

CMPSCI 120 Homework 5

This homework is due in hard copy (paper), at the beginning of class on November 1. No emailed submissions will be accepted.

Furthermore, please ensure your first and last names are written on your homework. Please write neatly or type your homework; illegible solutions will not receive any credit. Please staple all pages together. Points may be deducted for not following these rules.

1. Create a webpage called `hw5.html` in your `public.html` directory. Add the four essential tags. Have the title of the webpage (in the `<title>` tag) be “CMPSCI 120 Homework 5.”
 - (a) Using the various attributes of the `<body>` tag, change the background color of the page, the text color, the (unvisited) link color, and the visited link color. Use whatever colors you want, as long as the page is still readable. At least one of these colors should be specified with an RGB code.
 - (b) Add a hyperlink to the page that links to the webpage you created for Homework 4.¹ Use a relative URL in the `href` attribute.
 - (c) Add another hyperlink to the page that also links to the webpage you created for Homework 4, except this time, use an absolute URL in the `href` attribute. (So you will have two links on the page that link to the same place.)

On the paper on which you write the rest of this homework, for this question, simply write down the URL of this webpage you created.

2. Assume I have a graphic called `logo.gif` in my `public.html` directory, and this graphic is a picture of the University of Massachusetts logo (the University seal). On a webpage that I am creating, I want people to be able to click this logo and have them be taken to the website `http://www.umass.edu`. Furthermore, I want users who can't see images to have the image replaced by the words “UMass seal” instead. Give the HTML code that will accomplish this. (Don't create a real webpage for this problem or write down *all* the HTML code for this hypothetical webpage; just write down the necessary HTML code that will show the image and the hyperlink.)
3. Visit Flickr (`http://www.flickr.com`). Search for “apple.” Based on the set of photos returned, describe the different interpretations of the “apple” tag that people are using. What seems to be the most popular interpretation?

¹If you didn't do Homework 4, then just create a simple webpage with some text to take its place — you don't actually have to do the problems for Homework 4, but you need a second webpage for this problem, so just make up a simple one.

4. On Flickr, suppose I only want to find pictures of apples with the fruit interpretation of the word “apple.” (That is, I want pictures of apples on trees, pictures of food using apples, pictures of apple juice, etc). Suppose I search for this using the tags “apple” and “fruit.” Will I likely find *all* the pictures I’m looking for? Try it on Flickr. Do you get all the same pictures of fruit-type apples that you did for the search in the previous question, or are some pictures of (fruit) apples from the previous search missing? Why or why not?
5. Suppose on a social networking site (like MySpace or Facebook) there is a group of 7 people: Alex, Bob, Charlie, Debbie, Emily, Frank, and Gretchen. The people each one has friended are:
 - Alex: Charlie, Debbie, Gretchen
 - Bob: Emily, Frank
 - Charlie: Alex, Debbie, Gretchen
 - Debbie: Alex, Charlie, Gretchen
 - Emily: Bob, Frank
 - Frank: Bob, Emily
 - Gretchen: Alex, Charlie, Debbie

Social networks are often easier to study if you draw them first. Draw this network by representing each person as a dot, circle, or box, and connecting every pair of friends together with a line line.

- (a) Describe any patterns you notice in this network. Make sure to turn in your drawing as well.
 - (b) Suppose on this social networking website, person X can only view person Y 's profile if X and Y are friends or if there is a common person Z whom X and Y are both friends with. In other words, you can view the profiles of your friends and the friends of your friends (but not the friends of your friends of your friends). Can Emily see Debbie's profile?
 - (c) If Emily and Debbie become each other's friend, what new profiles can Charlie see that he couldn't see before?
6. (This problem will not be graded, but you will need these skills for the next homework.) Download appropriate SFTP software for your computer (there are links on the class webpage to the software). Search the web for some clip art and save it to your computer. Try to use the FTP software to transfer the clip art to your webpages directory on OITUNIX. Make a webpage that uses the graphics.