Rules:
• You have 50 minutes to complete this exam.  
  You may receive a deduction if you keep working after the instructor calls for papers.
• This test is open-book but closed notes.  You may not use any paper resources other than textbooks.
• You may not use any computing devices, including calculators, cell phones, or music players.
• Unless otherwise indicated, your code will be graded on proper behavior/output, not on style.
• Do not abbreviate code, such as writing ditto marks ("") or dot-dot-dot marks (...).
• If you enter the room, you must turn in an exam and will not be permitted to leave without doing so.
• You must show your Student ID to a TA or instructor for your submitted exam to be accepted.

Good luck! You can do it!

<table>
<thead>
<tr>
<th>Problem</th>
<th>Description</th>
<th>Earned</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CSS</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>PHP</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>SQL</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Total Points</td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>
1. HTML/CSS

Write the CSS code necessary to recreate the following appearance on-screen, exactly as shown. The page uses the HTML code below. You are not allowed to modify the HTML.

```html
<body>
  <div id="contentArea">
    <div id="bigPic">
      <p>minions</p>
      <img src="minions.jpg" alt="big" />
    </div>
    <div id="gallery">
      <h3>minions photos</h3>
      <img src="bydrant.jpg" alt="hydrant" />
      <img src="snow.jpg" alt="snow" />
      <img src="meet.jpg" alt="meet" />
      <img src="banana.jpg" alt="banana" />
    </div>
    <div id="more">
      <p>more movie galleries</p>
    </div>
  </div>
</body>
```

All borders shown are 2px thick, solid and black in color. The elements that contain “minions” and “more movie galleries” have yellow backgrounds and 20px of space between the words and the edge of the background color. There is 5px empty space around the outside of each div. The small pictures are 60px wide and 60px tall and have 10px space around them. They should appear on the same line unless the line is full.

The div with the big picture and “minions” title is 75% of the width. The one with the small photos is 20%.

The background color of the page is gray but the background color of the area containing everything is white. The white area is 90% wide and centered.
1. HTML / CSS writing space
2. **PHP**

Write the code for a web page `horoscope.php` and a page `horoscope-submit.php` which it submits to with a GET request. `horoscope.php` contains a small form that allows a user to type in the name of their sign. The form submits to `horoscope-submit.php` which displays a horoscope. This horoscope is the entire contents of a .txt file that is randomly chosen from a directory named the same thing as what the user typed in. For example, if the user typed in “taurus” your program might display the contents of "taurus/file1.txt". It should pick a file in the “taurus/” folder at random with equal probability. No matter what capitalization the user uses, you should look for a folder with a lowercase name.

Once a computer has accessed the site once, it should show anyone using the same computer the same horoscope for 24 hours. Individual computers where a user types in the same sign should get their own random horoscope. You should use cookies to implement this. If the user tries to access `horoscope.php` when they already have a chosen horoscope the page should redirect to `horoscope-submit.php`.

Once the user has successfully submitted the form once and gotten a horoscope and the 24 hours of redirecting are over, it should pre-fill the input box with the sign the user typed on the last access. The page should redirect for the first 24 hours after access and auto fill after that.

If the user types a sign that you do not have data for print an error message. The user should then be able to go back to `horoscope.php` and try again.

The following screenshots show the page as the user types the word "sagittarius" and after clicking Submit:

**Find your horoscope!**

![Input and Submit button](image)

**sagittarius horoscope for today:**

You will do well on a test

Use the browser's default styling; you do not need to write any CSS for this problem.
3. PHP (additional writing space)
3. SQL

Write a single SQL query to search the imdb database for all movies that both Ginger Rogers and Fred Astaire were in. They should be ordered first by the year that the movie came out from newest to oldest and then by name alphabetically. Each film should be listed only once. You may assume that Ginger Rogers and Fred Astaire are the only actors in the database with those exact first/last name pairings. Recall the imdb tables:

When run on the imdb database, your query would produce the results at left
(a subset of the total rows are shown).

You may only write one query to solve this problem.

If you join too many tables together that are not needed for the query, you will not receive full credit.

You should solve this problem using only the SQL syntax shown in class and the textbook.