

Solutions:

1.

```
window.onload = function() {
    document.getElementById("add").onclick = add;
}

function add() {
    var el = document.createElement("div");
    el.innerHTML = document.getElementById("input").value;
    el.onmouseenter = color;
    el.onmouseleave = uncolor;
    el.onclick = del;
    document.getElementById("game").appendChild(el);
}

function color() {
    this.style.backgroundColor = "cyan";
    this.style.fontSize =
        parseInt(window.getComputedStyle(this).fontSize) + 5 + "px";
}

function uncolor() {
    this.style.backgroundColor = "white";
    this.style.fontSize =
        parseInt(window.getComputedStyle(this).fontSize) - 5 + "px";
}

function del() {
    this.parentNode.removeChild(this);
}
```

2.

```
<?php
```

```
$start = $_GET["start"];
$end = $_GET["end"];

$file = file("classes.txt");

$classCount = 0;
$classes = array();
for($i = 0; $i < count($file); $i++) {
    #CSE154 1:30 2:30 250 250 Web Programming
    $split = split(" ", $file[$i], 6);

    if($split[1] == $start && $split[2] == $end) {
        $classCount++;
        if($split[3] < $split[4]) {
            $class = array("code" => $split[0],
                "spaces" => ($split[4]-$split[3]),
                "name" => $split[5]);
            $classes[] = $class;
        }
    }
}
$all = array("count" => $classCount, "classes" =>$classes);

header("Content-type: application/json");
print(json_encode($all));
```

```
?>
```

3.

```
window.onload = function() {
    document.getElementById("search").onclick = search;
}

function search() {
    document.getElementById("count").innerHTML = "";
    document.getElementById("results").innerHTML = "";
    var start = document.getElementById("start").value;
    var end = document.getElementById("end").value;
    var request = new XMLHttpRequest();
    request.onload = processData;
    request.open("GET", "classes.php?start=" + start +
                "&end=" + end, true);
    request.send();
}

function processData() {
    var data = JSON.parse(this.responseText);
    for(var i = 0; i < data.classes.length; i++) {
        var item = document.createElement("li");
        item.innerHTML = data.classes[i].name + " - " +
                        data.classes[i].spaces + " spaces"
        document.getElementById("results").appendChild(item);
    }
    document.getElementById("count").innerHTML = data.count +
                " total classes offered";
}
```

4.

a) /^#[A-Za-f0-9]{6}\$/

b) /^5[1-5][0-9]{14}\$/

c) /^[1-9]|10|11|12):[0-5][0-9] (A|P)M\$/