COMP 101 Practice Exam 3 Answers
1. Write the HTML for a form that contains 2 input fields and a button. The first input field is to be a text field and have a label of Name. The second input field is to be numeric and have a label of Age. The button is to be labeled Register. The input fields must have all elements that would allow them to be used as parameters to a JavaScript function.

```html
<form>
    <label>Name: <input type="text" id="yourname"></label>
    <label>Age: <input type="number" id="yourage"></label>
    <button type="button">Register</button>
</form>
```
2. Write the CSS to make all text input fields be 600px wide and have a black border while all number input fields have a light blue background and no border.

```css
input[type="text"] {
    width: 600px;
    border: 1px solid black;
}
input[type="number"] {
    background-color: lightblue;
    border: none;
}
```
3. Write the HTML and CSS to create three numeric fields that are inside a form. (You do not have to write the HTML or the CSS for the form.) They are each to start on a new line of the form, have a label, and the input fields themselves are to line up. The three fields are to labeled minuend, subtrahend and difference.

<label><input type="number">Minuend</label>
<label><input type="number">Subtrahend</label>
<label><input type="number">Difference</label>

Two options for CSS:

label on left

```css
label {
  display: block;
  clear: right;
}
input {
  float: right;
}
```

label on right

```css
label {
  display: block;
}
```
4. You have an HTML page that invokes several JavaScript functions: getColor, getSize, and getStyle. They are all defined in a single JavaScript file called inventory.js, which is in the same folder as your HTML page. Write the HTML that is needed to be added to the <head> section of the page in order to allow the HTML to use these functions.

<script src="inventory.js" type="text/javascript"></script>
5. Write a JavaScript function that is called Months, takes a single numeric value that is a number of years. It returns a numeric value that is the number of months in that many years. This function could then be used in the following JavaScript statement:

```javascript
monthsAge = Months(yearsAge);
```

```javascript
function Months(years) {
    return (12*years);
}
```
6. Write a JavaScript function called RandomNum that returns a random integer. The function takes two parameters that represent the range that you want the random number to be between. For example RandomNum(3,8) would return a random integer between 3 and 8 (that is 3, 4, 5, 6, 7, or 8).

```javascript
function RandomNum(min,max) {
  return (Math.round(Math.random()*(max-min))+Number(min));
}
```

Or in steps:

```javascript
function RandomNum(min,max) {
  var newnum = Math.random(); // give a value from 0-1
  newnum = newnum * (max-min); // gives a value from 0 to the range needed (max-min)
  newnum = Math.round(newnum); // gives an integer from 0 to the range needed (max-min)
  newnum = newnum+Number(min); // gives a number in the range of min to max by adding min
  return (newnum);
}
```
7. Write a JavaScript statement that produces the following table (do not worry about formatting)

<table>
<thead>
<tr>
<th>Semesters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2016</td>
<td>Spring 2017</td>
</tr>
</tbody>
</table>

in the following div: `<div id="school"></div>`

document.getElementById("school").innerHTML =
"<table><tr><td colspan='2'>Semesters</td></tr><tr><td>Fall 2016</td><td>Spring 2017</td></tr></table>";
8. Write an img tag that displays a picture named cloud.jpg that changes the size of the following h3 tag:

   <h3 id="changed" class="normal">Yoga</h3>

By changing the class to big. You can assume that the class big is properly defined.

   <img src="cloud.jpg" alt="cloud" onclick="document.getElementById('changed').className = 'big';">
9. Write a form with two input fields. The first is to be a text field with instructions to the user to “Enter your name”. The second is to be a numeric field that is to have a default value of 17. The form and both fields are to have all fields required to be accessed by an onclick statement.

```html
<form>
  <input type="text" id="yourname" placeholder="Enter your name"/>
  <input type="number" id="yourage" value=17>
</form>
```