CISC103 sections 010-011, Midterm 1 10/18/05

Name

UD Email address (e.g. jsample@udel.edu)

Please circle your section number:

010 011
(Tuesday lab) (Thursday Lab)

Answer the multiple choice questions on a "Scantron Form"

Bubble in ONLY your UD Email address and your answers

DO NOT bubble in your id number or section
If you bubble in your SSN, the computer will **reject your form!!!**

Answer the remaining questions directly on the exam paper.

General Instructions

- The exam is @@% multiple choice, @@% short answer.

- The short-answer questions start with number 22. You may want to tackle them first, since they may take more time.

- DO NOT WRITE YOUR NAME ON ANY PAGE EXCEPT THIS ONE!

- You have 75 minutes. **Pace yourself,** and pay attention to the point values.

- The points values are a good approximation of how long you should spend on each program (e.g. 10 minutes for a 10 point question.) That will leave you 15 minutes at the end to finish up your work.

- Read *all* the directions *carefully* on each problem.

- Good luck.

1. (3 pts) The hexadecimal number 1743 would be represented in binary as:

    (a)   001 111 100 011

    (b)   101 011 111 001

    (c)   0010 1110 1000 0110

    (d)   0001 0100 0111 0011

    (e)   0001 0111 0100 0011

2. (3 pts) The number system that corresponds to how computers store information internally using the flow of electricity is:

    (a)   hexadecimal

    (b)   decimal

    (c)   binary

    (d)   octal

Questions 3 through 5 deal with code in `page1.html`, shown here:

```
1  <html>
2
3  <head>
4
5  <title>Test page 1</title>
6
7  </head>
8
9  <body bgcolor="#FF0000">
10
11 <h1>This is a test page</h1>
12
13 <p>Lorem ipsum <strong>dolor</strong> sit amet, consectetur
14 adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore
15 magna aliqua. </p>
16
17 <h2>Oremlam ipsumway <em>olorday</em> itsay ametway?</h2>
18
19 <p>The "lorem ipsum" text is dummy text used in font and layout
20 samples.  Is it real latin or fake latin?  In any case, it isn't
21 pig-latin, though sometimes folks might slip some pig-latin in just
22 for fun. </p>
23
24 <hr />
25
26 <p><a href="http://copland.udel.edu/~pconrad">P. Conrad</a></p>
27
28 </body>
29
30 </html>
```

3. **(3 pts)** The text `<h1>` on line 11 represents:

    (a)   one XHTML element

    (b)   one XHTML open tag

    (c)   one XHTML closing tag

    (d)   one XHTML attribute

    (e)   the name of one XHTML attribute

4. **(3 pts)** Line 9 containing `<body bgcolor="#FF0000">` would NOT be equally valid XHTML if it were written as:

   (a)   `<body bgcolor="red">`

   (b)   `<body bgcolor='red'>`

   (c)   `<body bgcolor='#FF0000'>`

   (d)   `<body bgcolor=#FF0000>`

5. **(3 pts)** Which of the following is the name of the element nested inside the `h2` element on this page?

   (a)   `h1`

   (b)   `p`

   (c)   `em`

   (d)   `strong`

   (e)   both a `p` and a `strong` element are nested in the `h2` element.

6. **(3 pts)** The binary number 00100010 would be represented in decimal (base 10) as:

   (a)   12

   (b)   22

   (c)   34

   (d)   42

   (e)   none of the above

7. **(3 pts)** The binary number 1010 1111 would be represented in hex as:

   (a)   6F

   (b)   AF

   (c)   BF

   (d)   FA

   (e)   none of the above

8. **(3 pts)** The `em` element is recommended to be used used in place of what older element that is expected to be eliminated in a future version of XHTML?

   (a)   `b`

   (b)   `i`

   (c)   `u`

   (d)   `strong`

9. (3 pts) Which of the following statements is TRUE?

    (a)   An `h1` element should be used for a heading that is more important than an `h2` element.

    (b)   An `h2` element should be used for a heading that is more important than an `h1` element.

    (c)   The importance of the text doesn't matter when choosing between `h1` and `h2`—the only thing that matters is which one you want to appear in a bigger font.

10. (3 pts) Which is true of the process of converting between octal and binary:

    (a)   bits are grouped in groups of three, from right to left

    (b)   bits are grouped in groups of three, from left to right

    (c)   bits are grouped in groups of four, from right to left

    (d)   bits are grouped in groups of four, from left to right

11. (3 pts) Color codes such as `"#FF00FF"` represent a practical use of the number system known as:

    (a)   binary

    (b)   octal

    (c)   decimal

    (d)   hexadecimal

Questions 12 through 14 pertain to the following line of JavaScript code:

```
document.write("<h1>Welcome to my web page.</h1>");
```

12. (3 pts) Which of the following is a correct use of terminology to describe the part of this code inside the parentheses, i.e. `"<h1>Welcome to my web page.</h1>?"`?

    (a)   It is the value of an attribute.

    (b)   It is an integer constant.

    (c)   It is an argument to a method.

    (d)   It is a unary operator.

    (e)   It is an assignment statement.

13. (3 pts) Which of the following is a correct use of terminology to describe: `write()` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

14. (3 pts) Which of the following is a correct use of terminology to describe: `</h1>` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

15. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <strong><em>Foo</strong></foo>
    ```

    (a) yes

    (b) no

16. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <p>Hello.   <br> How are you?</p>
    ```

    (a) yes

    (b) no

17. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <p>Hello.</p> <hr /> </p>How are you?<p>
    ```

    (a) yes

    (b) no

18. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <h1>Hello.</h1> <hr /> <h2>How are you?</h2>
    ```

    (a) yes

    (b) no

19. **(3 pts)** The plus sign in the following JavaScript statement represents which of these operations:

    ```
    document.write("<p>The sum is:  " + ( 2 + 3 ) + "</p>";
    ```

    (a) addition

    (b) string concatenation

    (c) object composition

20. **(3 pts)** If you read in a number in JavaScript using the following code, the value assigned into `pizzaSize` will be of what type?

    ```
    pizzaSize = prompt("Enter size of pizza (diameter in
    inches)","12");
    ```

    (a) string

    (b) integer

    (c) boolean

    (d) method

    (e) attribute

21. (**4 pts**) The output of the following JavaScript statement is represented by which of the choices below?

```
document.write("<p>The sum is:  " + 2 + 3 + "</p>";
```

(a)   The sum is: 23

(b)   The sum is: 5

(c)   The sum is: 2 3

Section 3. Short Answer (answer on this sheet)

22. (**30 pts**) Write out the contents of an XHTML file `page2.html` that would render a web page that looks like the one in the figure below.
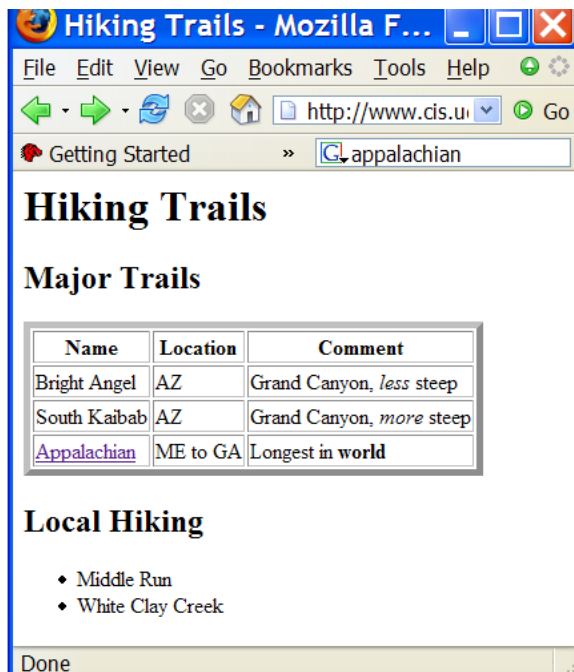
    Make the text "Appalachian" be a hyperlink to the following URL:
    `http://www.appalachiantrail.org`.

    Include an XHTML comment near the top of the file that includes the file name `page2.html`, the name `Elmer Fudd` (or some other pseudonym; don't use your real name), and today's date.

    Be sure all your tags follow the XHTML standard: i.e. they should be all closed, properly nested, and written with lowercase letters.

    Example rendering:

Space for your answer. There is more space on the next two pages in case you need it.

Extra space in case you need it

23. **(10 pts)** Write a few lines of JavaScript that declare a variable called `length`, prompt the user to enter the length of a hiking trail in miles, convert that length into a number and store it in a variable called `lengthInMiles`, and print it out in Kilometers using: out using:

```
document.write("<p>Length in Kilometers:   " +
(lengthInMiles * 1.6) + "</p>");
```

You do NOT need to write the rest of the web page. The problem can be solved with 4 lines of JavaScript, including the one listed above.

You can use either an integer, or a number with decimals for the length of the hiking trail.

Extra space in case you need it

End of Practice Exam. Total Points: 100

2 D K B 3 7 T P 1 8 2 D 6 I F 3S Q X A P E 3 8 A

Answer Key, version $\boxed{\text{A}}$

1. (e)
   lecture notes, 09/06/05

2. (c)lecture notes, 09/06/05

3. (b)
   See: EssDesign XHTML L1 p .3, Deitel/Deitel/Goldberg p .83

4. (d)
   See: EssDesign XHTML L1 p.13, Deitel/Deitel/Goldberg p. 84,

5. (c)

6. (c)lecture notes, 09/06/05

7. (b)lecture notes, 09/06/05

8. (b)See: EssDesign XHTML L1 p.45, Deitel/Deitel/Goldberg p. 89

9. (a)
   XHTML emphasizes document structure, not visual formatting. You should assign
   XHTML tags based on the *role* that some part of the document plays in the actual
   content, not based on what you want the text to look like. The size of the font can
   be assigned independently of which tag you use, using CSS styles.

10. (a)lecture notes, 09/06/05

11. (d)lecture notes, 09/01/05

12. (c)
    lecture notes, 09/08/05

13. (c)
    EssDesign JS Level 1, p. 102; also, mentioned in lecture.

14. (b)

15. (b)

16. (b)

17. (b)

18. (a)

19. (a)

20. (a)

21. (a)

Section 3. Short Answer (answer on this sheet)

22.
```
1  <html>
2
3  <!-- page2.html    Elmer Fudd    10/18/05 -->
4
5  <head>
6
7  <title>Hiking Trails</title>
8
9  </head>
10
11 <body>
12
13 <h1>Hiking Trails</h1>
14
15 <h2>Major Trails</h2>
16
17 <!-- it is ok if the values of the attributes vary from
18      what I have here -->
19
20 <table border="5" cellspacing="2" cellpadding="1">
21
22 <tr><th>Name</th><th>Location</th><th>Comment</th></tr>
23 <tr><td>Bright Angel</td><td>AZ</td>
24    <td>Grand Canyon, <em>less</em> steep</td></tr>
25 <tr><td>South Kaibab</td><td>AZ</td>
26     <td>Grand Canyon, <em>more</em> steep</td></tr>
27 <tr><td><a href="http://www.appalachiantrail.org">Appalachian</a></td>
28     <td>ME to GA</td>
29     <td>Longest in <strong>world</strong></td></tr>
30 </table>
31
32
33 <h2>Local Hiking</h2>
34
35 <ul>
36   <li>Middle Run</li>
37   <li>White Clay Creek</li>
38 </ul>
39
40 </body>
41
42 </html>
```

For more info, see:

- Ess Design XHTML L1, lesson 1 for basic page layout.
- Ess Design XHTML L1, p. 56 for `<ul>` and `<li>`

23.

```html
1  <html>
2
3  <!-- Joe Sample, Calculate distance in kilometers, 10/13/05 -->
4
5  <head>
6
7  <title>Distance in Kilometers</title>
8
9  </head>
10
11 <body>
12 <h1>Calculating distance in kilometers</h1>
13
14 <script language="JavaScript" type="text/javascript">
15
16  <!--
17
18 // *** FOR E01 ANSWER, PART ABOVE THIS COMMENT OPTIONAL ***
19
20 var length;
21
22 length = prompt("Enter length of hiking trail in miles","1");
23
24 lengthInMiles = parseFloat(length); // or parseInt(length)
25
26 document.write("<p>Length in Kilometers: " +
27       (lengthInMiles * 1.6) + "</p>");
28
29
30 // *** FOR E01 ANSWER, PART BELOW THIS COMMENT OPTIONAL ***
31
32  // -->
33
34 </script>
35 </body>
36 </html>
37
38
39
40
41
42
43
44
45
```

End of Key, version $\boxed{\text{A}}$

Total Points: 0

Name_____

UD Email address (e.g. jsample@udel.edu)_____

Please circle your section number:

010 **011**

(Tuesday lab) (Thursday Lab)

Answer the multiple choice questions on a "Scantron Form"

Bubble in ONLY your UD Email address and your answers

DO NOT bubble in your id number or section
If you bubble in your SSN, the computer will **reject your form!!!**

Answer the remaining questions directly on the exam paper.

General Instructions

- The exam is @@% multiple choice, @@% short answer.

- The short-answer questions start with number 22. You may want to tackle them first, since they may take more time.

- DO NOT WRITE YOUR NAME ON ANY PAGE EXCEPT THIS ONE!

- You have 75 minutes. **Pace yourself,** and pay attention to the point values.

- The points values are a good approximation of how long you should spend on each program (e.g. 10 minutes for a 10 point question.) That will leave you 15 minutes at the end to finish up your work.

- Read *all* the directions *carefully* on each problem.

- Good luck.

1. (3 pts) The binary number 1010 1111 would be represented in hex as:

    (a)   6F

    (b)   AF

    (c)   BF

    (d)   FA

    (e)   none of the above

2. (3 pts) The number system that corresponds to how computers store information internally using the flow of electricity is:

    (a)   hexadecimal

    (b)   decimal

    (c)   binary

    (d)   octal

3. (3 pts) The `em` element is recommended to be used used in place of what older element that is expected to be eliminated in a future version of XHTML?

    (a)   `b`

    (b)   `i`

    (c)   `u`

    (d)   `strong`

4. (3 pts) Which of the following statements is TRUE?

    (a)   An `h1` element should be used for a heading that is more important than an `h2` element.

    (b)   An `h2` element should be used for a heading that is more important than an `h1` element.

    (c)   The importance of the text doesn't matter when choosing between `h1` and `h2`—the only thing that matters is which one you want to appear in a bigger font.

Questions 5 through 7 pertain to the following line of JavaScript code:

```
document.write("<h1>Welcome to my web page.</h1>");
```

5. (3 pts) Which of the following is a correct use of terminology to describe the part of this code inside the parentheses, i.e. `"<h1>Welcome to my web page.</h1>?"`?

    (a)   It is the value of an attribute.

    (b)   It is an integer constant.

    (c)   It is an argument to a method.

    (d)   It is a unary operator.

    (e)   It is an assignment statement.

6. (3 pts) Which of the following is a correct use of terminology to describe: `write()` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

7. (3 pts) Which of the following is a correct use of terminology to describe: `</h1>` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

Questions 8 through 10 deal with code in `page1.html`, shown here:

```
1  <html>
2
3  <head>
4
5  <title>Test page 1</title>
6
7  </head>
8
9  <body bgcolor="#FF0000">
10
11 <h1>This is a test page</h1>
12
13 <p>Lorem ipsum <strong>dolor</strong> sit amet, consectetur
14 adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore
15 magna aliqua. </p>
16
17 <h2>Oremlam ipsumway <em>olorday</em> itsay ametway?</h2>
18
19 <p>The "lorem ipsum" text is dummy text used in font and layout
20 samples.  Is it real latin or fake latin?  In any case, it isn't
21 pig-latin, though sometimes folks might slip some pig-latin in just
22 for fun. </p>
23
24 <hr />
25
26 <p><a href="http://copland.udel.edu/~pconrad">P. Conrad</a></p>
27
28 </body>
29
30 </html>
```

8. **(3 pts)** The text `<h1>` on line 11 represents:

    (a)   one XHTML element

    (b)   one XHTML open tag

    (c)   one XHTML closing tag

    (d)   one XHTML attribute

    (e)   the name of one XHTML attribute

9. (3 pts) Line 9 containing `<body bgcolor="#FF0000">` would NOT be equally valid XHTML if it were written as:

    (a)   `<body bgcolor="red">`

    (b)   `<body bgcolor='red'>`

    (c)   `<body bgcolor='#FF0000'>`

    (d)   `<body bgcolor=#FF0000>`

10. (3 pts) Which of the following is the name of the element nested inside the `h2` element on this page?

    (a)   `h1`

    (b)   `p`

    (c)   `em`

    (d)   `strong`

    (e)   both a `p` and a `strong` element are nested in the `h2` element.

11. (3 pts) The hexadecimal number 1743 would be represented in binary as:

    (a)   001 111 100 011

    (b)   101 011 111 001

    (c)   0010 1110 1000 0110

    (d)   0001 0100 0111 0011

    (e)   0001 0111 0100 0011

12. (3 pts) Color codes such as `"#FF00FF"` represent a practical use of the number system known as:

    (a)   binary

    (b)   octal

    (c)   decimal

    (d)   hexadecimal

13. (3 pts) The binary number 00100010 would be represented in decimal (base 10) as:

    (a)   12

    (b)   22

    (c)   34

    (d)   42

    (e)   none of the above

14. (3 pts) Which is true of the process of converting between octal and binary:

    (a)   bits are grouped in groups of three, from right to left

    (b)   bits are grouped in groups of three, from left to right

    (c)   bits are grouped in groups of four, from right to left

    (d)   bits are grouped in groups of four, from left to right

15. **(3 pts)** The plus sign in the following JavaScript statement represents which of these operations:

```
document.write("<p>The sum is:  " + ( 2 + 3 ) + "</p>";
```

(a)   addition

(b)   string concatenation

(c)   object composition

16. **(3 pts)** If you read in a number in JavaScript using the following code, the value assigned into `pizzaSize` will be of what type?

```
pizzaSize = prompt("Enter size of pizza (diameter in
inches)","12");
```

(a)   string

(b)   integer

(c)   boolean

(d)   method

(e)   attribute

17. **(4 pts)** The output of the following JavaScript statement is represented by which of the choices below?

```
document.write("<p>The sum is:  " + 2 + 3 + "</p>";
```

(a)   The sum is: 23

(b)   The sum is: 5

(c)   The sum is: 2 3

18. **(2 pts)** Are the XHTML tags propely nested?
```
<strong><em>Foo</strong></foo>
```

(a)   yes

(b)   no

19. **(2 pts)** Are the XHTML tags propely nested?
```
<p>Hello.   <br> How are you?</p>
```

(a)   yes

(b)   no

20. **(2 pts)** Are the XHTML tags propely nested?

    ```
    <p>Hello.</p> <hr /> </p>How are you?<p>
    ```

    (a) yes

    (b) no

21. **(2 pts)** Are the XHTML tags propely nested?

    ```
    <h1>Hello.</h1> <hr /> <h2>How are you?</h2>
    ```

    (a) yes

    (b) no

Section 3. Short Answer (answer on this sheet)

22. (30 pts) Write out the contents of an XHTML file `page2.html` that would render a web page that looks like the one in the figure below.
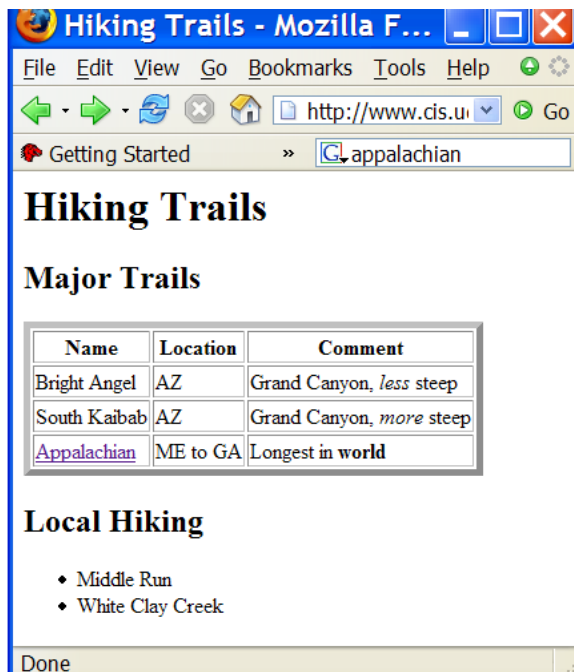
Make the text "Appalachian" be a hyperlink to the following URL: `http://www.appalachiantrail.org`.

Include an XHTML comment near the top of the file that includes the file name `page2.html`, the name `Elmer Fudd` (or some other pseudonym; don't use your real name), and today's date.

Be sure all your tags follow the XHTML standard: i.e. they should be all closed, properly nested, and written with lowercase letters.

Example rendering:

Space for your answer. There is more space on the next two pages in case you need it.

Extra space in case you need it

23. **(10 pts)** Write a few lines of JavaScript that declare a variable called `length`, prompt the user to enter the length of a hiking trail in miles, convert that length into a number and store it in a variable called `lengthInMiles`, and print it out in Kilometers using: out using:

```
document.write("<p>Length in Kilometers:   " +
(lengthInMiles * 1.6) + "</p>");
```

You do NOT need to write the rest of the web page. The problem can be solved with 4 lines of JavaScript, including the one listed above.

You can use either an integer, or a number with decimals for the length of the hiking trail.

Extra space in case you need it

End of Practice Exam. Total Points: 100

2 D K B 3 7 H P 1 8 2 D 6 S F 3T Q X B P E 3 8 B

Answer Key, version $\boxed{B}$

1. (b)lecture notes, 09/06/05

2. (c)lecture notes, 09/06/05

3. (b)See: EssDesign XHTML L1 p.45, Deitel/Deitel/Goldberg p. 89

4. (a)
   XHTML emphasizes document structure, not visual formatting. You should assign XHTML tags based on the *role* that some part of the document plays in the actual content, not based on what you want the text to look like. The size of the font can be assigned independently of which tag you use, using CSS styles.

5. (c)
   lecture notes, 09/08/05

6. (c)
   EssDesign JS Level 1, p. 102; also, mentioned in lecture.

7. (b)

8. (b)
   See: EssDesign XHTML L1 p .3, Deitel/Deitel/Goldberg p .83

9. (d)
   See: EssDesign XHTML L1 p.13, Deitel/Deitel/Goldberg p. 84,

10. (c)

11. (e)
    lecture notes, 09/06/05

12. (d)lecture notes, 09/01/05

13. (c)lecture notes, 09/06/05

14. (a)lecture notes, 09/06/05

15. (a)

16. (a)

17. (a)

18. (b)

19. (b)

20. (b)

21. (a)

Section 3. Short Answer (answer on this sheet)

22.
```
1  <html>
2
3  <!-- page2.html   Elmer Fudd    10/18/05 -->
4
5  <head>
6
7  <title>Hiking Trails</title>
8
9  </head>
10
11 <body>
12
13 <h1>Hiking Trails</h1>
14
15 <h2>Major Trails</h2>
16
17 <!-- it is ok if the values of the attributes vary from
18      what I have here -->
19
20 <table border="5" cellspacing="2" cellpadding="1">
21
22 <tr><th>Name</th><th>Location</th><th>Comment</th></tr>
23 <tr><td>Bright Angel</td><td>AZ</td>
24    <td>Grand Canyon, <em>less</em> steep</td></tr>
25 <tr><td>South Kaibab</td><td>AZ</td>
26     <td>Grand Canyon, <em>more</em> steep</td></tr>
27 <tr><td><a href="http://www.appalachiantrail.org">Appalachian</a></td>
28     <td>ME to GA</td>
29     <td>Longest in <strong>world</strong></td></tr>
30 </table>
31
32
33 <h2>Local Hiking</h2>
34
35 <ul>
36   <li>Middle Run</li>
37   <li>White Clay Creek</li>
38 </ul>
39
40 </body>
41
42 </html>
```

For more info, see:

- Ess Design XHTML L1, lesson 1 for basic page layout.
- Ess Design XHTML L1, p. 56 for `<ul>` and `<li>`

23.

```html
<html>

<!-- Joe Sample, Calculate distance in kilometers, 10/13/05 -->

<head>

<title>Distance in Kilometers</title>

</head>

<body>
<h1>Calculating distance in kilometers</h1>

<script language="JavaScript" type="text/javascript">

 <!--

// *** FOR E01 ANSWER, PART ABOVE THIS COMMENT OPTIONAL ***

var length;

length = prompt("Enter length of hiking trail in miles","1");

lengthInMiles = parseFloat(length); // or parseInt(length)

document.write("<p>Length in Kilometers: " +
      (lengthInMiles * 1.6) + "</p>");


// *** FOR E01 ANSWER, PART BELOW THIS COMMENT OPTIONAL ***

 // -->

</script>
</body>
</html>
```

Name

UD Email address (e.g. jsample@udel.edu)

Please circle your section number:

010

(Tuesday lab)

011

(Thursday Lab)

Answer the multiple choice questions on a "Scantron Form"

Bubble in ONLY your UD Email address and your answers

DO NOT bubble in your id number or section
If you bubble in your SSN, the computer will **reject your form!!!**

Answer the remaining questions directly on the exam paper.

General Instructions

- The exam is @@% multiple choice, @@% short answer.

- The short-answer questions start with number 22. You may want to tackle them first, since they may take more time.

- DO NOT WRITE YOUR NAME ON ANY PAGE EXCEPT THIS ONE!

- You have 75 minutes. **Pace yourself,** and pay attention to the point values.

- The points values are a good approximation of how long you should spend on each program (e.g. 10 minutes for a 10 point question.) That will leave you 15 minutes at the end to finish up your work.

- Read *all* the directions *carefully* on each problem.

- Good luck.

Questions 1 through 3 pertain to the following line of JavaScript code:

```
document.write("<h1>Welcome to my web page.</h1>");
```

1. (3 pts) Which of the following is a correct use of terminology to describe the part of this code inside the parentheses, i.e. "`<h1>Welcome to my web page.</h1>?"`?

   (a) It is the value of an attribute.

   (b) It is an integer constant.

   (c) It is an argument to a method.

   (d) It is a unary operator.

   (e) It is an assignment statement.

2. (3 pts) Which of the following is a correct use of terminology to describe: `write()` ?

   (a) It is the value of an attribute

   (b) It is an XHTML closing tag

   (c) It is a method of the document object.

   (d) It is a binary operator.

   (e) It is an assignment statement.

3. (3 pts) Which of the following is a correct use of terminology to describe: `</h1>` ?

   (a) It is the value of an attribute

   (b) It is an XHTML closing tag

   (c) It is a method of the document object.

   (d) It is a binary operator.

   (e) It is an assignment statement.

4. (3 pts) The hexadecimal number 1743 would be represented in binary as:

   (a) 001 111 100 011

   (b) 101 011 111 001

   (c) 0010 1110 1000 0110

   (d) 0001 0100 0111 0011

   (e) 0001 0111 0100 0011

5. **(3 pts)** The `em` element is recommended to be used used in place of what older element that is expected to be eliminated in a future version of XHTML?

(a) `b`

(b) `i`

(c) `u`

(d) `strong`

6. **(3 pts)** Which of the following statements is TRUE?

(a) An `h1` element should be used for a heading that is more important than an `h2` element.

(b) An `h2` element should be used for a heading that is more important than an `h1` element.

(c) The importance of the text doesn't matter when choosing between `h1` and `h2`—the only thing that matters is which one you want to appear in a bigger font.

7. **(3 pts)** The binary number 00100010 would be represented in decimal (base 10) as:

(a) 12

(b) 22

(c) 34

(d) 42

(e) none of the above

8. **(3 pts)** The number system that corresponds to how computers store information internally using the flow of electricity is:

(a) hexadecimal

(b) decimal

(c) binary

(d) octal

9. **(3 pts)** Color codes such as `"#FF00FF"` represent a practical use of the number system known as:

(a) binary

(b) octal

(c) decimal

(d) hexadecimal

10. **(3 pts)** The binary number 1010 1111 would be represented in hex as:

   (a)   6F
   (b)   AF
   (c)   BF
   (d)   FA
   (e)   none of the above

11. **(3 pts)** Which is true of the process of converting between octal and binary:

   (a)   bits are grouped in groups of three, from right to left
   (b)   bits are grouped in groups of three, from left to right
   (c)   bits are grouped in groups of four, from right to left
   (d)   bits are grouped in groups of four, from left to right

Questions 12 through 14 deal with code in `page1.html`, shown here:

```html
1  <html>
2
3  <head>
4
5  <title>Test page 1</title>
6
7  </head>
8
9  <body bgcolor="#FF0000">
10
11 <h1>This is a test page</h1>
12
13 <p>Lorem ipsum <strong>dolor</strong> sit amet, consectetur
14 adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore
15 magna aliqua. </p>
16
17 <h2>Oremlam ipsumway <em>olorday</em> itsay ametway?</h2>
18
19 <p>The "lorem ipsum" text is dummy text used in font and layout
20 samples.  Is it real latin or fake latin?  In any case, it isn't
21 pig-latin, though sometimes folks might slip some pig-latin in just
22 for fun. </p>
23
24 <hr />
25
26 <p><a href="http://copland.udel.edu/~pconrad">P. Conrad</a></p>
27
28 </body>
29
30 </html>
```

12. (**3 pts**) The text `<h1>` on line 11 represents:

    (a)   one XHTML element

    (b)   one XHTML open tag

    (c)   one XHTML closing tag

    (d)   one XHTML attribute

    (e)   the name of one XHTML attribute

13. **(3 pts)** Line 9 containing `<body bgcolor="#FF0000">` would NOT be equally valid XHTML if it were written as:

   (a)   `<body bgcolor="red">`

   (b)   `<body bgcolor='red'>`

   (c)   `<body bgcolor='#FF0000'>`

   (d)   `<body bgcolor=#FF0000>`

14. **(3 pts)** Which of the following is the name of the element nested inside the `h2` element on this page?

   (a)   `h1`

   (b)   `p`

   (c)   `em`

   (d)   `strong`

   (e)   both a `p` and a `strong` element are nested in the `h2` element.

15. **(3 pts)** The plus sign in the following JavaScript statement represents which of these operations:

```
document.write("<p>The sum is:  " + ( 2 + 3 ) + "</p>";
```

  (a)   addition

  (b)   string concatenation

  (c)   object composition

16. **(4 pts)** The output of the following JavaScript statement is represented by which of the choices below?

```
document.write("<p>The sum is:  " + 2 + 3 + "</p>";
```

  (a)   The sum is: 23

  (b)   The sum is: 5

  (c)   The sum is: 2 3

17. **(3 pts)** If you read in a number in JavaScript using the following code, the value assigned into `pizzaSize` will be of what type?

```
pizzaSize = prompt("Enter size of pizza (diameter in
inches)","12");
```

  (a)   string

  (b)   integer

  (c)   boolean

  (d)   method

  (e)   attribute

18. **(2 pts)** Are the XHTML tags propely nested?
```
<strong><em>Foo</strong></foo>
```

  (a)   yes

  (b)   no

19. **(2 pts)** Are the XHTML tags propely nested?
```
<p>Hello.   <br> How are you?</p>
```

  (a)   yes

  (b)   no

20. **(2 pts)** Are the XHTML tags propely nested?

    ```
    <p>Hello.</p> <hr /> </p>How are you?<p>
    ```

    (a) yes

    (b) no

21. **(2 pts)** Are the XHTML tags propely nested?

    ```
    <h1>Hello.</h1> <hr /> <h2>How are you?</h2>
    ```

    (a) yes

    (b) no

Section 3. Short Answer (answer on this sheet)

22. **(30 pts)** Write out the contents of an XHTML file `page2.html` that would render a web page that looks like the one in the figure below.
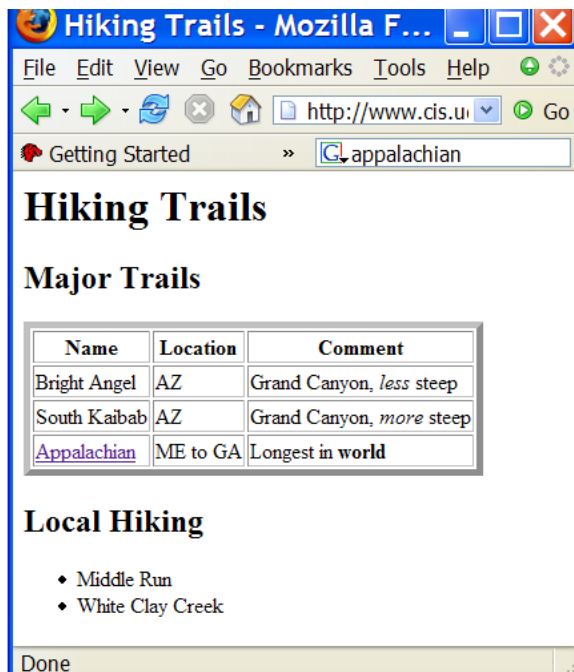
    Make the text "Appalachian" be a hyperlink to the following URL: `http://www.appalachiantrail.org`.

    Include an XHTML comment near the top of the file that includes the file name `page2.html`, the name `Elmer Fudd` (or some other pseudonym; don't use your real name), and today's date.

    Be sure all your tags follow the XHTML standard: i.e. they should be all closed, properly nested, and written with lowercase letters.

    Example rendering:

Space for your answer. There is more space on the next two pages in case you need it.

Extra space in case you need it

23. (10 pts) Write a few lines of JavaScript that declare a variable called `length`, prompt the user to enter the length of a hiking trail in miles, convert that length into a number and store it in a variable called `lengthInMiles`, and print it out in Kilometers using: out using:

```
document.write("<p>Length in Kilometers:   " +
(lengthInMiles * 1.6) + "</p>");
```

You do NOT need to write the rest of the web page. The problem can be solved with 4 lines of JavaScript, including the one listed above.

You can use either an integer, or a number with decimals for the length of the hiking trail.

Extra space in case you need it

End of Practice Exam. Total Points: 100

Answer Key, version C

1. (c)
   lecture notes, 09/08/05

2. (c)
   EssDesign JS Level 1, p. 102; also, mentioned in lecture.

3. (b)

4. (e)
   lecture notes, 09/06/05

5. (b)See: EssDesign XHTML L1 p.45, Deitel/Deitel/Goldberg p. 89

6. (a)
   XHTML emphasizes document structure, not visual formatting. You should assign XHTML tags based on the *role* that some part of the document plays in the actual content, not based on what you want the text to look like. The size of the font can be assigned independently of which tag you use, using CSS styles.

7. (c)lecture notes, 09/06/05

8. (c)lecture notes, 09/06/05

9. (d)lecture notes, 09/01/05

10. (b)lecture notes, 09/06/05

11. (a)lecture notes, 09/06/05

12. (b)
    See: EssDesign XHTML L1 p .3, Deitel/Deitel/Goldberg p .83

13. (d)
    See: EssDesign XHTML L1 p.13, Deitel/Deitel/Goldberg p. 84,

14. (c)

15. (a)

16. (a)

17. (a)

18. (b)

19. (b)

20. (b)

21. (a)

Section 3. Short Answer (answer on this sheet)

22.
```
1  <html>
2
3  <!-- page2.html   Elmer Fudd    10/18/05 -->
4
5  <head>
6
7  <title>Hiking Trails</title>
8
9  </head>
10
11 <body>
12
13 <h1>Hiking Trails</h1>
14
15 <h2>Major Trails</h2>
16
17 <!-- it is ok if the values of the attributes vary from
18      what I have here -->
19
20 <table border="5" cellspacing="2" cellpadding="1">
21
22 <tr><th>Name</th><th>Location</th><th>Comment</th></tr>
23 <tr><td>Bright Angel</td><td>AZ</td>
24    <td>Grand Canyon, <em>less</em> steep</td></tr>
25 <tr><td>South Kaibab</td><td>AZ</td>
26     <td>Grand Canyon, <em>more</em> steep</td></tr>
27 <tr><td><a href="http://www.appalachiantrail.org">Appalachian</a></td>
28     <td>ME to GA</td>
29     <td>Longest in <strong>world</strong></td></tr>
30 </table>
31
32
33 <h2>Local Hiking</h2>
34
35 <ul>
36   <li>Middle Run</li>
37   <li>White Clay Creek</li>
38 </ul>
39
40 </body>
41
42 </html>
```

For more info, see:

- Ess Design XHTML L1, lesson 1 for basic page layout.
- Ess Design XHTML L1, p. 56 for `<ul>` and `<li>`

23.

```html
1   <html>
2
3   <!-- Joe Sample, Calculate distance in kilometers, 10/13/05 -->
4
5   <head>
6
7   <title>Distance in Kilometers</title>
8
9   </head>
10
11  <body>
12  <h1>Calculating distance in kilometers</h1>
13
14  <script language="JavaScript" type="text/javascript">
15
16   <!--
17
18  // *** FOR E01 ANSWER, PART ABOVE THIS COMMENT OPTIONAL ***
19
20  var length;
21
22  length = prompt("Enter length of hiking trail in miles","1");
23
24  lengthInMiles = parseFloat(length); // or parseInt(length)
25
26  document.write("<p>Length in Kilometers: " +
27        (lengthInMiles * 1.6) + "</p>");
28
29
30  // *** FOR E01 ANSWER, PART BELOW THIS COMMENT OPTIONAL ***
31
32   // -->
33
34  </script>
35  </body>
36  </html>
37
38
39
40
41
42
43
44
45
```

Name‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗

UD Email address (e.g. jsample@udel.edu)‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗

Please circle your section number:

010
(Tuesday lab)

011
(Thursday Lab)

Answer the multiple choice questions on a "Scantron Form"

Bubble in ONLY your UD Email address and your answers

DO NOT bubble in your id number or section
If you bubble in your SSN, the computer will **reject your form!!!**

Answer the remaining questions directly on the exam paper.

General Instructions

- The exam is @@% multiple choice, @@% short answer.

- The short-answer questions start with number 22. You may want to tackle them first, since they may take more time.

- DO NOT WRITE YOUR NAME ON ANY PAGE EXCEPT THIS ONE!

- You have 75 minutes. **Pace yourself,** and pay attention to the point values.

- The points values are a good approximation of how long you should spend on each program (e.g. 10 minutes for a 10 point question.) That will leave you 15 minutes at the end to finish up your work.

- Read *all* the directions *carefully* on each problem.

- Good luck.

1. (3 pts) Color codes such as `"#FF00FF"` represent a practical use of the number system known as:

    (a)   binary

    (b)   octal

    (c)   decimal

    (d)   hexadecimal

Questions 2 through 4 pertain to the following line of JavaScript code:

```
document.write("<h1>Welcome to my web page.</h1>");
```

2. (3 pts) Which of the following is a correct use of terminology to describe the part of this code inside the parentheses, i.e. "`<h1>Welcome to my web page.</h1>?"`?

    (a)   It is the value of an attribute.

    (b)   It is an integer constant.

    (c)   It is an argument to a method.

    (d)   It is a unary operator.

    (e)   It is an assignment statement.

3. (3 pts) Which of the following is a correct use of terminology to describe: `write()` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

4. (3 pts) Which of the following is a correct use of terminology to describe: `</h1>` ?

    (a)   It is the value of an attribute

    (b)   It is an XHTML closing tag

    (c)   It is a method of the document object.

    (d)   It is a binary operator.

    (e)   It is an assignment statement.

5. (3 pts) The hexadecimal number 1743 would be represented in binary as:

    (a)   001 111 100 011

    (b)   101 011 111 001

    (c)   0010 1110 1000 0110

    (d)   0001 0100 0111 0011

    (e)   0001 0111 0100 0011

6. (3 pts) The number system that corresponds to how computers store information internally using the flow of electricity is:

    (a)   hexadecimal

    (b)   decimal

    (c)   binary

    (d)   octal

7. (3 pts) The `em` element is recommended to be used used in place of what older element that is expected to be eliminated in a future version of XHTML?

    (a)   `b`

    (b)   `i`

    (c)   `u`

    (d)   `strong`

8. (3 pts) Which of the following statements is TRUE?

    (a)   An `h1` element should be used for a heading that is more important than an `h2` element.

    (b)   An `h2` element should be used for a heading that is more important than an `h1` element.

    (c)   The importance of the text doesn't matter when choosing between `h1` and `h2`—the only thing that matters is which one you want to appear in a bigger font.

9. (3 pts) The binary number 00100010 would be represented in decimal (base 10) as:

    (a)   12

    (b)   22

    (c)   34

    (d)   42

    (e)   none of the above

Questions 10 through 12 deal with code in `page1.html`, shown here:

```
1  <html>
2
3  <head>
4
5  <title>Test page 1</title>
6
7  </head>
8
9  <body bgcolor="#FF0000">
10
11 <h1>This is a test page</h1>
12
13 <p>Lorem ipsum <strong>dolor</strong> sit amet, consectetur
14 adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore
15 magna aliqua. </p>
16
17 <h2>Oremlam ipsumway <em>olorday</em> itsay ametway?</h2>
18
19 <p>The "lorem ipsum" text is dummy text used in font and layout
20 samples.  Is it real latin or fake latin?  In any case, it isn't
21 pig-latin, though sometimes folks might slip some pig-latin in just
22 for fun. </p>
23
24 <hr />
25
26 <p><a href="http://copland.udel.edu/~pconrad">P. Conrad</a></p>
27
28 </body>
29
30 </html>
```

10. **(3 pts)** The text `<h1>` on line 11 represents:

    (a)   one XHTML element

    (b)   one XHTML open tag

    (c)   one XHTML closing tag

    (d)   one XHTML attribute

    (e)   the name of one XHTML attribute

11. (3 pts) Line 9 containing `<body bgcolor="#FF0000">` would NOT be equally valid XHTML if it were written as:

(a)   `<body bgcolor="red">`

(b)   `<body bgcolor='red'>`

(c)   `<body bgcolor='#FF0000'>`

(d)   `<body bgcolor=#FF0000>`

12. (3 pts) Which of the following is the name of the element nested inside the `h2` element on this page?

(a)   `h1`

(b)   `p`

(c)   `em`

(d)   `strong`

(e)   both a `p` and a `strong` element are nested in the `h2` element.

13. (3 pts) The binary number 1010 1111 would be represented in hex as:

(a)   6F

(b)   AF

(c)   BF

(d)   FA

(e)   none of the above

14. (3 pts) Which is true of the process of converting between octal and binary:

(a)   bits are grouped in groups of three, from right to left

(b)   bits are grouped in groups of three, from left to right

(c)   bits are grouped in groups of four, from right to left

(d)   bits are grouped in groups of four, from left to right

15. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <strong><em>Foo</strong></foo>
    ```

    (a) yes

    (b) no

16. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <p>Hello.  <br> How are you?</p>
    ```

    (a) yes

    (b) no

17. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <p>Hello.</p> <hr /> </p>How are you?<p>
    ```

    (a) yes

    (b) no

18. **(2 pts)** Are the XHTML tags propely nested?
    ```
    <h1>Hello.</h1> <hr /> <h2>How are you?</h2>
    ```

    (a) yes

    (b) no

19. **(3 pts)** The plus sign in the following JavaScript statement represents which of these operations:

    ```
    document.write("<p>The sum is:  " + ( 2 + 3 ) + "</p>";
    ```

    (a) addition

    (b) string concatenation

    (c) object composition

20. **(4 pts)** The output of the following JavaScript statement is represented by which of the choices below?

    ```
    document.write("<p>The sum is:  " + 2 + 3 + "</p>";
    ```

    (a) The sum is: 23

    (b) The sum is: 5

    (c) The sum is: 2 3

21. (3 pts) If you read in a number in JavaScript using the following code, the value assigned into `pizzaSize` will be of what type?

```
pizzaSize = prompt("Enter size of pizza (diameter in
inches)","12");
```

(a) string

(b) integer

(c) boolean

(d) method

(e) attribute

Section 3. Short Answer (answer on this sheet)

22. **(30 pts)** Write out the contents of an XHTML file `page2.html` that would render a web page that looks like the one in the figure below.
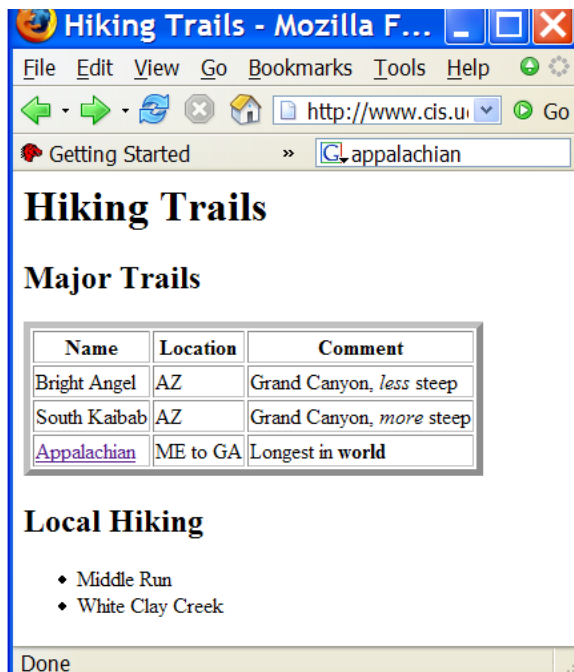
    Make the text "Appalachian" be a hyperlink to the following URL: `http://www.appalachiantrail.org`.

    Include an XHTML comment near the top of the file that includes the file name `page2.html`, the name `Elmer Fudd` (or some other pseudonym; don't use your real name), and today's date.

    Be sure all your tags follow the XHTML standard: i.e. they should be all closed, properly nested, and written with lowercase letters.

    Example rendering:

Space for your answer. There is more space on the next two pages in case you need it.

Extra space in case you need it

23. **(10 pts)** Write a few lines of JavaScript that declare a variable called `length`, prompt the user to enter the length of a hiking trail in miles, convert that length into a number and store it in a variable called `lengthInMiles`, and print it out in Kilometers using: out using:

```
document.write("<p>Length in Kilometers:   " +
(lengthInMiles * 1.6) + "</p>");
```

You do NOT need to write the rest of the web page. The problem can be solved with 4 lines of JavaScript, including the one listed above.

You can use either an integer, or a number with decimals for the length of the hiking trail.

Extra space in case you need it

End of Practice Exam. Total Points: 100

2 D K B 3 7 H P 1 8 2 D 6 U F 3S Q X D P E 3 8 A

Answer Key, version $\boxed{\text{D}}$

1. (d)lecture notes, 09/01/05

2. (c)

   lecture notes, 09/08/05

3. (c)

   EssDesign JS Level 1, p. 102; also, mentioned in lecture.

4. (b)

5. (e)

   lecture notes, 09/06/05

6. (c)lecture notes, 09/06/05

7. (b)See: EssDesign XHTML L1 p.45, Deitel/Deitel/Goldberg p. 89

8. (a)

   XHTML emphasizes document structure, not visual formatting. You should assign XHTML tags based on the *role* that some part of the document plays in the actual content, not based on what you want the text to look like. The size of the font can be assigned independently of which tag you use, using CSS styles.

9. (c)lecture notes, 09/06/05

10. (b)

    See: EssDesign XHTML L1 p .3, Deitel/Deitel/Goldberg p .83

11. (d)

    See: EssDesign XHTML L1 p.13, Deitel/Deitel/Goldberg p. 84,

12. (c)

13. (b)lecture notes, 09/06/05

14. (a)lecture notes, 09/06/05

15. (b)

16. (b)

17. (b)

18. (a)

19. (a)

20. (a)

21. (a)

Section 3. Short Answer (answer on this sheet)

22.
```
1  <html>
2
3  <!-- page2.html   Elmer Fudd     10/18/05 -->
4
5  <head>
6
7  <title>Hiking Trails</title>
8
9  </head>
10
11 <body>
12
13 <h1>Hiking Trails</h1>
14
15 <h2>Major Trails</h2>
16
17 <!-- it is ok if the values of the attributes vary from
18      what I have here -->
19
20 <table border="5" cellspacing="2" cellpadding="1">
21
22 <tr><th>Name</th><th>Location</th><th>Comment</th></tr>
23 <tr><td>Bright Angel</td><td>AZ</td>
24    <td>Grand Canyon, <em>less</em> steep</td></tr>
25 <tr><td>South Kaibab</td><td>AZ</td>
26     <td>Grand Canyon, <em>more</em> steep</td></tr>
27 <tr><td><a href="http://www.appalachiantrail.org">Appalachian</a></td>
28      <td>ME to GA</td>
29      <td>Longest in <strong>world</strong></td></tr>
30 </table>
31
32
33 <h2>Local Hiking</h2>
34
35 <ul>
36    <li>Middle Run</li>
37    <li>White Clay Creek</li>
38 </ul>
39
40 </body>
41
42 </html>
```

For more info, see:

- Ess Design XHTML L1, lesson 1 for basic page layout.
- Ess Design XHTML L1, p. 56 for `<ul>` and `<li>`

23.

```html
<html>

<!-- Joe Sample, Calculate distance in kilometers, 10/13/05 -->

<head>

<title>Distance in Kilometers</title>

</head>

<body>
<h1>Calculating distance in kilometers</h1>

<script language="JavaScript" type="text/javascript">

 <!--

// *** FOR E01 ANSWER, PART ABOVE THIS COMMENT OPTIONAL ***

var length;

length = prompt("Enter length of hiking trail in miles","1");

lengthInMiles = parseFloat(length); // or parseInt(length)

document.write("<p>Length in Kilometers: " +
      (lengthInMiles * 1.6) + "</p>");


// *** FOR E01 ANSWER, PART BELOW THIS COMMENT OPTIONAL ***

 // -->

</script>
</body>
</html>
```

End of Key, version D
Total Points: 0