Solving the problems in this assignment will require you to make some creative use of the CSS box model and various CSS properties.

**Problem 1. (4 points) overunder.html**

Create an HTML document that matches the renderings shown in $a3/overunder*.png. Rendering in less horizontal space than shown in overunder1.png is undefined. Use this rule to produce the red line that surrounds everything: ```html
body { border: solid red 1px }
```

Hint: Don't use `<hr>`!

**Problem 2. (5 points) nested.html**

Same as problem 1 but for $a3/nested*.png.

**Problem 3. (6 points) flags.html**

Same as problem 1 but for $a3/flags.png. These are the flag colors: red, blue, green, teal, purple. For full credit you must match the details shown in $a3/flagdetails.png.

Hint: My solution employs &nbsp;.

**Problem 4. (5 points) create1.html**

Now it's your turn to be creative! Create a design using the CSS we've studied through CSS slide 79. Your design should at least as complex/difficult as problem 1. Feel free to use color and/or text styling features we haven't covered yet but that styling shouldn't be the core of your creation. Sorry, no floats, positions, width, height, and other stuff not covered on slides 1-79. You'll get a chance to use that stuff on assignment 4!

Hint: Sometimes it's fruitful to implement something simple and see where it takes you. For example, $a3/create1.png was the first step in what turned out to be flags.html. Some bouncing back and forth between problems 1-3 and problems 4-5 may produce some useful cross-fertilization.

**Problem 5. (5 points) create2.html**

Same as problem 4, but a little more complex/difficult, in the range of problems 2 and 3.

Note that complexity is not necessarily related to difficulty. A particular complex design might just be plug-and-chug to implement; but a simple, creative design might have some subtle challenges that make it difficult to realize.

We'll be happy to offer a quick thumbs up/down as to whether a proposed design is sufficient but beware of a last-minute crunch that could overwhelm us.
Turning in your work

Use the D2L Dropbox named a3 to submit a zip file named a3.zip that contains all your work. If you submit more than one a3.zip, we'll grade your final submission. Here's the full list of deliverables:

- overunder.html
- nested.html
- flags.html
- create1.html
- create2.html

Note that all characters in the file names are lowercase. It's ok if your zip includes other files, too.

Miscellaneous

HTML slides 1-90, CSS slides 1-79, and in-class examples should provide all you need to complete this assignment. If you find yourself wanting to use aspects of CSS we haven't yet covered, you're probably overlooking something and/or making a problem more difficult than intended.

Point values of problems correspond directly to assignment points in the syllabus. In total this assignment represents 2.5% of your final grade in this course.

$a3$ follows the convention of $a1$ and $a2$ on the first two assignments

Remember that late assignments are not accepted and that there are no late days; but if circumstances beyond your control interfere with your work on this assignment, there may be grounds for an extension. See the syllabus for details.

My estimate is that it will take a typical CS junior between three and eight hours to complete this assignment. If you're a CS senior, you'll probably do it in less. If you've taken only a single programming class, you might be on the high end, or beyond. We recommend that you touch base with us if you pass the six-hour mark—give us a chance to be sure you're not making things too hard.

None of your solutions need to validate with either the HTML5 validator or the "Jigsaw" CSS validator, but you may find the CSS validator to be helpful in diagnosing mysterious problems with CSS. (The typical mysterious CSS problem is that a declaration is ineffective, like those on slide CSS slide 16.)

I'll put up a Piazza poll that asks you to report how many hours you spent on this assignment. You don't need to participate in that, but if you want to, make a little effort to track your time.

Keep in mind the point value of each problem; don't invest an inordinate amount of time in a problem or become incredibly frustrated before you ask for a hint or help. Remember that the purpose of the assignments is to build understanding of the course material by applying it to solve problems. If you reach the six-hour mark, regardless of whether you have specific questions, it's probably time to touch base with us. Give us a chance to speed you up! Our goal is that everybody gets 100% on this assignment and gets it done in an amount of time that is reasonable for them.

Remember that I award Bug Bounty points; if you find problems, there's a potential reward for reporting them. I prefer that bugs be reported by mail to me. I'll put up a "FAQs and Corrections" post on Piazza and update it as things come in.

Use the a3 folder for any Piazza posts about the assignment.