

Sample midterm extra questions

1. HTML/CSS Coding

Write the XHTML and CSS code necessary to recreate the following appearance on-screen.
(Adapted from the WA.B.L. page of the Washington Beer Commission website, washingtonbeer.com.)



Most of the XHTML code is given to you; the code given may not be modified. The only change you may make to the provided XHTML code is that you may add any number of `div` and/or `span` elements, possibly with `id` and/or `class` attributes, as targets for CSS styling. Write **valid code** that would pass the W3C validators. Assume that the given XHTML code would appear inside the `body` of the page.

- Text on the page uses a **sans-serif** font. The area around the outside of the page has a yellowish color of **#FFB131**.
- The overall central page area has a **white background**, and a **5px-thick solid black** border on its bottom edge only. It is **centered** within the page and is **950px** wide.
- The list of links appears **without bullets**, displayed all in **one line, centered** on the page. Each link's text is **bold, not underlined**, colored **#FFB131**, has a line height of **2em**, and has **1.5em** of horizontal spacing on either side of it. (Between two adjacent links there is a total of **3em** space.)
- The main content area (beneath the navigation links) has **1.5em** of horizontal space on the left and right. All the headers inside of it are **underlined**.
- The “Join WA.B.L” section is located on the right side of the main content area, with text flowing around it. Its font size is **190%** of the font size of the rest of the page, and its background is colored **#FBC57B**. There is **.75em** of space separating its content from its edges, as well as **1em** of space separating its edges from the surrounding content.

All other appearance is unspecified, and is subject to the default rendering of the browser.

Mark up the text on the next page with your `div/span` tags. If a tag can't fit in the space provided, write it in the margins and draw an arrow to where it should be inserted.

Write your answer on the next page.

1. HTML/CSS Coding (writing space)

Mark up the **HTML code** below.

```
<h1></h1>

<ul><li><a href="">Home</a></li>           <li><a href="">Festivals</a></li>
<li><a href="">Breweries</a></li>         <li><a href="">News</a></li>
<li><a href="">WABL</a></li>             <li><a href="">About Us</a></li>
<li><a href="">Contact</a></li></ul>

<h2>What is WA.B.L?</h2>
<p>WA.B.L. is a community of <strong>WA</strong>shington <strong>B</strong>eer ...</p>
<p>It's a Washington Beer Fan Club!</p>

<br/>
<a href="">JOIN WA.B.L NOW!</a>

<h2>WA.B.L. Perks</h2>
<p>WA.B.L.'ers enjoy monthly <strong>invitation-only</strong> events at various ...</p>
<p>Each year, upon renewal of their membership, WA.B.L.'ers receive a <strong>cool t-shirt</strong> ...</p>

<h2>WA.B.L. Passport</h2>
<p>WA.B.L.'ers are also encouraged to visit breweries when they're out traveling ...</p>
<p>Collecting stamps from WA breweries can get you some great prizes!</p>
```

Write your **CSS code** here. Put your CSS in two columns if you need more writing space, and/or use scratch paper.

2. HTML/CSS Coding

Write the XHTML and CSS code necessary to recreate the following appearance on-screen.

(Adapted from the S.N.O.B page of the Oregon Brewers' Guild website, oregonbeer.org.)

OREGON
BREWERS
GUILD

BEER
BREWERIES
S.N.O.B
BLOG
EVENTS
PRESS
ABOUT

HIT THE OREGON BEER TRAIL!

Search our interactive brewpub map -

S.N.O.B

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.

S.N.O.B.
Supporter of Native Oregon Beer

Most of the XHTML code is given to you; the code provided may not be modified. The only change you may make to the provided XHTML code is that you may add any number of **div** and/or **span** elements, possibly with `id` and/or `class` attributes, as targets for CSS styling. Write **valid code** that would pass the W3C validators. Assume that the given HTML text would appear inside the `body` of the page.

- Text on the page uses the “Georgia” font. The area around the outside of the page has a nearly-black color of **#E2D1BB**.
- The overall page area has a background colored **#E2D1BB**. It is **centered** within the page and is **50em** wide.
- The left sidebar has a header in it, which should be **centered** within the column. The list of links in the left column are **bolded**, have **no bullets or underlines**, have a line height of **1.75em**, and are colored **#C5833B**. The sidebar's content is **8em** wide.
- The central content area has a **white** background color. Its content is **30em** wide. Additionally, there is **4em** of horizontal space on either side separating the content from the edges of the area.
- Surrounding each of the columns is **1em** of space on all sides.

Mark up the text on the next page with your `div/span` tags. If a tag can't fit in the space provided, write it in the margins and draw an arrow to where it should be inserted. All other appearance is unspecified, and is subject to the default rendering of the browser.

2. HTML/CSS Coding (writing space)

Mark up the **HTML code** below.

```
<h1></h1>

<ul><li><a href="">BEER</a></li>           <li><a href="">BREWERIES</a></li>
  <li><a href="">S.N.O.B</a></li>         <li><a href="">BLOG</a></li>
  <li><a href="">EVENTS</a></li>        <li><a href="">PRESS</a></li>
  <li><a href="">ABOUT</a></li></ul>

<p></p>

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

<p>Now you can show your support for our world-class beers by becoming an <a href="">Enthusiast ...</p>
<p>As a SNOB, you will be able to show off your impeccable taste in malt beverages and at the same ...</p>

<p><strong>SNOBs receive the following Membership Benefits:</strong></p>
<ul>
  <li>Current SNOB shirt is Dusk Blue with Vermillion lettering and list of members on the back.</li>
  <li>Think Oregon Drink Oregon Bumper Sticker.</li>
  <li>"SNOB Stories" monthly <a href="">e-mail newsletter</a></li>
  ...
</ul>

<p></p>
```

Write your **CSS code** here. Put your CSS in multiple columns if you need more writing space, and/or use scratch paper.

3. HTML / CSS Coding

Write the HTML and CSS code necessary to recreate the following appearance onscreen. No manual line breaks have been inserted into the text.



The screenshot shows a Wikipedia article about Geneva. The main heading "Wikipedia - Geneva" is highlighted with a yellow background and an orange border. The main text is left-aligned. A red square with a white cross (Swiss flag) is positioned to the left of a paragraph. A red-bordered box on the right contains a sub-heading "Geneva, the name" and a bulleted list of similar names.

Wikipedia - Geneva

Geneva is the second-most populous city in Switzerland (after Zurich) and is the most populous city of Romandy (the French-speaking part of Switzerland). Situated where the Rhone River exits Lake Geneva (French Lac Lemman), it is the capital of the Republic and Canton of Geneva.



Geneva is widely regarded as a global city, mainly because of the presence of numerous international organizations, including the headquarters of many of the agencies of the United Nations and the Red Cross. It is also the place where the Geneva Conventions were signed, which chiefly concern the treatment of wartime non-combatants and prisoners of war.

Geneva is also the name of Geneva Francine Stepp, an adorable baby also seen as:

- a desktop wallpaper
- the subject of a recent midterm exam

Geneva, the name

(f) English Possibly a shortened form of Genevieve, or possibly from the name of the city in Switzerland.

Similar names:

- *Jenna*
- *Jennifer (Jenny)*
- *Genevieve*
- *Genevive*

NOTE: Most of the HTML code is given to you; the code given may not be modified. The only change you may make to the provided HTML code is that you may add any number of div and span elements, possibly with id and/or class attributes, as targets for CSS styling. Write valid code that would pass the W3C validators. Assume that the given HTML text would appear inside the body of the page. Here are the details about the desired appearance:

- The overall page's text uses a 14pt Verdana font. The page has an overall background of `bg.jpg`, located in the same folder as the page; the background should appear only once and should not repeat.
- The text in the page's main `h1` heading has a yellow background and a solid 5px-thick orange border.
- The main section of page content is half as wide as the browser window and centered horizontally in the window. The text uses the default left-alignment.
- The image of the Swiss flag, `switzerland.png`, has 1em of horizontal space between itself and nearby text. Text wraps around the image as necessary.
- The area on the right about "Geneva, the name" appears 1em from the page's top/right corner. Its width should be 1/5 of the width of the overall browser window. It has a solid 5px-thick red border. Text in that part of the page uses a 9pt font. 1em separates the section's border from the content inside the section. The items in the bulleted list in this section are in italic.

Mark up the text on the next page with your `div/span` tags. If a tag can't fit in the space provided, write it in the margins and draw an arrow to where it should be inserted. Write the CSS styles on the page after next.

3. HTML / CSS Coding (writing space)

```
<h1>
  Wikipedia - Geneva
</h1>

<p>
  Geneva is the second-most populous city in Switzerland (after
  Zurich) and is the most populous city of Romandy (the French-
  speaking part of Switzerland). Situated where the Rhone River
  exits Lake Geneva (French Lac Lemman), it is the capital of
  the Republic and Canton of Geneva.
</p>



<p>
  Geneva is widely regarded as a global city, mainly because of
  the presence of numerous international organizations, including
  the headquarters of many of the agencies of the United Nations
  and the Red Cross. It is also the place where the Geneva
  Conventions were signed, which chiefly concern the treatment
  of wartime non-combatants and prisoners of war.
</p>

<p>
  Geneva is also the name of Geneva Francine Stepp, an adorable
  baby also seen as:
</p>

<ul>
  <li>a desktop wallpaper</li>
  <li>the subject of a recent midterm exam</li>
</ul>

<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>

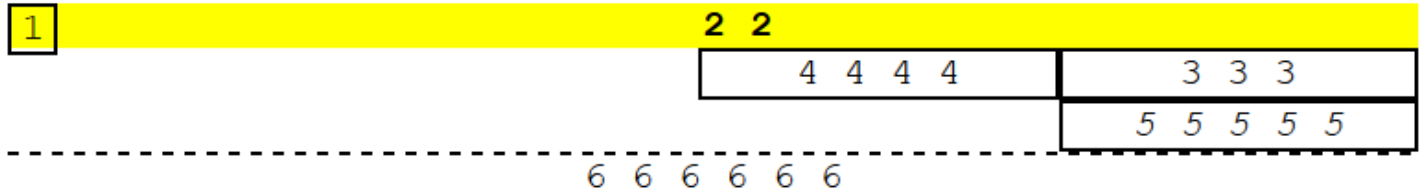
<p>
  Similar names:
</p>

<ul>
  <li>Jenna</li>
  <li>Jennifer (Jenny)</li>
  <li>Genevieve</li>
  <li>Genevive</li>
</ul>
```

4. CSS

Write the **CSS code** necessary to recreate the following appearance on-screen, exactly as shown.

The page uses the same HTML code as in the previous problem. You are **not allowed to modify the HTML**.



```
<div>
  <span>1</span>
  <div id="div">2 2</div>
</div>
<span class="div">3 3 3</span>
<div>
  <div class="div">4 4 4 4</div>
  <div id="span">5 5 5 5 5</div>
  <div class="span">6 6 6 6 6 6</div>
</div>
```

All text now uses a monospace font at the default size.

All borders shown are 2px thick and black in color.

The element with "2 2" now has a yellow background.

The elements with "3 3 3", "4 4 4 4", and "5 5 5 5 5" are now each exactly one fourth (1/4) of the page width.

The element "2 2" now has **bold** text, and the element "5 5 5 5 5" now has *italic* text.

5. SQL

The Springfield Elementary school board is trying to crack down on grade inflation. To do this, they are trying to figure out which teachers are giving a lot of high grades in their courses. They have asked you to write an SQL query that can be run on the `simpsons` database that will find the names and course names of all teachers who gave 2 or more grades of C- or better in a given course. The query should show the teacher's name and the course name.

Recall the `simpsons` database tables:

id	name	email
123	Bart	bart@fox.com
456	Milhouse	milhouse@fox.com
888	Lisa	lisa@fox.com
404	Ralph	ralph@fox.com

id	name	teacher_id
10001	Computer Science 142	1234
10002	Computer Science 143	5678
10003	Computer Science 190M	9012
10004	Informatics 100	1234

student_id	course_id	grade
123	10001	B-
123	10002	C
456	10001	B+
888	10002	A+
888	10003	A+
404	10004	D+

id	name
1234	Krabappel
5678	Hoover
9012	Stepp

The results of the query would be the following, because Krabappel taught 142 and gave Bart a B- and Milhouse a B+, and Hoover taught 143 and gave Bart a C and Lisa an A+:

Krabappel	Computer Science 142
Hoover	Computer Science 143

If a teacher taught more than one course with ≥ 2 high grades, your query should only show that teacher's name once along with any one of the courses in which the high grades were given by that teacher. Recall that a grade above C- is a string that occurs earlier than the string 'C-' in alphabetical order.

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.

6. SQL

Some actors are known for working with particular directors. **Write a SQL query that finds a list of all actors in the imdb database who worked on two films with the same director.**

Show the first and last name of the director, then the first and last name of the actor. Each combination of actor and director should be listed only once. Recall the `imdb` database tables:

actors			
id	first_name	last_name	gender
433259	William	Shatner	M
797926	Britney	Spears	F
831289	Sigourney	Weaver	F
...			

movies			
id	name	year	rank
112290	Fight Club	1999	8.5
209658	Meet the Parents	2000	7
210511	Memento	2000	8.7
...			

roles		
actor_id	movie_id	role
433259	313398	Capt. James T. Kirk
433259	407323	Sgt. T.J. Hooker
797926	342189	Herself
...		

directors		
id	first_name	last_name
24758	David	Fincher
66965	Jay	Roach
72723	William	Shatner
...		

movies_directors	
director_id	movie_id
24758	112290
66965	209658
72723	313398
...	

movies_genres	
movie_id	genre
209658	Comedy
313398	Action
313398	Sci-Fi
...	

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

7. SQL

Write an SQL query that searches the `imdb` or `imdb_small` database for all actors who have been in 3 or more total movies, and have been in at least one action film (a movie with the "Action" genre). Your result set should include each actor's first and last name, sorted by last name and then by first name. Each actor should be listed only once.

Recall the `imdb` database tables:

actors			
id	first_name	last_name	gender
433259	William	Shatner	M
797926	Britney	Spears	F
831289	Sigourney	Weaver	F
...			

movies			
id	name	year	rank
112290	Fight Club	1999	8.5
209658	Meet the Parents	2000	7
210511	Memento	2000	8.7
...			

roles		
actor_id	movie_id	role
433259	313398	Capt. James T. Kirk
433259	407323	Sgt. T.J. Hooker
797926	342189	Herself
...		

directors		
id	first_name	last_name
24758	David	Fincher
66965	Jay	Roach
72723	William	Shatner
...		

movies_directors	
director_id	movie_id
24758	112290
66965	209658
72723	313398
...	

movies_genres	
movie_id	genre
209658	Comedy
313398	Action
313398	Sci-Fi
...	

When run on the `imdb_small` database, your query would produce the following results:

first_name	last_name
Steve	Buscemi
Michael (I)	Madsen
Bill	Paxton
Stevo	Polyi
Uma	Thurman

Hint: You may be tempted to write a very long query, but you only really care about the genre of one of the actor's films. The others can be anything as long as there are 3 distinct films the actor has been in.

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.

8. SQL

Martin Scorsese has directed many movies, including Cape Fear, Casino, The Departed, Goodfellas, Raging Bull, and Taxi Driver. Scorsese is known for appearing as a character in his own films, in the background of a scene. Though he's known more as a director, he appears in our `imdb` database's table of actors due to appearances in his own films.

Write an SQL query to search the `imdb` database for all drama films (films with the "Drama" genre) that Martin Scorsese both directed *and* appeared in as an actor. For a movie to show in your results, Martin Scorsese must be that movie's director, and Martin Scorsese must also have played a character in that film. Show only the names of the movies, in **alphabetical order**. Each film should be listed only once. Recall the `imdb` database tables:

actors			
id	first_name	last_name	gender
433259	William	Shatner	M
797926	Britney	Spears	F
831289	Sigourney	Weaver	F
...			

movies			
id	name	year	rank
112290	Fight Club	1999	8.5
209658	Meet the Parents	2000	7
210511	Memento	2000	8.7
...			

roles		
actor_id	movie_id	role
433259	313398	Capt. James T. Kirk
433259	407323	Sgt. T.J. Hooker
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...		

directors		
id	first_name	last_name
24758	David	Fincher
66965	Jay	Roach
72723	William	Shatner
...		

movies_directors	
director_id	movie_id
24758	112290
66965	209658
72723	313398
...	

movies_genres	
movie_id	genre
209658	Comedy
313398	Action
313398	Sci-Fi
...	

When run on the `imdb` database, your query would produce the following results:

```
+-----+
| name                                     |
+-----+
| Age of Innocence, The                   |
| Boxcar Bertha                           |
| Bringing Out the Dead                   |
| Color of Money, The                     |
| Gangs of New York                       |
| King of Comedy, The                     |
| Mean Streets                             |
| New York Stories                         |
| Raging Bull                             |
| Taxi Driver                             |
| Who's That Knocking at My Door?       |
+-----+
```

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