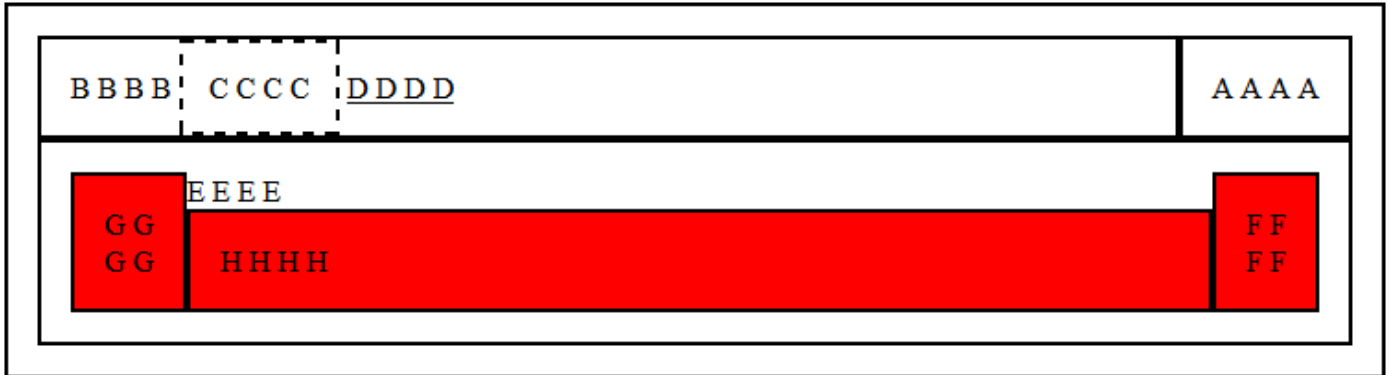


CSE 154, Spring 2013
Final Exam ANSWER KEY

1. HTML / CSS Tracing



2. CSS

With any code problem, there are always several correct solutions. Here is one:

```
div          { border: 2px solid black; font-family: "Comic Sans MS"; }
span        { float: right; }
.id         { background-color: yellow; }
.class      { clear: right; }
.class .id  { float: left; }
#h          { margin: auto; width: 33%; text-align: right; }
div div .class { font-style: italic; }
```

3. PHP

```
<h1>Matching Books:</h1>

<?php
$category = $_GET["category"];
$max = (int) $_GET["max"];
$prime = isset($_GET["prime"]);
$filename = strtolower($category) . ".txt");

if (file_exists($filename)) {
    $lines = file($filename);
    ?>

    <ul>
        <?php
        $count = 0;
        foreach ($lines as $line) {
            list($title, $price) = explode(":", $line);
            if ($prime) {
                $price *= 0.8;
            }
            if (!$max || $price <= $max) {
                $count++;
                ?>
                <li> $<?= $price ?> - <?= $title ?>
                <?php
            }
        }
        ?>
    </ul>

    <?= $count ?> match(es).
    <?php
} else {
    ?>
    <p>Category not found.</p>
    <?php
}
?>
```

4. JavaScript / DOM

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

function goClick() {
    document.getElementById("words").innerHTML = "";
    var filter = document.getElementById("filter").value.toLowerCase();
    var words = document.getElementById("phrase").value.split(" ");
    var kept = 0;
    var filteredOut = 0;
    var text = "";
    for (var i = words.length - 1; i >= 0; i--) {
        if (filter && words[i].toLowerCase().indexOf(filter) >= 0) {
            filteredOut++;
        } else {
            var span = document.createElement("span");
            span.className = "word";
            span.innerHTML = words[i];
            if (kept % 2 == 0) {
                span.style.textDecoration = "underline";
            }
            document.getElementById("words").appendChild(span);
            kept++;
        }
    }

    if (filteredOut > 0) {
        document.getElementById("count").innerHTML = filteredOut +
            " word(s) filtered out.";
    } else {
        document.getElementById("count").innerHTML = "";
    }
}
```

5. SQL

```
-- all movies directed by Woody Allen and another director  
-- in which Woody Allen also appeared as an actor
```

```
SELECT DISTINCT m.name, m.year  
FROM movies m  
JOIN movies_directors md1 ON md1.movie_id = m.id  
JOIN movies_directors md2 ON md2.movie_id = m.id  
JOIN directors d ON d.id = md2.director_id  
JOIN roles r ON r.movie_id = m.id  
JOIN actors a ON a.id = r.actor_id  
WHERE md1.director_id <> md2.director_id  
AND d.first_name = "Woody" AND d.last_name = "Allen"  
AND a.first_name = "Woody" AND a.last_name = "Allen"  
ORDER BY m.name;
```