Grades:

Distribution:

<table>
<thead>
<tr>
<th>Grade Range</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>96-100</td>
<td>15</td>
</tr>
<tr>
<td>90-95</td>
<td>36</td>
</tr>
<tr>
<td>80-89</td>
<td>37</td>
</tr>
<tr>
<td>70-79</td>
<td>15</td>
</tr>
<tr>
<td>below 70</td>
<td>6</td>
</tr>
</tbody>
</table>

Average: 86.5

Format of this document:

- Question (short version)
- Description of the key points
- Sample answer
- Grading rubric

1. You have an image, named ClickHere.jpg, that you want to use as a link. You can assume that the image is appropriately sized and is in a subfolder called “images”. When clicked it is to take the user to the UNC home page.

   This question addresses the use of an image as the means to access a hyperlink and the correct way to go to an external link.

   `<a href="http://www.unc.edu" target="_blank"><img src="images/ClickHere.jpg" alt="button"></a>`

   `<a>tag: 2
Correct href format: 2
target="_blank": 3
<img>tag: 2
Correct format for src: 3
alt attribute: 2`
2. You want to have two boxed paragraphs (that is, they have visible borders) that follow one another. Without any changes to the HTML, write the CSS that will format them so that the border (which is to be 2px wide, black and solid) is 25px away from the text, there is 50px between the two boxes, but the boxes extend the entire width of the page.

This question is addressing borders, margin, and padding. Because the paragraphs were to span the full page, you do not want any left or right margin (default is 0). You only want to change the bottom margin.

```css
p {
    border: 2px solid black;
    padding: 25px;
    margin-bottom: 50px;
}
```

- p selector: 2
- border: 3
- padding: 4
- margin-bottom (and only bottom): 5 (-2 if top/bottom math wrong or added to sides)
- 3 if break the width of the box
- 1 css syntax errors
- 2 changed the CSS
3. Create the HTML for the following table. Fields that are in bold are to be headers. All widths are to be determined by content. Do not worry about any CSS formatting. The title above the table is to be its caption.

This is a standard table definition. Key points are the use of colspan and rowspan, caption, and th in both rows and columns. It is important to remember not to have additional th or td entries when that “space” has already been taken with a colspan or rowspan. Caption can go at the top or bottom. It will always appear at the top of the table. Note that caption is a specific table tag and not the same as figcaption.

<table>
    <caption>Ernest’s First Essay</caption>
    <tr>
        <th rowspan="2">Well-organized</th>
        <th colspan="2">Structure</th>
    </tr>
    <tr>
        <th>Well-formatted</th>
    </tr>
    <tr>
        <th>Introduction</th>
        <td>Good</td>
        <td>Poor</td>
    </tr>
    <tr>
        <th>Conclusion</th>
        <td colspan="2">Not included</td>
    </tr>
</table>

Use of caption: 2
Use of colspan: 2
Use of rowspan: 2
Correct number of elements with rowspan: 3
Correct number of elements with colspan: 3
Use of th for bold elements: 2
-1 if added border or style on tags
4. Write the HTML and CSS for a form that requests the user’s name and city of residence. The form is to have a border and 10px between it and any content. The city of residence is to be chosen from a dropdown that has 3 entries: Chapel Hill, Carrboro and Durham. When the button labeled “Submit” is clicked, a complete statement that the person lives in the chosen city is to be printed in a field in the form below the button. The field where it is written should have no visible borders. Each of the two data entries is to have a label and start on a new line. The button is to be on its own line and centered. The four elements are to have 10px between them.

This is a standard form. In order for the onclick to work, both the form and the elements need to be named and the assignment statement must reference them properly. For formatting, the key is that label and button need to have display: block; to start them on a new line. Using display: table; for the form assures that there is no extraneous spacing.

```html
<form name="who">
  <label>
    Name:
    <input name="person" type="text">
  </label>
  <label>
    City:
    <select name="city">
      <option value="Chapel Hill">Chapel Hill</option>
      <option value="Carrboro">Carrboro</option>
      <option value="Durham">Durham</option>
    </select>
  </label>
  <button onclick="who.outfield.value = who.person.value + ' lives in ' + who.city.value;" type="button">
    Submit
  </button>
  <input name="outfield" type="text">
</form>
```

form {
  display: table;
  border: 1px black solid;
  padding: 10px;
}
label {
  display: block;
  margin-bottom: 10px;
}
button {
  display: block;
  margin-left: auto;
  margin-right: auto;
}
input[name="outfield"] {
  border:none;
  background: transparent;
  margin-top: 10px;
}

Single <form> tag: 1
<input text with name> for name: 1
<select with name> for city: 1
<label> on name and city: 1
<button button> for submit: 1
<input text> for output: 1
Correct onclick format (quotes and semi-colon): 1
Correct format for an assignment statement: 1
Correct format for concatenation: 1
Correct referencing of value fields: 1
Form has border and 10px padding: 1
Labels stat on new line: 1
Button is centered: 1
Output box is invisible: 1
5. The following HTML structure appears multiple times in a web site but with different numbers of paragraphs. (You can assume that there are always at least 3 paragraphs.) Without making any changes to the HTML, you are to write the CSS to format each section such that

- The first paragraph is in bold and has a first letter that is twice the size of the rest of the text.
- The second paragraph is in italics.
- The last paragraph is to in bold but there is no difference in the size of the first letter.

This is basic application of the DOM positional CSS formatting. Because there are different numbers of paragraphs, you need to use last-child. It also requires that you recognize how to use both a pseudo-element and pseudo-class together; specifically, they need to be in the correct order: first you select the correct paragraph (first-child) and then you select the first letter. Alternate formats: first-child is the same as nth-child(1) and last-child is the same as nth-last-child(1). Since all formatting was for paragraphs in this case, you can use first-of-type and last-of-type.

```css
p:first-child {
    font-weight: bold;
}
p:first-child::first-letter {
    font-size: 2em;
}
p:nth-child(2) {
    font-weight: italic;
}
p:last-child {
    font-style: bold;
}
```

Use of first child (or nth-child(1)): 3
Use of nth-child(2): 3
Use of last-child (or nth-last-child(1)), not 4: 4
Correct use of first-letter, including correct position: 2
Doubling the size that works independent of size: 2
6. Write the CSS to float an image to the left of a list. You can assume that the image is the proper size. A sample of the HTML would be

```html
<img src="spain.jpg" alt="Spanish rain">
<ul>
    <li>rain</li>
    <li>Spain</li>
    <li>plain</li>
</ul>
```

The float: left; on the img is obvious. The difficulty is making sure that the list does not overlay the img. The problem occurs because the default formatting for the list does not include the bullet on the inside and it therefore will overlap the img. The possible solutions that work independent of the image size are display: table; or list-style-position: inside; or overflow: hidden; on the ul formatting.

```css
img {
    float: left;
}
ul {
    list-style-position: inside; /* or display: table; or overflow: hidden; */
}
```

Use of float: left: 6
ul solution that works independent of size: 8
ul solution that only works for specific sizes: 4
7. You are to write the HTML for a complete web page that would validate properly. There is to be no CSS. The only content of the page is (1) an audio that plays automatically and has no visible controls and (2) a video – not from youtube. You can assume that the video is appropriately sized and it need not be centered. The audio is in a file called intro.wav and the video in a file called amazing.mp4. Both files are in a subfolder called content.

The purpose of this question is to see that you know the correct format for audio and video and understand the use of autoplay. It is also review of the required elements of a page: you must include both a title and meta tag to validate.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Native Multimedia</title>
    <meta charset="UTF-8">
  </head>
  <body>
    <audio autoplay><source src="content/intro.wav" type="audio/wav"></audio>
    <video controls><source src="content/amazing.mp4" type="video/mp4"/></video>
  </body>
</html>
```

<IDOCTYPE html>, <html, and <body>: 1
<head> with title and meta: 1
<audio>: 2
Autoplay on audio: 2
Correct source format for audio including type: 2
<video>: 2
Controls on video: 2
Correct source format for video including type: 2
8. Write the HTML and CSS to create a figure that is floated to the left with a centered caption that reads "Figure 7" at the bottom in italics that contains two images that are side by side with no space between them and are the same height (400px).

The figure is to have a 2px blue border with rounded corners (50px), 25px space between the border and the images and caption, and 5px spacing between the caption and the images.

You should assume that the pictures are called `people.jpg` and `place.jpg` and are both in a subfolder called `images`.

This problem requires a straightforward use of a figure with a figcaption and two images in it. The more difficult pieces are in the formatting. Alignment and spacing should be straightforward, just requiring that you follow instructions. To get the rounded corners, you use `border-radius`. The element that is hardest to get is having the images have no space between them. `img` has 2px of margin built into it so you need to use `-2px` between the images in order to get them to truly abutt. Another solution is to put the images in a list and use inline. Setting `figure` to `display:table` also solves it.

```html
<figure>
  <img src="images/place.jpg" alt="arches">
  <img src="images/people.jpg" alt="people">
  <figcaption>Two Images</figcaption>
</figure>
```

```css
figure {
  float: left;
  border: 2px blue solid;
  padding: 25px;
  border-radius: 50px;
}
figcaption {
  text-align: center;
  padding-bottom: 5px;
}
ing {
  height: 500px;
}
ing:nth-child(2) {
  margin-right: -2px;
}
ing:last-child {
  margin-left: -2px;
}
```

- figure floated left: 1
- figure border styled properly: 2
- figure padding of 25px: 1
- figcaption at bottom: 1
- figcaption centered and italic: 2
- 5px between images and figcaption: 2
- Height set for images: 1
- Images side by side: 2
- No space between images: 2
- Other deductions:
  - Float left on the right image only (-1)
  - Wrong img name (-1)
  - No figure (-5)
  - No subfolder (-03)
  - No alt (-2)
  - No figcaption (-5)
  - Set width and height (-2)
  - Style or size attributes on tag (-1)