Review for Midterm 1 CMSC 122, all sections

Date & Times

Midterm 1 will be given in normal lecture on Monday 10 October 2016. Your exams will be distributed and collected within the 50 minutes allocated for your section. You should therefore expect that the exam itself will require a full forty minutes of time to complete.

Please bring several writing implements —none will be provided.

Please do not bring electronic devices. We reserve the right to ask students to remove "smart watches," or any other device that may be used to photograph or copy information.

Important:

You must take your Midterm exam in the section for which you are registered.

Exams taken out of section will not be graded.

Topics

Questions are drawn from all of the class and project work completed as of 30 September. These include, but are not limited to:

- Common HTML elements (as they appear in HTML 5)
- Base-N number conversion, specifically base-2, base-10, and base-16 as these are the most commonly used in Web applications.
- Common visualization strategies: in particular, the use of diagrams and comments to guide the creation and assist in the understanding of both HTML and CSS source codes.
- CSS syntax and application: given a specific requirement, you should be able to interpret and construct CSS rule(s), and given a specific CSS rule, you should be able to anticipate how it will apply to the HTML. You should also be able to compute the effective dimensions of html elements given width, border, margin, and padding attributions in CSS.

You should attempt the following sample questions on a separate sheet of paper and bring these with you for review in Fridays' lectures.

Review Questions (by category)

Questions on numbers:

1. Convert 21 base-10 into its equivalent in base-2. Note, you must show your work to receive any credit for your response.
2. Convert 59 base-10 into its equivalent in base-16. Show your work.
3. Rewrite the following color specification `#ff00ff` in `rgb()`.

Questions on HTML

Examine the following HTML fragment that *fails* to validate:

```
<ul>
    <li>Item One</li>
    <li> Item Two</li>
    <ol>
        <li>Nested Item One</li>
    </ol>
    <li>Item Three</li>
<ul>
```

1. Draw the diagram of this fragment as we have done in class, using a sticks-and-boxes diagram showing the parent child relations.
4. Using that diagram, find the error in the original code fragment and re-write the *corrected* version in the space below.

Questions on CSS

(1) Given the following HTML (fragment):

```
<p class="myClass" id="myId"> Text here </p>
```

and the following CSS rules:

```
p { color: purple; }
#myId { color: green; }
.myClass { color: blue; }
```

what is the color of "`Text here`" when displayed in a browser?

What is the total width of the ‹div› element as specified by the following CSS rule:

```
div {
  width: 320px;
  padding: 10px;
  border: 5 px solid black;
  margin: 0;
}
```

Write the following CSS rules that will be used to format images in a document:

- One that defines the class "medium" that sets the width and height of an image to 300 pixels.
- One the defines the class "align-left" that using the float property to ensure that the image is left aligned and that the image provides 15 pixels of space along its right border.

Make sure that these rules only apply to images.

(Rules go here)

Modify the HTML below to apply the two rules from above:

```
<img alt=" . . ." src = url( " . . . ") . . . >
```

Questions on Inheritance

Consider the following CSS rules:

```
body { color: black; }

span { color: blue; border: 2px solid black; }

.extra span { color: inherit; }
```

In the following HTML fragment

```
<div>
Here is a <span> span element</span> which is color-1.
</div>
<div class="extra">
Here is a <span> span element</span> which is color-2.
</div>
```

What is `color-1` when rendering `span element` that appears in the first `<div>`?

What is `color-2` when rendering `span element` that appears in the second `<div>`?