Final Exam
CIS 228: The Internet
Prof. St. John
Lehman College
City University of New York
12 December 2007

NAME (Printed) _____

NAME (Signed) _____

E-mail _____

Exam Rules

- **Show all your work. Your grade will be based on the work shown.**

- **The exam is closed book and closed notes.**

- **When taking the exam, you may have with you pens or pencils, and an 8 1/2" x 11" piece of paper filled with notes, programs, etc.**

- **You may not use a computer or calculator.**

- **All books and bags must be left at the front of the classroom during this exam.**

- **Do not open this exams until instructed to do so.**

Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
Question 6	
Question 7	
Question 8	
Question 9	
Question 10	
TOTAL	

(Blue exam)

1. True or False:

    (a) ＿＿ Opening tags can have attributes.

    (b) ＿＿ An empty element consists of only one tag.

    (c) ＿＿ You cannot use more than one attribute at a time for the <a> element.

    (d) ＿＿ JPEG is a "lossless" format for presenting images.

    (e) ＿＿ Strict HTML style is the same as XHTML style.

    (f) ＿＿ The document type tag (<doctype>) is used to tell the browser which version of HTML your web page is written in.

    (g) ＿＿ The META tag is not needed to the transitional XHTML 1.0.

    (h) ＿＿ A <span> elements joins up pieces created by the <div> element.

    (i) ＿＿ You can nest tables inside tables.

    (j) ＿＿ In JavaScript, arrays can be of any length.

2. Answer in two sentences or less the following:

    (a) What is HTML? What is it used for?

    (b) What is CSS? What is it used for?

    (c) What is the difference between them?

3. Fill in the following table with the corresponding decimal or hexcode representation of the number. For partial credit, show your work.

Decimal	Hexcode
15	
	#15
31	
	#aa
	#f1

4. What does the following JavaScript code do? Write the **ending** value for each variable in the box below. (Show your work for partial credit.)

```
var meenie, miney, moe = 3, all = "it's ";

meenie = moe +2;
miney = meenie % moe;
all = all+moe+"!";
moe--;
```

meenie	miney	moe	all

5. Write Javascript **functions** that will do the following:

   (a) Say ``hello world.''

   (b) Take as input a number, `digit`, and return true if `digit` is less than 16, otherwise return false.

   (c) Prompt the user for their grades on the last 10 assignments and tell them the average of their grades.

6. Be the browser with the following HTML and CSS files. On the following page of the exam, draw the page and indicate any style (color, borders, etc) on your page:

HTML:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" lang="en" xml:lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />
    <title>Starbuzz Coffee</title>
    <link rel="stylesheet" type="text/css" href="starbuzz.css" />
  </head>
  <body>
    <div id="header">
      <img src="images/header.gif" alt="Starbuzz Coffee header image" />
    </div>
    <div id="drinks">
      <h1>BEVERAGES</h1>
      <p>House Blend, $1.49</p>
      <p>Mocha Cafe Latte, $2.35</p>
      <p>Cappuccino, $1.89</p>
    </div>

    <div id="sidebar">
      <p class="beanheading">
        <img src="images/bag.gif" alt="Bean Machine bag" />
        <br />
        ORDER ONLINE
        with the
        <a href="form.html">BEAN MACHINE</a>
        <br />
        <span class="slogan">
          FAST <br />
          FRESH <br />
          TO YOUR DOOR <br />
        </span>
      </p>
      <p>
        Why wait?  You can order all our fine coffees right from the Internet with our new,
        automated Bean Machine.
      </p>
    </div>

    <div id="main">
      <h1>QUALITY COFFEE, QUALITY CAFFEINE</h1>
      <p>
        At Starbuzz Coffee, we are dedicated to filling all your  caffeine needs through our
        quality coffees and teas.
      </p>

      <h1>OUR STORY</h1>
      <p>
        "A man, a plan, a coffee bean". Okay, that doesn't make a palindrome, but it resulted
        in a damn good cup of coffee.  Starbuzz's CEO is that man, and you already know his
        plan: a Starbuzz on every corner.
      </p>
      <h1>STARBUZZ COFFEE BEVERAGES</h1>
      <p>
        We've got a variety of caffeinated beverages to choose
        from at Starbuzz, including our
        <a href="beverages.html#house" title="House Blend">House Blend</a>,
        <a href="beverages.html#mocha" title="Mocha Cafe Latte">Mocha Cafe Latte</a>,
        <a href="beverages.html#cappuccino" title="Cappuccino">Cappuccino</a>,
        and a favorite of our customers,
        <a href="beverages.html#chai" title="Chai Tea">Chai Tea</a>.
      </p>
    </div>

    <div id="footer">
      &copy; 2005, Starbuzz Coffee
      <br />
      All trademarks and registered trademarks appearing on
      this site are the property of their respective owners.
    </div>

  </body>
</html>
```

CSS:

```
body {
background-color: #b5a789;
font-family: Georgia, "Times New Roman", Times, serif;
font-size: small;
margin: 0px;
}
#main {
background: #efe5d0 url(images/background.gif) top left;
font-size: 105%;
padding: 15px;
margin: 0px 10px 10px 10px;
}
#sidebar {
background: #efe5d0 url(images/background.gif) bottom right;
font-size: 105%;
padding: 15px;
margin: 0px 10px 10px 10px;
}

#footer {
background-color: #675c47;
color: #efe5d0;
text-align: center;
padding: 15px;
margin: 10px;
font-size: 90%;
}
#header {
background-color: #675c47;
margin: 10px;
height: 108px;
}
#drinks {
background: #efe5d0 url(images/background.gif) top left;
font-size: 105%;
padding: 15px;
margin: 0px 10px 10px 10px;
}
h1 {
font-size: 120%;
color: #954b4b;
}
h2 {
font-size: 110%;
}
.slogan {
color: #954b4b;
}
.beanheading {
text-align: center;
line-height: 1.8em;
}
.beanheading img {
width: 60%;
}
a:link {
color: #b76666;
text-decoration: none;
border-bottom: thin dotted #b76666;
}
a:visited {
color: #675c47;
text-decoration: none;
border-bottom: thin dotted #675c47;
}
#sidebar {
float: right;
width: 180px;
}
#main {
margin-right: 230px;
margin-left: 165px;
}
#drinks {
float: left;
width: 115px;
}
#footer {
clear: both;
}
```

(Space for Answer to #6:)

7. Write the HTML code for the table with the following information. Include any style rules needed to display the table:

CIS 228: The Internet

Section	Code	Open Seats	Day and Time	Instructor	Bldg/Rm
01	0292	13	T,TH 4:00 - 5:50 PM	Wilson, E.	GI/207
02	0293	14	T,TH 11:00 - 12:50 PM	St John, K.	GI/217
03	0294	3	S 9:00 - 12:30 PM	Krishnakumar, P.	GI/217

8. Write the style sheet that will arrange the following page: fonts should be sans-serif, headings should be gray, the elixirs sidebar should be on the right side of the page, the footer should not overlap other sections of the page, CD names should be boldface, and the artists' names should be in italic. (Hint: Do not change any of the HTML code.)

```
<html xmlns="http://www.w3.org/1999/xhtml" lang="en" xml:lang="en">
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />
    <title>Head First Lounge</title>
    <link type="text/css" rel="stylesheet" href="lounge.css" media="screen" />
  </head>
  <body>
    <p><img src="images/logo.gif" alt="Head First Lounge" /></p>
    <div id="elixirs">
      <h2>Weekly Elixir Specials</h2>
      <h3>Lemon Breeze</h3>
      <p>
        The ultimate healthy drink, this elixir combines
        herbal botanicals, minerals, and vitamins with
        a twist of lemon.
      </p>
      <h3>Chai Chiller</h3>
      <p>
        Not your traditional chai, this elixir mixes chai spices and
        adds an extra chocolate kick for a caffeinated taste sensation.
      </p>
      <p>
        Join us any evening for these and all our
        other wonderful
        <a href="beverages/elixir.html"
           title="Head First Lounge Elixirs">elixirs</a>.
      </p>
    </div>

    <h1>Welcome to the Head First Lounge</h1>
    <p>
      The Head First Lounge is, no doubt, the biggest trendsetter in Webville.
    </p>
    <p>
      During your stay at the lounge, you'll enjoy a smooth mixture of
      ambient and mystic sounds.
    </p>
    <p id="guarantee">
      Our guarantee: at the lounge, we're committed to providing you,
      our guest, with an exceptional experience every time you visit.
    </p>
    <p>
      But that's not all; at night, join us in the backroom as our resident
      DJ spins a choice selection of trance and drum&amp;bass beats across
      our spacious tiki-themed dance floor.
    </p>
    <p>
      Now that you've experienced the lounge <em>virtually</em>, isn't
      it time to check us out <em>for real</em>? We're located right
      in the heart of Webville, and we've created some
      <a href="about/directions.html"
         title="Detailed Directions to the Lounge">detailed directions</a>
    </p>

    <h2>What's playing at the Lounge</h2>
    <p>
      We're frequently asked about the music we play at the lounge, and no wonder,
    </p>
    <ul>
      <li><span class="cd">Buddha Bar</span>, <span class="artist">Claude Challe</span></li>
      <li><span class="cd">When It Falls</span>, <span class="artist">Zero 7</span></li>
      <li><span class="cd">Earth 7</span>, <span class="artist">L.T.J. Bukem</span></li>
      <li><span class="cd">Le Roi Est Mort, Vive Le Roi!</span>, <span class="artist">Enigma</span></li>
      <li><span class="cd">Music for Airports</span>, <span class="artist">Brian Eno</span></li>
    </ul>
    <div id="footer">
      <p> Copyright 2005, Head First Lounge<br /></p>
    </div>
  </body>
</html>
```

9. Create a form for ordering ice cream from the "228 Ice Cream Shop." Your form should have the following choices (the name used by the web application is included in parenthesis):

- first and last names (`fname` and `lname`)
- type of ice cream cone (`cone`)
- kind of ice cream (`iceCream`),
- extra toppings (`extras[]`), and
- a text area for comments and special instructions (`comments`)

For the first four, you should allow only one answer (i.e. radio buttons or pull-down menu), while for extras (i.e. sprinkles, whipped cream, etc), multiple answers are expected (i.e. checkboxes).

The web application for processing the form is located at:
`http://comet.lehman.cuny.edu/stjohn/teaching/cis228/order.php`

10. Write a COMPLETE file that does the following:

- Uses cookies to keep track of when the user has visited in the last year.

- If this is the first visit, the user is prompted for their name and the program replies that it is nice to meet them, using their name (i.e. if they say their name is "Herbert", the program then says, "Nice to meet you, Herbert"). Store their name in a cookie.

- If this isn't their first visit, then welcome them back to the page. For example, if the name stored in the cookie is "Lehman", you would say "Welcome back, Lehman!".

- You can assume that the following functions have been written for you: `setCookie(name, value, days)`, `getCookie(name)`, and `delCookie(name)`.