

**CMPSCI 120**  
**Fall 2014**  
**Midterm Exam #2 Solution Key**  
**Monday, November 10, 2014**  
**Professor William T. Verts**

<1> 20 Points – Quick Answers. Do any 10 for full credit (2 points each); do more for extra credit (1 point each for any correct answers over 10).

<code>r--r--r--</code>	What are the permissions on the file <code>xxx.txt</code> after the command <code>chmod 444 xxx.txt</code> (use <code>rwxrwxrwx</code> form)?
<code>r--r--r--</code>	If the permissions on <code>xxx.txt</code> are currently <code>r--rwx---</code> , what are the permissions after the command <code>chmod a+r,g-wx xxx.txt</code> ?
<code>ug+x,o-x</code>	What pattern do I use in the <code>chmod ____ xxx.txt</code> command to add execute permission to user and group, but deny it from others?
<code>index.html</code>	What is the name of the actual resource file returned from <code>http://elsrv3.cs.umass.edu/~test1201/</code> ?
<code>index.html</code>	What is the name of the actual resource file returned from <code>http://elsrv3.cs.umass.edu/~test1201/xxx/</code> ?
<code>Q.gif</code>	What is the name of the actual resource file returned from <code>http://elsrv3.cs.umass.edu/~test1201/xxx/Q.gif</code> ?
<code>public_html</code>	What UNIX folder is used to store <code>xxx.html</code> in the following URL? <code>http://elsrv3.cs.umass.edu/~test1201/xxx.html</code>
YES	Yes or No: Can I connect to my <code>elsrv3</code> account simultaneously via PuTTY (Windows), ssh (Mac), WinSCP, Fugu, and a Web browser?
<code>cd public_html</code>	I log in to my UNIX account and want to change into the folder called <code>public_html</code> . What command will I type?
NO	Yes or No: Do I need to create the <code>public_html</code> folder more than once? <i>Once it is there on the server, it remains until you delete it.</i>
NEW	I change my UNIX password through PuTTY/ssh. When I log in to the same account with WinSCP/Fugu, do I use the old password or the new? <i>Doesn't matter how you connect! It's the same account.</i>
<code>#F5CEB3</code>	I want to create a color where the red value is 245, the green value is 206, and the blue value is 179. What is the HTML code for this?
<code>very light pink (close to Wheat)</code>	Approximately what visible color is described by the color definition in the previous problem? If the color has a name, write down the name.
<code>#A0C</code>	What is the short hex version of the color <code>#AA00CC</code> ? <i>All three primaries must be a stuttered color value in hex.</i>
NO	Is the color <code>LightSlateGray</code> browser safe? <i>#778899, components are not all from 00, 33, 66, 99, CC, FF</i>
YES	Is the color <code>LightSlateGray</code> convertible to short hex? <i>#778899 → #789</i>
FAVICON	What is the special name for the tiny graphic images that can appear in the title bar or tabs for a Web page?
120	What is the value of 5! (five factorial)? <i>1×2×3×4×5</i>
<code>&amp;acute;</code> ; <i>-or-</i> <code>&amp;#233;</code>	What do I type in to typeset the word <code>Bézier</code> in HTML? (The <code>é</code> must have the accent mark.)
To get to his Web site!	Why did the spider cross the road? <i>See page #226 of the Companion!</i>

- <2> 20 Points – What HTML code is written out by the following JavaScript fragment? (The fragment is located somewhere between <BODY> and </BODY>.)

```
<SCRIPT TYPE="text/javascript">
  <!--
    document.writeln ("<UL>")
    N = 1 ;
    while (N <= 3)
      {
        document.writeln ("<LI>") ;
        document.writeln (N, " squared = ", N*N) ;
        document.writeln ("</LI>") ;
        N = N + 1
      }
    document.writeln ("</UL>")
  //-->
</SCRIPT>
```

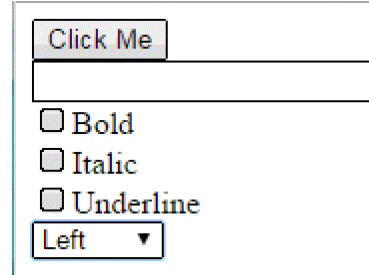
Solution

```
<UL>
<LI>
1 squared = 1
</LI>
<LI>
2 squared = 4
</LI>
<LI>
3 squared = 9
</LI>
</UL>
```

Notes

```
from document.writeln ("<UL>")
from document.writeln ("<LI>") when N=1
from document.writeln (N, ...) when N=1
from document.writeln ("</LI>") when N=1
from document.writeln ("<LI>") when N=2
from document.writeln (N, ...) when N=2
from document.writeln ("</LI>") when N=2
from document.writeln ("<LI>") when N=3
from document.writeln (N, ...) when N=3
from document.writeln ("</LI>") when N=3
from document.writeln ("</UL>")
```

<3> 20 Points – The graphic at the right shows a portion of a Web page containing a form. There are, in order: a submit button, a text box (named **Input**), three check boxes (named **BB**, **II**, and **UU**, respectively), and a drop-down list (named **Alignment**, containing items **Left**, **Center**, **Right**, and **Justify**, in that order). Complete the HTML code for this form so that it looks as shown:



The screenshot shows a web form with the following elements from top to bottom: a submit button labeled "Click Me", a text input field, three checkboxes labeled "Bold", "Italic", and "Underline", and a dropdown menu labeled "Alignment" with "Left" selected.

```
<FORM NAME="ThisForm" METHOD="post"
  ACTION="http://.../FormsTest.cgi">

  <INPUT TYPE="submit" VALUE="Click Me"><BR>

  <INPUT TYPE="text" NAME="Input"><BR>

  <INPUT TYPE="checkbox" NAME="BB">Bold<BR>

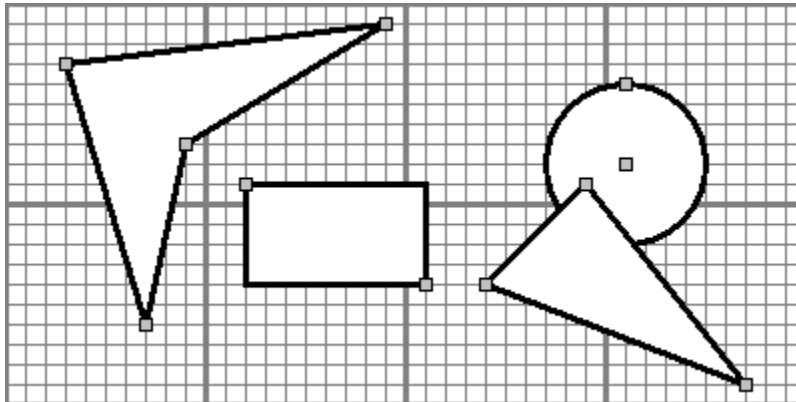
  <INPUT TYPE="checkbox" NAME="II">Italic<BR>

  <INPUT TYPE="checkbox" NAME="UU">Underline<BR>

  <SELECT NAME="Alignment">
    <OPTION>Left
    <OPTION>Center
    <OPTION>Right
    <OPTION>Justify
  </SELECT>

</FORM>
```

- <4> 20 Points – The following image shows a 400×200 pixel graphic containing four objects: a circle, a rectangle, and two polygons. Complete the HTML code below to turn the image, called **Mammal Map.gif**, into a client-side image map, where the circle and triangle both link to **www.goat.edu**, the rectangle links to **www.bat.edu**, the 4-point polygon links to **www.dog.org**, and the background of the image links to **www.cat.com**. In the image the gray grid (normally not shown) is at a 10-pixel spacing, and all points of interest are shown as small square dots (also normally not shown). All points are on 10-pixel boundaries (i.e., a point might be at coordinates <30,20>, but not at <32,18>, for example).



```
<IMG SRC="Mammal%20Map.gif" USEMAP="#MyMap">
```

```
<MAP NAME="MyMap">
```

```
<AREA SHAPE="circle" COORDS="310,80,40"  
HREF="http://www.goat.edu/">
```

```
<AREA SHAPE="poly" COORDS="290,90,370,190,240,140,290,90"  
HREF="http://www.goat.edu/">
```

```
<AREA SHAPE="rect" COORDS="120,90,210,140"  
HREF="http://www.bat.edu/">
```

```
<AREA SHAPE="poly" COORDS="30,30,190,10,90,70,160,30,30"  
HREF="http://www.dog.org/">
```

```
<AREA SHAPE="default"  
HREF="http://www.cat.com/">
```

```
</MAP>
```

- <5> 20 Points – Fill in the blanks, and complete the Web page code below as follows:
1. In the `<STYLE>...</STYLE>` block, define all **H1** headings to be colored green and in the Arial typeface.
  2. In the `<SCRIPT>...</SCRIPT>` block, write the JavaScript code to compute the golden ratio  $(1+\sqrt{5})/2$  and write out the answer inside its own **H1** heading.
  3. In the **Links** section, write the HTML code for a hypertext link to **www.frog.org** with the clickable link an image called **Ribbet.jpg**. The image must also have the title text set to: **A cute little froggy**.
  4. In the last H1 heading, override the color style to make this one tag red instead of the default value, and fill in the blank with the code for the copyright symbol.

```
<HTML>
  <HEAD>
    <TITLE>My Web Page</TITLE>

    <STYLE TYPE="text/css">

      H1 {color:green ; font-family:'Arial'}

    </STYLE>
  </HEAD>

  <BODY>
    <H1>Welcome!</H1>

    <SCRIPT TYPE="text/javascript">
      <!--

      N = (1 + math.sqrt(5)) / 2 ;

      document.writeln("<H1>", N, "</H1>") ;

      -->
    </SCRIPT>

    <H1>Links</H1>

    <A HREF="http://www.frog.org/">

      <IMG SRC="Ribbet.jpg"
          TITLE="A cute little froggy">
    </A>

    <H1 STYLE="color:red">Copyright &copy; 2014</H1>
  </BODY>
</HTML>
```