

CSE 190 M, Spring 2009, Final Exam ANSWER KEY

1. HTML/CSS Tracing

Emperor Palpatine (to Luke Skywalker): I'm afraid the
deflector shield will be quite operational when your friends
arrive.

Luke: That's not true. That's impossible!

- Luke Skywalker
- Princess Leia
- Han Solo
- Chewbacca
- C3-PO
- R2-D2

If you only knew the
power of the Dark Side.

May the Force be with you

2. PHP

```
<?php
if (isset($_GET["student"])) {
    $student = $_GET["student"];
    $filename = "students/$student/asciimation.txt";
    if (file_exists($filename)) {
        $text = file_get_contents($filename);
        $frames = explode("====\n", $text);
        $frame = 0;
        if (isset($_GET["frame"])) {
            $frame = (int) $_GET["frame"];
        }

        if ($frame < count($frames)) {
            header("Content-type: text/plain");
            print $frames[$frame];
        }
    }
}
?>
```

3. JavaScript/DOM

```
var answer;
var guesses = 0;

window.onload = function() {
    document.getElementById("makeguess").onclick = makeGuessClick;
    answer = parseInt(Math.random() * 100) + 1;
};

function makeGuessClick() {
    guesses++;
    var guess = parseInt(document.getElementById("number").value);
    var li = document.createElement("li");
    li.innerHTML = guess;

    if (guess > answer) {
        document.getElementById("result").innerHTML = "Too high!";
        li.className = "high";
    } else if (guess < answer) {
        document.getElementById("result").innerHTML = "Too low!";
        li.className = "low";
    } else {
        document.getElementById("result").innerHTML =
            "You got it right in " + guesses + " tries!";
        document.getElementById("makeguess").disabled = true;
    }

    document.getElementById("guesses").appendChild(li);
}
```

4. Ajax/XML

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

function goClick() {
    var ajax = new XMLHttpRequest();
    ajax.onload = ajaxSuccess;
    ajax.open("GET", "q4.xml", true);
    ajax.send();
}

function ajaxSuccess() {
    var critters = document.querySelectorAll("." + animal);
    var moves = this.responseXML.getElementsByTagName("move");
    for (var i = 0; i < moves.length; i++) {
        var animal = moves[i].getAttribute("animal");
        var move = moves[i].firstChild.nodeValue;

        for (var j = 0; j < critters.length; j++) {
            var x = parseInt(critters[j].style.left);
            var y = parseInt(critters[j].style.top);
            if (move == "N") { y -= 20; }
            else if (move == "S") { y += 20; }
            else if (move == "W") { x -= 20; }
            else if (move == "E") { x += 20; }
            critters[j].style.left = x + "px";
            critters[j].style.top = y + "px";
        }
    }
}
```

5. SQL

```
SELECT DISTINCT a.first_name, a.last_name
FROM actors a
JOIN roles r1 ON r1.actor_id = a.id
JOIN movies m ON m.id = r1.movie_id
JOIN movies_genres mg ON mg.movie_id = m.id
JOIN roles r2 ON r2.actor_id = a.id
JOIN roles r3 ON r3.actor_id = a.id
WHERE r1.movie_id <> r2.movie_id
AND r1.movie_id <> r3.movie_id
AND r2.movie_id <> r3.movie_id
AND mg.genre = "Action"
ORDER BY a.last_name, a.first_name;
```