

Sample midterm 2 key

1. a)

`*('O')*`

`[aaa]` `[bbb]` `[ccc]`

b)

foo	
baz	
ant	

b
a
r

2.

```
<div id="main">
  <div id="column1">
    <h1>Zen Garden</h1>

    <div id="slogan">
      <p>A demonstration of...</p>
    </div>

    <div id="enlightenment">
      <h3>The Road to Enlightenment</h3>
      <p>Littering a dark and dreary road lay...</p>
      <p>Today, we must clear the mind...</p>

      <div id="selectadesign">
        <h3>Select Design</h3>
        <ul><li><a href="">Under the Sea!</a> by Eric Stoltz</li>
          <li><a href="">Make 'em Proud</a> by Michael McAghon and Scotty</li>...</ul>
        </div>
      </div>
    </div>
  </div>

  <div id="whatabout">
    <h3>So What is This About?</h3>
    <p>There is clearly a need for CSS to be taken seriously...</p>
    <p>CSS allows complete and total control over the style of a hypertext doc...</p>

    <h3>Participation</h3>
    <ul>
      <li>Graphic artists only please. You are modifying this page...</li>
      <li>Zen editors modify the style sheet in any way you wish, but not ...</li>
    </ul>
  </div>
</div>
```

```
body {
  background-image: url("heading.gif");
  background-repeat: no-repeat;
  color: #471C47;
  font-family: Verdana, sans-serif;
  font-size: 9pt;
}

#main { margin-left: 130px; }
h1 { display: none; }
#slogan { font-style: italic; }
#selectadesign { border-top: 3px solid #A690AF; }
#selectadesign a { font-weight: bold; }

#enlightenment {
  background-image: url("toad.png");
  background-repeat: no-repeat;
  background-position: right bottom;
  float: left;
  padding-right: 1em;
  width: 26em;
}

#whatabout {
  background-color: #A690AF;
  border: 2px solid #471C47;
  float: left;
  padding: 1em;
  width: 21em;
}

#whatabout h3 { text-align: right; }
```

3. <h1>Elevate-It!</h1>

```
<?php
if (!isset($_GET['profile'])) {
    ?>
    <form action="">
        <p>Select an elevation profile:</p>
        <p><select name="profile">
<?php
foreach(glob("*.dat") as $name) {
    ?>
        <option><?= $name ?></option>
        <?php
    }?>
        </select></p>
        <p><input type="submit" value="Elevate-It!" /></p>
    </form>
    <?php
} else {
    ?>
    <p>Elevation data for <?= $_GET['profile'] ?>:</p>

    <table>
        <tr><th>distance</th><th>elevation</th></tr>
    <?php
    $sum = 0;
    foreach(file($_GET['profile']) as $line) {
        list($dist, $elev) = explode(',', $line);
        $sum += $elev;
        ?>
        <tr><td><?= $dist ?></td><td><?= $elev ?></td></tr>
    <?php
    }
    ?>
    </table>
    <p>Total gain/loss: <?= $sum; ?></p>
    <?php
}
?>
```

4.

-- NOTE: *DON'T* run this query on imdb; it takes too long and hangs.

-- Run it on imdb_small only, please.

-- all directors who have made >= 2 movies across >= 2 genres

```
SELECT DISTINCT d.id, d.last_name d.first_name
FROM directors d
JOIN movies_directors md1 ON md1.director_id = d.id
JOIN movies_genres mg1 ON mg1.movie_id = md1.movie_id
JOIN movies_directors md2 ON md2.director_id = d.id
JOIN movies_genres mg2 ON mg2.movie_id = md2.movie_id
WHERE mg1.genre <> mg2.genre AND mg1.movie_id <> mg2.movie_id
ORDER BY d.last_name, d.first_name;
```

-- all directors who have made >= 2 movies across >= 2 genres

-- (includes movies table unnecessarily)

```
SELECT DISTINCT dir.id, dir.last_name, dir.first_name
FROM directors dir
JOIN movies_directors md1 ON md1.director_id = dir.id
JOIN movies m1 ON m1.id = md1.movie_id
JOIN movies_genres mg1 ON mg1.movie_id = m1.id
JOIN movies_directors md2 ON md2.director_id = dir.id
JOIN movies m2 ON m2.id = md2.movie_id
JOIN movies_genres mg2 ON mg2.movie_id = m2.id
WHERE m1.id <> m2.id AND mg1.genre <> mg2.genre
ORDER BY dir.last_name, dir.first_name;
```