

Final Examination
CIS 228: The Internet
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City University of New York
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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	

1. True or False:

- (a) ___ In HTML, every element has an opening and closing tag.
- (b) ___ You can only use words, not images, as the label for a link.
- (c) ___ “`http://google.com`” is an example of a relative path.
- (d) ___ Attributes describe properties of an element.
- (e) ___ In HTML, you can only use JPEG and GIF as image file formats.
- (f) ___ Strict HTML requires the use of `
` instead of `
`
- (g) ___ In HTML, you can have tables nested inside tables.
- (h) ___ In JavaScript, loops can be nested inside loops.
- (i) ___ The regular expression `/\d(5)/` matches the form of US phone numbers.
- (j) ___ JavaScript functions cannot call other functions.

2. Answer in two sentences or less the following:

- (a) What is an event in JavaScript? Give an example.

- (b) What triggers events (i.e. where do events come from)?

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

Decimal	Hexcode
11	
	#11
33	
	#4a
	#ff

4. (a) 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 lehman, citi, goldman, jp=100;
```

```
lehman = jp-jp;  
goldman = 2*jp;  
citi = goldman/jp;  
goldman--;
```

lehman	citi	goldman	jp

- (b) What does the following JavaScript code do?

```
var count;  
  
for (count = 5; count > 0; count--)  
{  
    alert(count);  
}  
alert{"Blast off!"};
```

5. Fill in the following Javascript **functions** that will do the following:

(a) Displays the message to the user:

```
function displayMessage(message)
{

}

}
```

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

```
function test{digit)
{

}

}
```

(c) Takes as input a number, **count**, and displays "bye" that many times:

```
function sayBye{count)
{

}

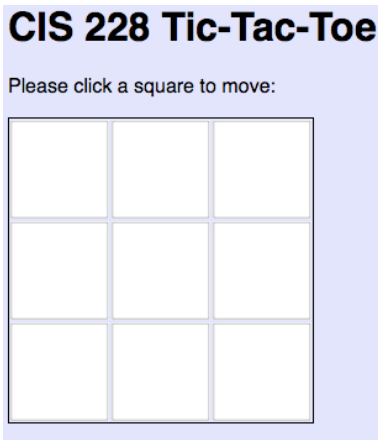
}
```

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

```
<html>
<head>
<style>
  body {
    font-family: sans-serif;
    background-color: #dddddff;
  }
  #airplane {
    background-color: #ffffff;
    margin: 10px;
    text-align: center;
  }
</style>
<script>
var seats = new Array;
function initializeSeats() {
  var max = 18, i;
  for (i = 1; i <= max; i++) {
    seats[i] = "empty";
    document.getElementById("seat"+i).src = "coach.jpg";
    document.getElementById("seat"+i).alt = "Coach seat";}
}
function seatSelect(i) {
  if (seats[i] == "empty") {
    document.getElementById("seat"+i).src = "full.jpg";
    document.getElementById("seat"+i).alt = "Seat taken";
    seats[i] = "taken";
  }
  else {
    alert("That seat is not available."); }
}
</script>
</head>
<body onload = "initializeSeats()">
  <h1>CIS 228 Airline Seat Selector</h1>
  <p>Please click on the seat you would like:</p>
  <div id="airplane">
    <table>
      <tr><td></td><th>A</th><th>B</th><th>C</th><td>Aisle</td><th>D</th><th>E</th><th>F</th></tr>
      <tr>
        <td>Row 1:</td>
        <td><img id="seat1" src="" alt="" height="80" onclick="seatSelect(1)"></td>
        <td><img id="seat2" src="" alt="" height="80" onclick="seatSelect(2)"></td>
        <td><img id="seat3" src="" alt="" height="80" onclick="seatSelect(3)"></td>
        <td></td>
        <td><img id="seat4" src="" alt="" height="80" onclick="seatSelect(4)"></td>
        <td><img id="seat5" src="" alt="" height="80" onclick="seatSelect(5)"></td>
        <td><img id="seat6" src="" alt="" height="80" onclick="seatSelect(6)"></td>
      </tr>
      <tr>
        <td>Row 2:</td>
        <td><img id="seat7" src="" alt="" height="80" onclick="seatSelect(7)"></td>
        <td><img id="seat8" src="" alt="" height="80" onclick="seatSelect(8)"></td>
        <td><img id="seat9" src="" alt="" height="80" onclick="seatSelect(9)"></td>
        <td></td>
        <td><img id="seat10" src="" alt="" height="80" onclick="seatSelect(10)"></td>
        <td><img id="seat11" src="" alt="" height="80" onclick="seatSelect(11)"></td>
        <td><img id="seat12" src="" alt="" height="80" onclick="seatSelect(12)"></td>
      </tr>
      <tr>
        <td>Row 3:</td>
        <td><img id="seat13" src="" alt="" height="80" onclick="seatSelect(13)"></td>
        <td><img id="seat14" src="" alt="" height="80" onclick="seatSelect(14)"></td>
        <td><img id="seat15" src="" alt="" height="80" onclick="seatSelect(15)"></td>
        <td></td>
        <td><img id="seat16" src="" alt="" height="80" onclick="seatSelect(16)"></td>
        <td><img id="seat17" src="" alt="" height="80" onclick="seatSelect(17)"></td>
        <td><img id="seat18" src="" alt="" height="80" onclick="seatSelect(18)"></td>
      </tr>
    </table>
  </div>
</body>
</html>
```

(Space for Answer to #6:)

7. Write the HTML **and** CSS to make the following table:



(Hint: the elements of the table are images, called `empty.jpg`. Use a `<div>` to style the “tic-tac-toe board” a different color from the background.)

8. Write the style sheet, `lounge.css`, that will arrange the following page: the fonts should be small and sans serif, the headings should be aqua blue with the `h1` at 150% and `h2` at 130%, and the paragraph `guarantee` should have serif fonts, a white dashed border, background color aqua-blue, and a background image in the upper left corner (path for the image is `"images/background.gif"`). Further, the elixir menu (contained in a `div`) should be displayed as a sidebar menu on the upper right hand side of the page.

(Hint: Do not change any of the HTML code.)

```
<!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>Head First Lounge</title>
  <link type="text/css" rel="stylesheet" href="lounge.css" media="screen" />
</head>
<body>
  <p></p>
  <h1>Welcome to the Head First Lounge</h1>
  <div id="elixir">
    <h2>Weekly Elixir Specials</h2>
    <p>
      
    </p>
    <h3>Lemon Breeze</h3>
    <p>
      The ultimate healthy drink, this elixir combines
      herbal botanicals, minerals, and vitamins with
      a twist of lemon into a smooth citrus wonder
      that will keep your immune system going all
      day and all night.
    </p>
    <p>
      
    </p>
    <h3>Chai Chiller</h3>
    <p>
      Not your traditional chai, this elixir mixes mat&eacute;
      with chai spices and adds an extra chocolate kick for
      a caffeinated taste sensation on ice.
    </p>
    <p>
      
    </p>
    <h3>Black Brain Brew</h3>
    <p>
      Want to boost your memory? Try our Black Brain Brew
      elixir, made with black oolong tea and just a touch
      of espresso. Your brain will thank you for the boost.
    </p>
  </div>
  <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, filling the lounge and adding an extra dimension
    to your dining experience.
  </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.
    Whether you're just stopping by to check in on email over an
    elixir, or are here for an out-of-the-ordinary dinner, you'll
    find our knowledgeable service staff pay attention to every detail.
    If you're not fully satisfied, have a Blueberry Bliss Elixir on us.
  </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>
    to get you here in record time. No reservations necessary;
    come and join us anytime.
  </p>
  <p>&copy; 2005, Head First Lounge</p>
</body>
</html>
```


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

- choice of cone (plain, sugar, chocolate): **cone**,
- ice cream (chocolate, vanilla, coffee, cookie dough): **iceCream**,
- extras (sprinkles, chocolate sauce, caramel sauce): **extras[]**,
- name: **name**,
- a text area for comments and special instructions: **comments**

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

The web application for processing the form is located at:
<http://comet.lehman.cuny.edu/stjohn/icecream.php>

10. Write a **complete** HTML file with JavaScript that squares a number:
- The webpage displays an image of your favorite pet or destination.
 - When the page is loaded, greet the user:
“Welcome! Click on image for squaring:”
 - When the image is clicked, ask the user to enter a number and then display the square of the number.