Introduction to ITWS

Quiz 2: November 1, 2021

Place your name on the top of this document in the header

Enter your answers directly into this document (unless instructed otherwise)

All answers should be in be in Your Own Words, and use proper grammar

There are 4 questions on this test. Make sure you complete them all.

Make sure your answers use an alternative font and/or color – (not black or red)

Save this document as *yourName*-*yourRCSID-*F21Quiz2.docx

Create a readme file and discuss any relevant information about the lab, include at least; your GitHub id, Repo name, and Discord handle.

Place all quiz specific documents including this one under your iit folder in a folder named

quiz2

When finished with the quiz, zip your iit folder into a file named

*yourName*-*yourRCSID-*F21Quiz2.zip

Commit your changes as instructed below and push to GitHub

Submit it to LMS

NOTE: You are not to discuss this quiz with anyone. You are not to reference old (previous semester) submissions for ‘help’ or guidance. You may not solicit or receive help online or in-person. You may reference online resources, and you may use the notes from this class, but all work must be your own and you must figure out the solutions on your own.

ALSO NOTE: This quiz is due at 11:59PM on the date shown on LMS. From 11:59-12:09:59 it will be accepted as late with a -30% penalty. At 12:10 it will NOT be accepted, and you will get a 0. Please submit your quiz on time.

1. Technology (coding): (45 points)
   1. You will be making changes to your website
   2. Create an issue indicating that Quiz 2 is taking place.
   3. Check out a branch from your iit repo, and name it quiz2

You should make stages/commits to this branch – DO NOT merge it back into the master/main until you are finished with the quiz

* 1. jQuery/jQueryUI
     1. Modify your menu to use jQueryUI widgets (Menu, Tabs, etc)
     2. Add an instructions description for each lab on the individual lab pages. The description should show up in a modal window and be resizable. (You may use the text for the instructions from the corresponding lab’s instructions)
     3. Add 1 additional new interaction (your choice) to your projects page
     4. Add 2 widgets or effects (your choice) throughout your whole site

*(You may need to modify your design to accommodate the above. Be creative – use this opportunity to jazz up your site)*

* 1. Using external fonts from Google – make sure your Header and Menu and Footer use one unique font, and your text uses another.
  2. Make sure you give a detailed description of your design choices, why you made them and how you went about implementing them. Be descriptive. Include this in your reradme and in your comments
  3. When done, merge your changes back
  4. Close the issue with a detailed comment
  5. Make sure your readme is descriptive and styled

1. Technology (description) (15 points): Web Development
   1. Based on the discussions in class, what is the dollar sign ($) used for? Hw could we accomplish the same functionality without it?

Based on the information received in class and used, javascript's use of "$" is a way to access JQuery. It is usually performed with a function as a way of getting an element by its ID. From this different JQuery functions or actions can be performed on this ID. However, this can easily be replaced by the document.getElementById.

* 1. What is the difference between an application layer protocol, a Transport layer protocol and a Link layer protocol? Give 3 examples of each.

An application layer protocol defines the application used for the process of sending and receiving information. For example, in regards to the application type being a file transfer, the application layer protocol being used would be a File Transfer Protocol (FTP). This is just telling the computer how to process the file transfer. When looking at the world wide web or WWW, HyperText Transfer Protocol or HTTP is used as the application-layer protocol. Another example is email and based on whether it is sending or receiving, it uses Post Office Protocol (POP). Similarly, a transport layer protocol is used with the application layer protocol as the form of moving data between two ends. Transport layer protocol takes care of making sure the correct information is sent in the proper order to the end-user. There are two most common types of transport layer protocol, TCP and UDP. UDP is simpler than TCP but the information is transferred in a best-effort versus a guarantee. DCCP or Datagram Congestion Control Protocol is also a type of transport layer protocol that is message-oriented. The lowest layer in internet protocols is the link layer. A group of protocols restricted to one host link that is physically connected, the link becomes a key component to connect between users in networks. ARP, NDP, and OSPF are all types of Link Layer Protocols. ARP is used for delivering addresses like MAX and IPv4 addresses whereas NDP is used for IPv6. OSPF, a routing protocol for IP networks, is considered an interior gateway protocol.

1. HCI - Website mockups (20 points) (deck and video are online on LMS in week 9)
   1. Explain, in your own words, per the inclass lecture, what is a paper prototype

A paper prototype is a written mockup to help a web developer and those with no computer skills (possible clients) understand all elements that will be needed in the website. They plan and make a paper prototype of how the different pages will connect thus helping them transition into a realistic prototype and the actual website better. By helping think ahead they are better prepared and fewer errors will be expected. Clients can also better project the idea for their website better.

* 1. Using Balsamiq, create a prototype of your personal website. Include the files in a subfolder of yor quiz2 folder named quiz2HCI. Make sure it gets added to your repo.
  2. In your prototype, add the current functionality and add future planned next steps. Make sure they phases are indicates clearly in your mockups
  3. As described in the HCI lecture what is the magic 7 seconds? Why is it important?

1. Web Science (20 points)
   1. Explain, in your own words: What is a URI? How does it relate to a URL? How do they help make ‘the Web’? Name 3 examples from class in your answer. (use complete sentences and your own words)
   2. Social Problem
      1. Using references from the in-class lecture, identify a social problem and propose an engineered solution. What could you do to offer a solution?

(In your response, identify how to measure, analyze evaluate and iterate. In other words, How might you analyze and visualize information to help make your case? )