**ITWS Web Systems**

**Quiz 1**

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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](http://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)

1. Once the user hits enter, the browser then begins to look for the IP address of the domain name via a DNS server. The browser then prompts the server with an HTTP request for a response, and if it gets one it begins to render the page. During the rendering the browser also has to send requests for the embedded objects included within the HTML (linked photos, external hosted CSS and Javascript, etc). After all the requests have been made and the page has been fully rendered, the browser then only needs to send asynchronous requests should the user call on it require it to do so.

1.2 What is the difference between a property and a method in JavaScript? (3 points)

1. A property is just an attribute of an object, properties can define the size, color, or shape of an object. A method is an action that is performed on objects. For example if your object is a dog, a property of that dog could be that its color is brown whereas a method would make the dog jump or bark.

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)

1. The browser chooses which rules to apply based on the specificity of the selector used. Styles that are applied *directly* to a given element take the highest priority where inherited styles (which targets an element’s parent-not the specific element itself) are given the lowest priority.

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

1. Separation of concerns has many advantages when it comes to web development. Isolating your HTML, Javascript, and CSS files from one another inherently gives the project code better **structure**. In addition to that it also makes **error tracking**, and subsequently **debugging** easier, as if there is an issue specifically regarding a site’s script then you only need to edit the Javascript file. It also helps with **page loading** as since the HTML document is parsed first-should there be a massive issue with your CSS or Javascript, at least the raw HTML document will still be accessible.