Extra midterm question solutions

1.

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1. WA.B.L. is a community of Washington Beer Lovers celebrating the FRESH, LOCAL, AWARD-WINNING craft beer produced in our state.

It's a Washington Beer Fan Club!

WA.B.L.'ers enjoy monthly invitation-only events at various breweries, brewpubs, tasting rooms, and other businesses promoting tasty Washington beer.

Each year, upon renewal of their membership, WA.B.L.'ers receive a cool t-shirt with a design unique to that year, listing all member breweries.

WA.B.L.'ers are also encouraged to visit breweries when they're out traveling around the state. Each member is issued a passport in which they collect stamps from the breweries they visit.

Collecting stamps from WA breweries can get you some great prizes!
2.

<h2>S.N.O.B</h2>

Now you can show your support for our world-class beers by becoming an Enthusiast Member of the Oregon Brewers Guild. Our Enthusiast Members — we call them SNOBs (Supporters of Native Oregon Beer) are an integral link in what we like to call the “beer chain” that connects suppliers, brewers, retailers and consumers.

As a SNOB, you will be able to show off your impeccable taste in malt beverages and at the same time get a backstage pass to see what’s going on behind the scenes in Oregon’s craft brewing industry.

SNOBs receive the following Membership Benefits:

- Current SNOB shirt is Dusk Blue with Vermillion lettering and list of members on the back.
- An official SNOB membership card.
- Think Oregon Drink Oregon Bumper Sticker.
- “SNOB Stories” monthly e-mail newsletter.
- Invitation to regional “Guild Gatherings”.
- A “SNOB” T-shirt.
- Discount on tickets on events.

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- A “SNOB” T-shirt.
- Discount on tickets on events.
3. HTML / CSS Coding

```html
<div id="main">
  <h1> <span class="highlight">Wikipedia - Geneva</span> </h1>
  <p>Geneva is the second-most populous city in ...</p>
  <img src="switzerland.png" alt="Switzerland" />
  <p>Geneva is widely regarded as a global city, ...</p>
  <p>Geneva is also the name of Geneva Francine Stepp, ...</p>
  <ul>
    <li>a desktop wallpaper</li>
    <li>the subject of a recent midterm exam</li>
  </ul>
</div>

<div id="info">
  <h1>Geneva, the name</h1>
  <p>(f) English
     Possibly a shortened form of Genevive, or possibly from
     the name of the city in Switzerland.</p>
  <p>Similar names:</p>
  <ul>
    <li>Jenna</li>
    <li>Jennifer (Jenny)</li>
    <li>Genevieve</li>
  </ul>
</div>
```
/* CSS code */
body {
    background-image: url(bg.jpg);
    background-repeat: no-repeat;
    font-family: "Verdana", sans-serif;
    font-size: 14pt;
}
.highlight {
    background-color: yellow;
    border: 5px solid orange;
}
#main {
    width: 50%;
    margin-left: auto;
    margin-right: auto;
}
#main img {
    float: left;
    margin-right: 1em;
}
#info {
    border: 5px solid red;
    font-size: 9pt;
    padding: 1em;
    position: absolute;
    right: 1em;
    top: 1em;
    width: 20%;
}
#info li {
    font-style: italic;
}
4. CSS

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

```css
body { text-align: center; font-family: monospace; }
#div { background-color: yellow; font-weight: bold; }
div span { float: left; border: 2px solid black; }
.span, #span { float: right; width: 25%; border: 2px solid black; }
#span { clear: right; font-style: italic; }
.span { clear: right; border-top: 2px dashed black; }
```

5. SQL (2 solutions shown)

```sql
SELECT DISTINCT t.name, c.name
FROM teachers t
JOIN courses c ON c.teacher_id = t.id
JOIN grades g1 ON g1.course_id = c.id
JOIN grades g2 ON g2.course_id = c.id
WHERE g1.student_id <> g2.student_id
AND g1.grade <= 'C-' AND g2.grade <= 'C-';

SELECT DISTINCT t.name, c.name
FROM teachers t
JOIN courses c ON c.teacher_id = t.id
JOIN grades g1 ON g1.course_id = c.id
JOIN students s1 ON s1.id = g1.student_id
JOIN grades g2 ON g2.course_id = c.id
JOIN students s2 ON s2.id = g2.student_id
WHERE s1.name < s2.name
AND g1.grade <= 'C-' AND g2.grade <= 'C-';
```

6.

```
-- actors who have appeared twice with the same director --
SELECT DISTINCT d.first_name, d.last_name, a.first_name, a.last_name
FROM actors a
JOIN roles r1 ON r1.actor_id = a.id
JOIN roles r2 ON r2.actor_id = a.id
JOIN movies_directors md1 ON md1.movie_id = r1.movie_id
JOIN movies_directors md2 ON md2.movie_id = r2.movie_id
JOIN directors d ON md1.movie_id = d.id AND md2.movie_id = d.id
WHERE md1.movie_id != md2.movie_id;
```
7. 
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;

8. 
-- names of the Martin Scorsese movies where he also appeared as an actor
SELECT m.name
FROM movies m
JOIN roles r ON m.id = r.movie_id
JOIN actors a ON a.id = r.actor_id
JOIN movies_genres mg ON mg.movie_id = m.id
JOIN movies_directors md ON md.movie_id = m.id
JOIN directors d ON d.id = md.director_id
WHERE a.first_name = "Martin" AND a.last_name = "Scorsese"
AND d.first_name = "Martin" AND d.last_name = "Scorsese"
AND mg.genre = "Drama"
ORDER BY m.name;