

**CMPSCI 105 Fall 2009**  
**Quiz #2 Solution Key**  
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1. Fill in the tag below with a properly formed reference to the image file which has the name **My Button.gif** on your disk:

`<IMG SRC=" _____ ">`

**Answer:** `My%20Button.gif`

**Discussion:** The name of the file contains a blank (space character). While this is OK when referencing files in Windows, this form will not work correctly in many browsers when the file is moved to the server. To address this problem, all blanks must be replaced with the hex (base 16) code for a blank character. The character code for a blank is 32 in decimal, which in hex has the value **20**. You must specify the % symbol to indicate that the next two characters represent an encoded hex value.

**Scoring:** 1 point. Students must write down the modified name of the file, but need not write down all of the HTML for the enclosing `<IMG SRC="...">` tag. They may do so without penalty, however. Remove all credit if the file name is written down without any changes at all (i.e., still containing the blank). Remove ½ point if the blank is removed (`MyButton.gif`), or is replaced by an underscore (`My_Button.gif`). Remove ½ point for any other errors in the file name, including errors in capitalization.

2. For: `<BODY BGCOLOR="#2EE4F4">` what are the decimal (base 10) values of the **red**, **green**, and **blue** components? What is the approximate visible background color?

**Answer:** The red value is 46, the green value is 228, and the blue value is 244. The displayed color is cyan.

**Discussion:** You must convert all three values from hex (base 16) into decimal (base 10).  
The red value is:  $2 \times 16^1 + E \times 16^0 = 2 \times 16 + 14 \times 1 = 32 + 14 = 46$ .  
The green value is:  $E \times 16^1 + 4 \times 16^0 = 14 \times 16 + 4 \times 1 = 224 + 4 = 228$ .  
The blue value is:  $F \times 16^1 + 4 \times 16^0 = 15 \times 16 + 4 \times 1 = 240 + 4 = 244$ .  
On a scale of 0...255 the red value is low and the green and blue values are both high, so the resulting color is cyan.

**Scoring:** 4 points. Assign 1 point for the red value, 1 point for the green value, and 1 point for the blue value. In each case, remove the point if the value is completely bogus and no work is shown, but only remove ½ point for “off-by-1” errors or for cases where the work is shown and is roughly correct and the value is still wrong. Remove the remaining 1 point for getting the color wrong (accept cyan, teal, turquoise, aqua, but not yellow, brown, white, etc.).

3. Show two ways to insert a copyright © symbol into a Web page.

**Answer:** Either `&copy;` or `&#169;`;

**Discussion:** There is no copyright symbol on the keyboard, so in HTML we must tell the browser explicitly which character we want. We can do that by placing either the name (`copy`) or the number (`#169`, including the hash mark) inside the ampersand-semicolon pair. The copyright symbol is at position 169 in the standard character set.

**Scoring:** 2 points. Assign 1 point for each answer. Do not accept (C) for any answer. Remove ½ point for each case of omitting the `&` or the `;` or the `#` from the answers, but do not go below zero points.

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4. Write an HTML fragment (not a complete Web page) that links to the Web site `http://www.facebook.com/` when you click on the `My_Face.jpg` image.

**Answer:**

```
<A HREF="http://www.facebook.com/">
    <IMG SRC="My_Face.jpg">
</A>
```

**Discussion:** A standard anchor tag is always of the form `<A HREF="..."> ... </A>`, with the link address inside the quotes and something for the user to click on in between the opening tag and the closing tag. In this case the link address is `http://www.facebook.com/` (the final slash is recommended but optional), and the item to click is an image, which requires an `<IMG SRC="...">` tag. The name of the file is simply `My_Face.jpg`, with the underscore (which is not a blank). Because we did not specify the location of the file, it must be in the same folder as the page which references it.

**Scoring:** 3 points. Assign 1 point for the basic `<A HREF="..."> ... </A>` framework. Remove ½ point for each error, including omitting the quotes, using backslashes (`\`) instead of slashes (`/`), forgetting one or more of the angle brackets, etc., but do not take off more than 1 point. Assign 1 point for a correct usage of the `http://www.facebook.com/` link address (everything shown here is required except the final trailing slash). Remove ½ point for each error, including capitalization errors, using the backslash instead of the slash, omitting the `http://` protocol, etc., but do not take off more than 1 point. Assign 1 point for the `<IMG SRC="My_Face.jpg">` tag. Remove ½ point for each error, including omitting the quotes, including extraneous path information on the file name, capitalization errors, using a space or `%20` instead of the underscore, etc., but do not remove more than 1 point. Remove 1 additional point if students include more than is required or necessary, such as the framework for a complete Web page instead of just a fragment, but do not go below zero total points.

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