Introduction to ITWS: ITWS 1100

Quiz 3: December 5, 2022

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 Detailed and in be in Your Own Words, and use proper grammar

There are 3 main questions on this test. Make sure you complete all sections of both.

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

Save this document as *yourRCSID-yourName*-F22Quiz3.docx

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

*yourRCSID-yourName*-F22Quiz3.zip

Submit it to LMS

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.*

Remember to save as you go,

Good luck!

1. HTML, CSS, JavaScript, jQuery, PHP, and then some … (3 parts - 30 Points, 30 min)

In lab 3 you built a simple website using (primarily) static HTML. Then, over time, you enhanced your website with jQuery and jQueryUI, and in lab 8 you modified your projects page to read from a JSON file using jQuery and AJAX.

Now I want you to prepare to repurpose your websites again. This time, I want you to prepare to build them using data stored in a database and setup your pages using PHP. (You should refer to lab 10 and to the in-class exercise on PHP)

**Note**: You do not need to execute any code in either SQL or PHP although it is an excellent way to check your work.

*Put your code inline, below.*

1. Write the **SQL code** to: (5 points)
   1. Create a database named webSiteContent

CREATE DATABASE webSiteContent;

* 1. Create a table named myProjects
     1. You must have a primary key
     2. You must allow for all the content to be stored as in your json for lab8

-- create the tables for website content

CREATE TABLE `myProjects` (

`number` varchar(100) unsigned NOT NULL AUTO\_INCREMENT,

`name` varchar(100) NOT NULL,

`link` varchar(100) NOT NULL,

`link2` varchar(100) NOT NULL,

`description` varchar(100) NOT NULL,

PRIMARY KEY (`myProjects`)

)

1. PHP – Write the **PHP code** to do the following: (15 Points)
   1. Connect to your SQL Database

<?php

$servername = "localhost";

$username = "kumars14";

$password = "itws1100";

//Creates the connection

$conn = new mysqli($servername, $username, $password);

//Checks connection

if ($conn->connect\_error) {

die("Connection failed: " . $conn->connect\_error);

}

echo "Connected successfully";

?>

* 1. Insert the data for your projects page into your table using a prepared statement

-- insert data into the tables

INSERT INTO myProjects

VALUES (“Lab 1”, "Virtual Machine and Github Repo", "In Lab 1 I created a Virtual Machine on Microsoft Azure, my own server, and a Github account."),

(“Lab 2”, “Resume”, “../lab2/kumars14-ShreyaKumar-resume.html", “In Lab 2 I created my own resume through HTML and CSS.”),

(“Lab 3”, "Personal Website and Projects Page", "../index.html", "In Lab 3 I built my website that stores all my labs and projects in my ITWS class."),

(“Lab 4”, "XML RSS and Atom Feed", "../lab4/rssfile.xml", "../lab4/atomfile.xml", "In Lab 4 I created two XML files, one RSS 2.0 and one Atom 1.0. They each contain five entries that link to a news article or blog that interested me."),

(“Lab 5”, "HTML Form with JavaScript", "../lab5/lab5.html", "In Lab 5 I worked on an HTML form to provide user feedback and validation while implementing Javascript and CSS."),

(“Lab 6”, "HTML Page with JavaScript and jQuery", "../lab6/lab6.html", "In Lab 6 I worked on an HTML page that I edited with Javascript and jQuery. The buttons on the page work and when 'Your Name' is pressed, my name shows up in purple and lowercase. "),

(“Lab 7”, "Term Project Mockup", "../lab7/termprojectmockup.docx", "In Lab 7 my term project team and I created our project mockup.");

* 1. Read the records back into a variable called $myProjectsList

$myProjectsList = (VALUES)

1. In In lab 10, we promoted our sites to production. In the instructions there was some JavaScript. (Shown here). (10 Points)



1) what does it do?

Gets rid of the inclass folders by moving them to some other part of the machine outside of the repo folders

2) How does it do it? (Explain in detail - you will need to refer to the instructions document to be thorough)

Takes a function that creates a variable named ‘doc\_ols’ to the document and gets the tag ‘ol’ from the html homepage. Then, makes a for loop that iterates i and in the loop, creates another variable named ‘ol\_start’ and sets it equal to getting “start” from the tag ‘ol’ in the homepage. It finally resets the homepage style.

1. Cases: (2 Parts, 4 questions – 40 points, 30 minutes)
   1. Google V Oracle: Using references from what was discussed and learned for this case;
      1. Assuming you have created a new game, while at RPI, and as part of a class at RPI, for which you submitted your game for a grade. Who owns this game and why? (10 points)

I would own the game because it was my work. If I used another student or source without citing my sources and entirely copying their work, then it wouldn’t be my work since that is plagiarism. This is like the whole Copyright form of IP protection that was used in the Google v Oracle case. If the game was my work entirely and I cited any sources I used, as well as the source not being my entire work, then it would be considered my game and I would be the owner. This is like Google creating Android using part of the Java API, but Google still having ownership of Android after the court hearing.

* + 1. Should all software be open source? Why or why not. Be descriptive and detailed. (10 points)

All software should be open sourced because there is open-source licensing that allows a person the freedom to use and change the software for their needs but not be the owner of the original piece of software they used. This means the ownership will not change, but others can use the code or parts of the code for their own applications. By having software be open source, it can benefit the community, as other developers can use the sample of code to create applications that help people and solve problems. Yes, it can be argued that the samples of code could be used for bad purposes, but if there is someone with the intention of developing with bad intentions, then they will go to extents to get the code regardless of it being open sourced or not.

* 1. Tiptoeing into the Metaverse
     1. What is an NFT? Be descriptive and detailed in your answer and give at least 2 examples. (5 points)

An NFT is a non-fungible token that is a unique digital identifier that cannot be copied, substituted, or subdivided, that is recorded in a blockchain, and that is used to certify authenticity and ownership in the Metaverse. This means that the NFT is unique and can only be one, there is no other like that certain NFT. An example is Nike’s digital sneaker that would be unique to only Nike and that certain design. Another example of an NFT is a unique piece of artwork that is digital.

* + 1. Based on the case, and the Web science, other discussions, and your newfound knowledge of NFTs, predict the future. Provide 1 detailed example of where you might be able to use NFTs to solve a world problem. (15 points)

I think NFT’s are currently trending due to the Metaverse and all the talk around it. Since the pandemic, most businesses are trying to digitalize and interact with their customers through applications instead of in-person. I think that NFT’s will become more popular and normalized as they are right now, but I think that there will be a lot more laws and security circulated around NFT’s as there is a history of stolen NFTs by hackers or crimes committed with the use of NFT’s. An example of where someone may be able to use NFT’s to solve a world problem is by collecting or buying NFT’s and then selling them and using that money to donate to a certain cause such as cancer which would help the cancer community and the research around it.

1. IA & DevOps: (4 questions - 30 points, 20 minutes)
   1. As discussed in this class, what is Information Architecture, and how did it relate to our work this semester? (5 points)

Information Architecture is the structural design of shared information environments. It is the art and science of organizing and labelling websites, online communities, and other software. Information Architecture relates to our work this semester because we used it throughout our labs, for example in lab 3 while creating our own webpage and projects page. It was also used in our Term Project where we had to create a web application, since we had to layout a plan or “blueprint” of our web pages and the resources that were incorporated inside of it.

* 1. As discussed in this class, what is DevOps and how did it relate to our work this semester (5 points)

DevOps is a set of practices that combines software development and IT operations that increases an organization’s ability to deliver applications and services at high velocity. This means that with the use of those practices a product can be improved faster and in a more efficient manner. DevOps related to our work this semester in some of the labs. For example, lab 5, there was a form with JavaScript and we had to write the code to make the alerts appear in a certain manner. Another example is lab 8, where we used JSON to create a dynamic projects page which is an improvement from the original projects page made during lab 3 with just HTML and CSS.

* 1. What is Git? What is GitHub? How do they relate to our work this semester? (5 points)

Git is an open source distributed version control system that tracks changes in any set of files, project, or application, allows us to develop simultaneously, resolve conflicts, track history of every change made (who made, when it was made, and why it was made), reverse changes if needed, and can link to bug-tracking systems. Github is a hosted repository that helps developers store, manage, track and control changes to their projects. Git and Github relate to our work this semester because we connected our Azure instance to our own Github repositories, use the Github repository for every lab and quiz, and we commit the Git changes through our local machines to track all changes made to our labs and quizzes.

* 1. Given what you now know about the above, and considering your experiences with each, how would you adjust your site architecture, and why? If you would not change a thing, why? (Be as descriptive as possible) (15 points)

I would adjust my site architecture by creating a menu tab on the top right of the page that has tabs that would link to an ‘About Me’ page, my projects page, and maybe a page of pictures that I’ve taken at RPI to show the memories I’ve made. To do all this I would need to make three additional HTML pages and write the CSS for each page to design them. Additionally, I would have to incorporate PHP and MySQL to add the pictures that I upload to a database so that they will display on my pictures page.