Introduction to ITWS

Quiz 1: February 12, 2024

**Directions**

There are 4 questions of multiple parts. Point values and suggested times are indicated

* Place your name on the top of the document in the header
* Enter your answers directly into *a copy* of this document named: *yourRCSid*-quiz1.docx
* All answers should be in complete sentences, in *Your Own Words*, and use proper grammar
* Make sure your answers use an alternative font AND color – (a legible font, and not Black or Red)
* Create a branch called quiz1 in your repository. Work in this branch for the quiz
* Place all files for this quiz in this folder
* When finished with the quiz, commit your changes and push them to GitHub
  + Do NOT merge your changes – or you will lose points
* Submit a copy of your repository to LMS

**Additional Notes**

* Answer question referencing (as appropriate) content and example from class.
* Make sure your submitted document remains in MS Word format
  + (Pages, GDocs, etc… will NOT be graded.)
* Follow all these instructions and additional instructions throughout this document, or you will lose points

1. Network protocols, HTML & WWW: (20 points, 10 minutes) Answer the following question referencing (as needed) content and examples from class.   
   1. What are FTP & HTTPS? What is the difference (if any)? Include a definition in your answer as well as an example used in class. (5 points)

FTP is a File Transfer Protocol which is a set of rules for sending files from one computer to another with one computer functioning as the server. It promotes sharing of files and other types of data through direct use of remote computers. In contrast, there is another protocol called HTTPS which stands for Hypertext Transfer Protocol Secure. This is another protocol used for file transfer between client and server. The difference between the FTP and HTTPS is that FTP is more efficient at transferring large files whereas HTTPS is better for transferring smaller files such as web pages. An example used in class would be our own websites. When we enter the URL for our websites into our browser, we see the protocol used at the beginning of our URL which starts as <http://youngj22rpi.eastus.cloudapp.azure.com/iit/index.html> and we see here that the less secure version is used.

* 1. What is a URI? Be descriptive and detailed in your answer using descriptions from class (5 points).

A URI is a uniform resource identifier which is the value of a hypertext reference. URIs identify a resource directly. An example of this could be when we are using the <a src=””> </a> tag. When we input a URL (a URL is a subset of URI) in the src attribute, it specifies the location of the external resource and we can thus see it on our webpage. URIs can identify resources like text documents, image files, etc.

* 1. What is the cascade as covered in class? Make sure to include the concept of precedence and why its important. (5 points)

The cascade is a mechanism that controls which rule applies when there is a conflict where you create two rules that apply different values of the same property to the same element. Precedence is important in order to determine which rule will end up being applied. More specific styles trump less specific styles. Style rules are read in order from top to bottom and if two styles call the same selector, later styles trump earlier styles, inline styles trump embedded styles, embedded styles trump externally declared styles and IDs trump classes. Overall this is important in order to decide which rule will apply.

* 1. What is an ID? What is a class? Give an example of each, and an explanation of why one might be used over another. (provide an example) (5 points)

An ID is a unique identifier for an element. The CSS ID selector matches an element based on the value of the element’s id attribute. It should only exist once in a document since it is unique. For example, if you assigned the paragraph tag with the id attribute “firstname” <p id=”firstname”>hi</p>, then you would style that element in the designated CSS file and declare #firstname {color: blue;} In contrast, a class is a non-unique identifier for an element. For example, <div class=”rightCallOut”></div> where this can be placed on multiple elements and have the same styling. Classes may be used over IDs for the reason that the styling different elements with the same styles part of that class. Alternatively, Ids may be preferred over classes if you are only styling a specific element which could be important if you have a large project and you need to overwrite a lot of CSS rules.

1. DevOps (20 pts, 15 minutes) Answer the following question referencing (as needed) content and examples from class.
   1. What is an instance? How is it relevant for this class?

An instance is a server running our application. It is relevant for this class since it has its own operating system, storage, networking, configuration settings, and software that we can control and have super user privileges.

* 1. What is a Pull Request, and what is it used for? Include the difference between a PR and a Merge. How are we using this in this class? How is it important in the development process?

A pull request is a request to have changes merged into a repository or project. It is used to suggest changes where collaborators can review and discuss the proposed changes before they integrate the changes to the main branch. The difference between a Pull Request and a Merge is that the PR is a request to merge. The PR is created and reviewed before agreed upon and eventually two branches are then Merged. We are using this in class when we do a pull request to our GitHub where we work on a branch, commit the changes, then submit a pull request. Since we are the only ones working on a branch, we can merge the branches without reviewing with other possible collaborators in another setting. It is important in the development process so that changes could be discussed with other collaborators before any changes would be actually implemented to foster agreement on decisions made.

* 1. Explain your development workflow. Include how *you* move files from Development, through Staging and Production. (Make sure to mention their locations, locally, and remotely. And include how Git plays a role)
  2. What is XML? How is it similar to HTML (and/or XHTML)? How is it different?
  3. Write out (or describe) the commands (or steps) to do the following, in your environments
     1. Bring changes from the main branch of your repo to your server
     2. Where (what folder) is the homepage of your webserver located?
     3. How do you determine your current folder in linux?
     4. Explain ‘sudo -u www-data git fetch’?

1. HTML & CSS (35 points, 40 minutes) In Lab 3, you created a website to host your classwork; specifically, your labs, according to your Information Architecture (IA). Answer the following question referencing (as needed) content and examples from class.
   1. What is relative linking? How do we use it? How does it compare to other types of linking? Why do we use it? Answer in detail below
   2. What are the minimum tags required for an html file to be considered valid. Write them out below.

* 1. Write the CSS to have the first of the following 2 lists display on the same line, and show the list items blue, given the following HTML. Include the selector and CSS below the HTML in this document (DO NOT change the HTML)

<ul id=”myFirstList” class=”myLists”>

<li class=first”>first</li>

<li class=”second”>second</li>

<li class=”third”>third</li>

<li class=”fourth”>fourth</li>

</ul>

<ul class=”myLists”>

<li class=first”>first</li>

<li class=”second”>second</li>

<li class=”third”>third</li>

<li class=”fourth”>fourth</li>

</ul>

* 1. I want you to add a background image to your page. Write the HTML to include an image named myHeadshot.jpg, with a height of 80 and a width of 90 relative to the parent container (div) which has a width of 100 pixels using relative sizing. (include the HTML below)
  2. Explain the Box model, and why is it important. Give an example of how you would make sure 3 boxes lines up on a page of 1000 pixel width.

1. “Dell” Case (25 points, 20 minutes)
   1. Based on your research and the conversation in class, What is Project Management? Include 2 examples in your answer. Be specific. (15 points)
   2. How does Flow affect Software Development Productivity? (10 points)