeWorld();
```

Defining movement of character in different portions of the map:

```
 83   var moving;
 84
 85   var moveSpriteBy = function(x, y) {
 86       game.add.tween(sprite).to({x: sprite.x + x * 16, y: sprite.y + y * 16}, 100, Phaser.Easing.Linear.None, true).onComplete
 87       function () {
 88           window.moving = false;
 89       }, this);
 90       window.moving = true;
 91   };
 92
 93   var update = function () {
 94       game.physics.arcade.collide(ball, sprite, function (obj1, obj2) {
 95           console.log('obj1: ', obj1);
 96           console.log('obj2: ', obj2);
 97       }, null, this);
 98       //game.physics.arcade.collide(sprite, ball);
 99
100       if(window.moving)
101       {
102           return;
103       }
104
105       if (map.getTileBelow(1, sprite.x/16, sprite.y/16).index == -1) {
106           if (!townEnabled) {
107               townEnabled = true;
108               musicTown.play();
109               musicBattle.stop();
110           }
111       } else {
112           if (townEnabled) {
113               musicTown.stop();
114               musicBattle.play();
115               townEnabled = false;
116           }
117       }
118
119       if (game.input.keyboard.isDown(Phaser.Keyboard.LEFT))
120       {
121           //console.log(window.moving)
122           //console.log(map.getTileLeft(2, sprite.x/16, sprite.y/16));
123           if(map.getTileLeft(2, sprite.x/16, sprite.y/16).index == -1)
124           {
125               moveSpriteBy(-1, 0);
126           }
127           else
128           {
129               // Do something, like play the "bump" sound
```

Creation of map to different layers and areas of map:


```json
{ "height":100,
 "layers":[
        {
         "data":[4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,
         "height":100,
         "name":"calque",
         "opacity":1,
         "properties":
             {
              "name":"calque"
             },
         "type":"tilelayer",
         "visible":true,
         "width":100,
         "x":0,
         "y":0
         },
         {
         "data":[0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
         "height":100,
         "name":"danger",
         "opacity":1,
         "type":"tilelayer",
         "visible":true,
         "width":100,
         "x":0,
         "y":0
         },
         {
         "data":[0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
         "height":100,
         "name":"collision",
         "opacity":1,
         "properties":
             {
              "bounce":"1",
              "collides":"true"
             },
         "type":"tilelayer",
         "visible":true,
         "width":100,
         "x":0,
         "y":0
         }],
 "orientation":"orthogonal",
 "properties":
```

Safe/Home Zone in the map: