Introduction to ITWS

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 multiple 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)

Create an issue in GitHub stating that quiz 2 is taking place

Create a branch for this quiz called quiz2 and switch to that branch

Create a folder, somewhere under the root of your website (iit) for this quiz called quiz2

Save this document into that folder as *yourName*-*yourRCSID-F22*Quiz2.docx

Create a readme file in the same folder and discuss any relevant information about the lab.

(Include at least; your GitHub id, Repo name, Azure homepage link, and Discord handle.)

Place all quiz other specific documents (if any) in the same folder

Commit your changes as instructed below and push to GitHub

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.

1. Technology (coding): (40 points, 30 minutes)
   1. You will be making changes to your websites by adding a login form to your site
2. Make sure you are connecting your html file to jQuery via CDN
3. Add a small form anywhere on your page that has fields for a userid and password and a submit/login button – make this form hidden upon initial page load
4. Add a menu option to your homepage that says ‘Login’
5. When selected, have the form appear.
6. When the user enters a name and password, validate the form
7. DO NOT worry about checking user id and password. Assume any entry other than blanks is correct
8. After submitting the form,
   1. Change the Login item in the menu to Logout
   2. Hide the form
   3. Once, a & b are complete, open a dialog that says, ‘User logged in Successfully’
9. If the user clicks ‘Logout’, replace the Logout with Login as at the beginning
10. Technology (description) (20 points, 15 minutes): Web Development
    1. When initiating a connection between the Client and the Server, what is the first thing that happens? Be Specific and give an example used in class (5 points)

When initiating a connection between the Client and the Server the first thing that happens is the three-way handshake. The three-way handshake is when the client sends a request to the server, the server acknowledges the request and sends one back to the client, and the client acknowledges the server to establish a reliable connection. An example used in class is a user logging into Skype and establishing a connection to the server.

* 1. We have learned the jQuery function in class. Explain, in detail, what is happening in the following code samples (10 points) {i:2,ii:2,iii:6}
     1. $(document).ready(function() { });

This is a function to execute after the DOM is ready. This means this function is used to run JavaScript code as soon as the page's Document Object Model (DOM) becomes safe to operate.

* + 1. $(“bodyBlock”).html(output);

This function is assigning the html tag “bodyBlock” to the output of inside of the function.

* + 1. $.ajax({type:‘GET’,

url:’https://rpi.edu’,

dataType:’html’,

success: function(thePage) {

// do something with thePage

},

error: function(msg) {

// do something with msg

}

});

In this we are getting the url rpi.edu from the html file and creating a function called thePage that assigns thePage to do something if successful and to do something with msg if an error.

* 1. Let’s say that I am trying to run my JavaScript code above, and the file is not loading. How would I test out my code and try and identify the error. (Be specific and explain your debugging process) (5 points)

If I am trying to run my JavaScript code and the file is not loading I would test out my code and try to identify the error by opening Chrome Developer tools and go to Event Listener Breakpoints and check off the ‘click’ under ‘Mouse’. Then click on lines of code and run the Debugger until you see anything under Breakpoints. Based on the Breakpoints you can run the function and fix the errors.

1. Web Science (20 points, 15 min) (Explain in detail)
   1. According to the Lecture by Dr. Erickson, what is Web Science? Why is it important?

According to Dr. Erickson, Web Science is when the World Wide Web is positioned into a scientific study into itself. It recognizes the Web as transformational technology and focuses on understanding the Web, its components, facets, and characteristics. Web Science is important because it provides a common search language, navigation, and data structure, allowing different people to search broadly use citation connections to navigate to relevant research results.

* 1. How does web science complicate our daily lives – be descriptive and include an example from your own personal experience

Web Science complicates our daily lives because there are so many sources and publications on the Web, that it becomes difficult to identify which resource is best and most accurate. An example from my own personal experience is when I was in high school trying to do research for a business project, I came across many sources for this one area I was trying to find information on, but wasn’t sure which one was most accurate and best for my conclusions.

* 1. How would you apply the concepts from your definition in a, to help with the problem you described in b?

I would apply the concepts from my definition with the problem I described by using Web Science to filter searches on the Web with the most popular citation connections since that would provide more accurate and well-known information for research.

1. Cybersecurity (20 points, 10 minutes) (Explain in detail)
   1. According to the lecture, what is the biggest threat when it comes to cybersecurity? Why?

According to the lecture, the biggest threat when it comes to cybersecurity are humans. Humans are the biggest threat to cybersecurity because of weak passwords (lazy to make strong ones and remember), gullible or curious users (scams and phishing attacks), and poor sysadmining (keeping machines not updates and running insecure OSes).

* 1. What is the CIA? How is it related to cybersecurity?

CIA is the 3 fundamental pillars of cybersecurity. The ‘C’ stands for Confidentiality, which means making sure people who aren’t supposed to see your secrets cannot see them. The ‘I’ stands for Integrity, which means making sure there are no unauthorized changes to your data. The ‘A’ stands for Availability, which means making sure those who need access to data can get access when they need it. CIA is related to cybersecurity because it helps outline the goals and objectives of a security program and helps organizations defend against threats.

* 1. What is are SSH keys and how do they work? How have we used them in this class beyond this cybersecurity lecture?

SSH keys are a cryptographic protocol, primarily used to enable secure access to remote servers and devices over the internet. SSH keys provide mutual authentication between the server and the client and establishes an encrypted channel of communication between them over an unsecured network. We have used them in this class beyond this cybersecurity lecture for connecting our virtual machines on Microsoft Azure to our local machines. Everytime I want to create a connection I have to ssh into my local machine with my virtual machine server.