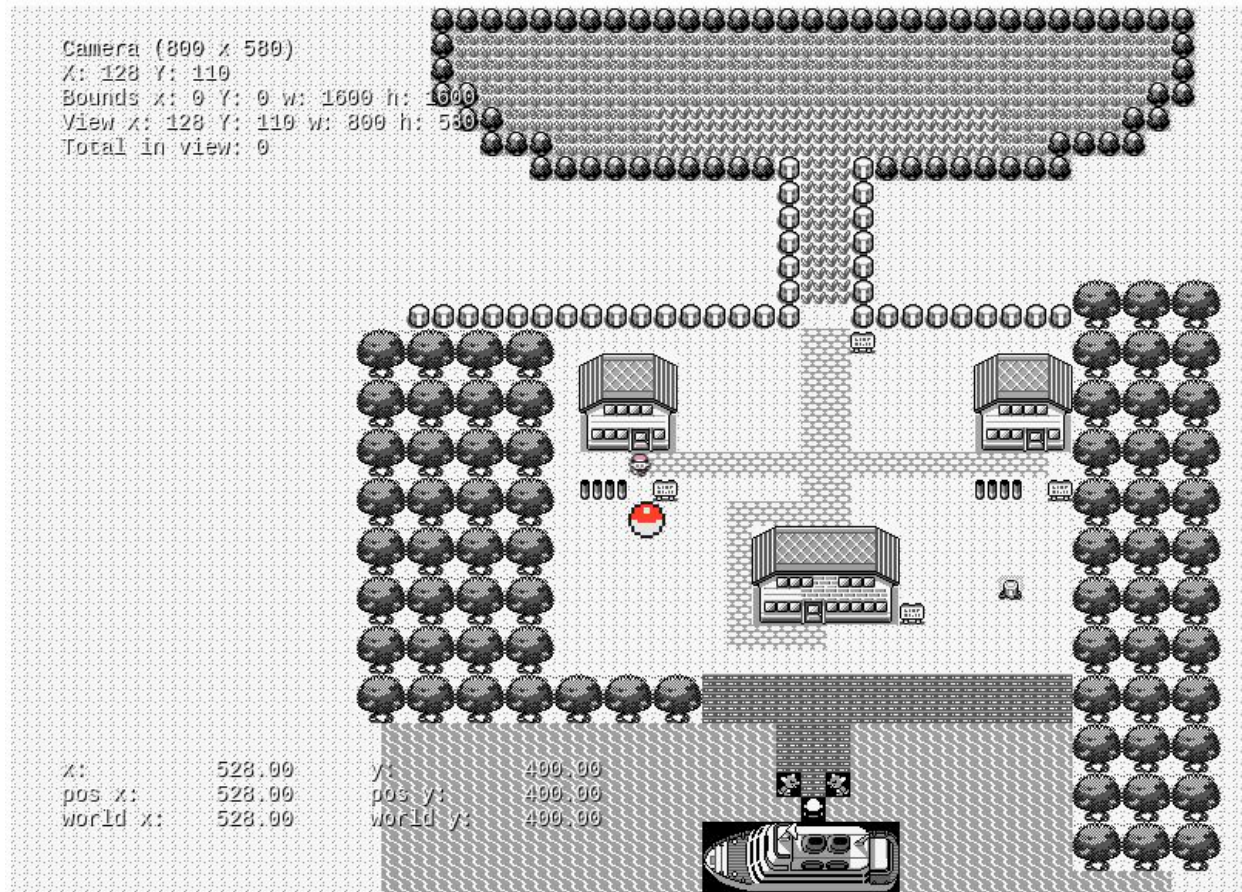


Programming Tools Project

Pokemon Game



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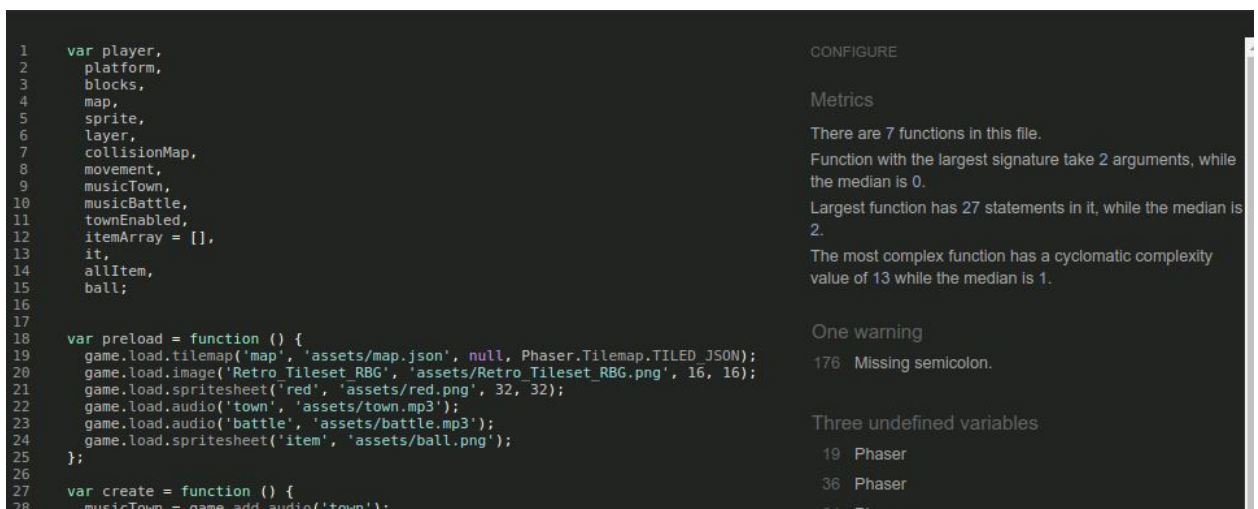
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Aim

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 Phaser, 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.

Tool usage

1. **JsHint** : Analyses the modules present in the program, their arguments and the cyclomatic complexity of the entire program.



```

var create = function () {
  musicTown = game.add.audio('town');
  musicTown.loop = true;
  musicTown.play();
  townEnabled = true;

  musicBattle = game.add.audio('battle');
  musicBattle.loop = true;

  game.physics.startSystem(Phaser.Physics.ARCADE);

  map = game.add.tilemap('map');
  map.addTilesetImage('Retro_Tileset_RGB');

  collide = map.createLayer('collision');
  collide.resizeWorld();

  layer = map.createLayer('calque');
  layer.resizeWorld();

  danger = map.createLayer('danger');
  danger.resizeWorld();

  // allItem = game.add.group();
  // allItem.enableBody = true;

  // it = allItem.create(33*16, 25*16 + 16, 'item');
  ball = game.add.sprite(33*16, 25*16 + 32, 'item');

  sprite = game.add.sprite(33*16, 25*16, 'red');

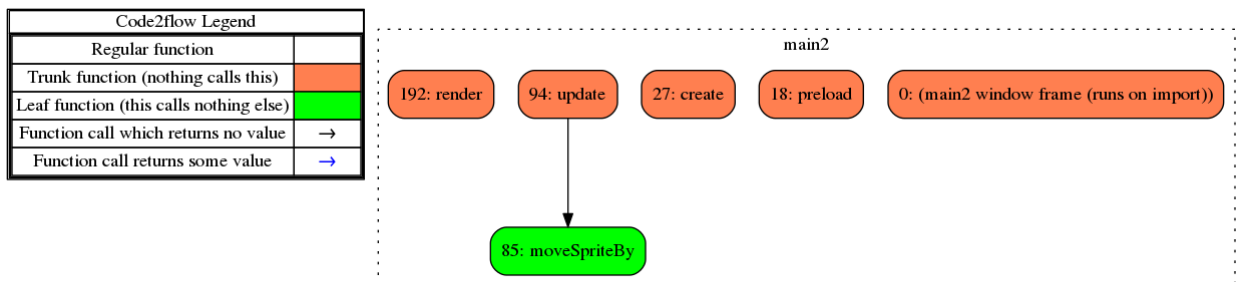
  /* it.custom = {
    name: "pokeball"
  };
  it.height = 12;
  it.width = 12;
  */
  game.physics.enable([sprite, ball], Phaser.Physics.ARCADE);
  ball.body.velocity.x = 0;
  ball.name = "pokeball";
  //game.physics.enable(sprite);
  //game.physics.arcade.enable(ball);

  //add(name, frames, frameRate, loop, useNumericIndex)
  var down = sprite.animations.add('down', [0, 1], 8, true);
  var left = sprite.animations.add('left', [2, 3], 8, true);
  var right = sprite.animations.add('right', [4, 5], 8, true);
  var up = sprite.animations.add('up', [6, 7], 8, true);
}

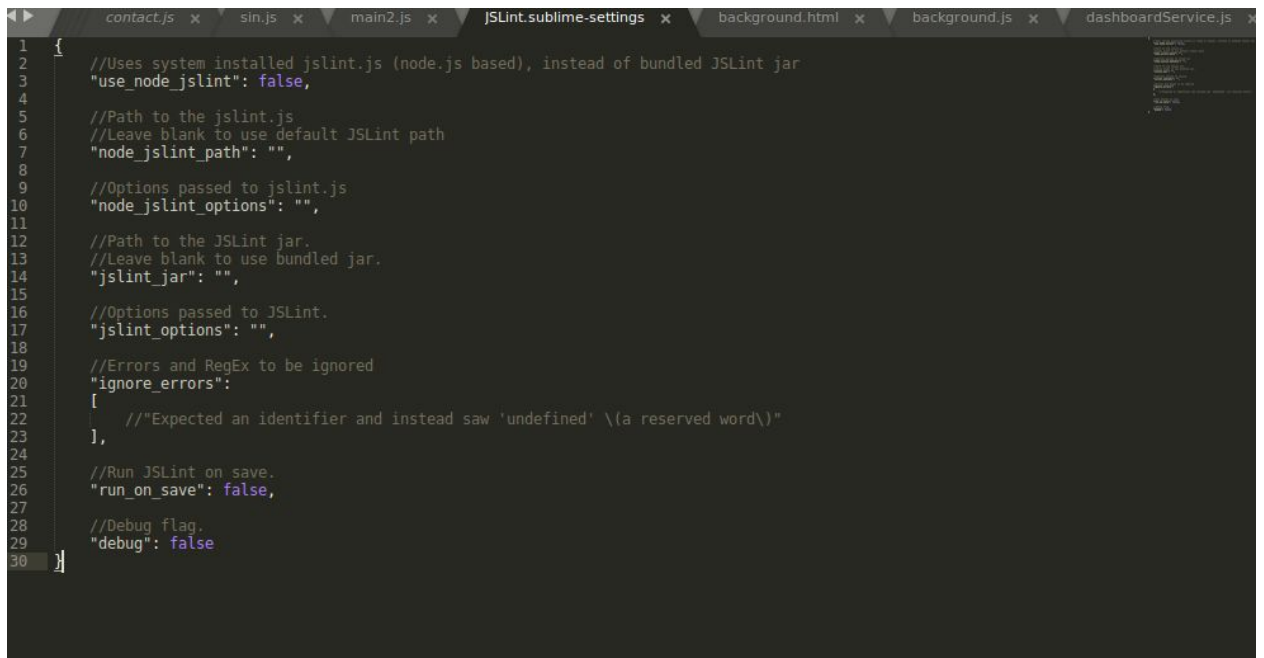
```

86 Phaser
 119 Phaser
 141 Phaser
 154 Phaser
 166 Phaser
 196 Phaser
 196 Phaser
 41 collide
 42 collide
 47 danger
 48 danger
 13 unused variables
 71 down
 72 left
 73 right
 74 up
 1 player
 2 platform
 3 blocks
 7 collisionMap
 8 movement
 12 itemArray
 13 it
 14 allItem
 83 moving

2. **Code2flow** : Gives the callgraph of the JavaScript code which helps us analyse the flow of the program using graphviz.



3. **JsLint** : Linter used in giving warnings and error correction.



```
1 {
2   //Uses system installed jslint.js (node.js based), instead of bundled JSLint jar
3   "use_node_jslint": false,
4
5   //Path to the jslint.js
6   //Leave blank to use default JSLint path
7   "node_jslint_path": "",
8
9   //Options passed to jslint.js
10  "node_jslint_options": "",
11
12  //Path to the JSLint jar.
13  //Leave blank to use bundled jar.
14  "jslint_jar": "",
15
16  //Options passed to JSLint.
17  "jslint_options": "",
18
19  //Errors and RegEx to be ignored
20  "ignore_errors":
21  [
22    // "Expected an identifier and instead saw 'undefined' \{(a reserved word\}"
23  ],
24
25  //Run JSLint on save.
26  "run_on_save": false,
27
28  //Debug flag.
29  "debug": false
30 }
```

4. **IDE** : Sublime Text 3. It allowed addition of packages through it's own package control system.
5. **SinonJs** : Used to test modules inside the program as shown below

//A simple spy helper

```
function createSpy(targetFunc) {

  var spy = function() {

    spy.args = arguments;

    spy.returnValue = targetFunc.apply(this, arguments);

    return spy.returnValue;

  };

  return spy;

}
```

//Let's spy on a simple function:

```
function equal(a, b) { return a == b; }

var spiedSum = createSpy(equal);
```

```
var ball= 'pokeball';  
spiedSum(ball, 'pokeball');  
console.log(spiedSum.args); //Output: [10, 5]  
if (spiedSum.returnValue === true) {console.log('Pokeball successfully found!');}  
else {console.log('Pokeball not created by create() :(');}  
  
//spies, assertions, stubs
```