Quiz 1

BEFORE YOU DO ANYTHING: LOOK OVER THE ENTIRE QUIZ, THEN READ THE LIST BELOW THOROUGHLY. THEN READ IT AGAIN. THEN READ IT A THIRD TIME. THEN CONTINUE ON. GOOD LUCK!

Remember:

1. Read all instructions *carefully*. Reread them a few times just to make sure. I am expecting you to match whatever I have asked for as I have asked for it. Don't lose points because you misnamed a file or you forgot to answer a part of a question.
2. Answers to long-form questions should be written in Word/LibreOffice or Google Docs and saved as a Word document or PDF; code should be written in your IDE of choice.
3. You must be in Lally 102 (*i.e.*, in attendance today) to take the quiz.

Part 1
Copy these four questions into a new Word document and answer them in **long-form**.

1.1 Describe in your own words how the web works! In as much detail as you can, describe **all** the sequences of events that take place from the time a user presses Enter on the keyboard after typing in www.rpi.edu into the address bar to when the webpage is finished rendering in the browser. Specifically, tell me in great detail the protocols in action. (10 points)

After typing in the domain name to the web browser, the computer will start resolving the hostname www.rpi.edu. The computer will start looking for the IP address associated with the domain name in the local DNS cache first. If the cache is present locally, the website will be displayed, but if it is not present the computer will perform a DNS query to another server recursively. Recursive DNS servers have their own local cache, and if the domain name is in that server's cache the query will end and it will display to the user. Otherwise, it will continue to look at different DNS servers until it finds a nameserver for the domain. When found it will access the A record for www.rpi.edu, and it will store the record into the local cache. It reads the IP address from the DNS record and passed it to our browser. The web browser will connect to the web server associated with the A records IP and display the website.

1.2 What is the difference between a property and a method in JavaScript? (3 points)
A property is a value stored in a hash key. It is a named attribute of an object. Properties define the characteristics of an object such as size, color, etc. On the other hand, a method is like a function, an action that can be performed on objects.

1.3 Explain how your browser chooses which CSS rule to apply to a tag in the case where there are multiple rules that could apply. (3 points)

Cascade, specificity, and inheritance

If there are two rules that apply with equal specificity the one that comes last in the CSS will be the one that is used. The last one in the source order is selected.
CSS also considers specificity, which means depending on the selector's specificity it will select the ones with that specific attribute value.

1.4 State **four** total advantages of "separation of concerns," for any permutations of that term we discussed in class. (4 points)