Introduction to IT: ITWS 1100

Take Home Final: Due April 27, 11:59:59pm

* 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, in complete sentences and should use proper grammar
* Make sure your answers use an alternative font and/or color – (not red, and not Comic Sans or similar)
* Save this document as;
  + ITWS1100-S20-FinalExam-*yourRCSID*-*yourname*.docx
* Place all documents including this one in a folder ***inside*** your iit folder named;
  + finalExam
* When finished with the quiz, zip your entire iit folder and all related files into a file named;
  + ITWS1100-S20-FinalExam-*yourRCSID*-*yourname*.zip
  + Make sure you extract your SQL database (include the CREATE statement) – save the output as *yourRCSID-website.sql.* Place it in your iit root
* And submit it to LMS

Remember to save as you go,

Good luck!

1. HTML, CSS, JavaScript, jQuery, PHP, and then some … (65 Points)

In lab 3 you built a simple website using (primarily) static HTML. In Lab 9 you modified your projects page to read from a JSON file using jQuery and AJAX.

Now I want you to repurpose your websites again. This time, I want you to build them using data stored in your DBMS and setup your pages using PHP.

* + Databases: create a database in your MariaDB (MySQL) server named, ‘myIntroProjects’
    - In this database, create a table named ‘projectList’
    - Make sure you have a primary key, that is automatically set that is 4 bytes in length
    - Create the fields necessary to store your project data
  + Forms: You are now going to fill your database with the data necessary to build your projects page (hint: convert your JSON data)
    - Write a program named loadData.php which will display a form on the screen to accept the data for your lab and insert it into the database. It should validate the entry using JavaScript and/or jQuery – your choice.
    - It may follow similarly in function to the examples in class
    - It must have the look and feel consistent with your website’s design
  + PHP: Convert your index.html and projects.html from labs 3 & 9 to PHP so that when I go to iit/finalExam the index.php file will be served by default. This will be the new homepage for your website.
    - In your finalExam folder add a new folder named ‘resources’
      * In it you will place the CSS, JavaScript and any other resources for your site
    - Convert your index.html file into an appropriate php file
    - Modify your projects.html file (or whatever you named it) to read the content from your new SQL database instead of the JSON file. You are to use PHP, the mysqli API, and prepared statements as we discussed in class and in the lab

Document your code and include a readme with an explicit discussion of your IA and the logic contained throughout your site.

The site should be fully functional. DO NOT relocate all your other lab files. Reference them where they currently exist within your iit folder.

1. Facebook and AirFox Cases: (20 points)
   1. Why does Facebook consider TikTok to be one of its biggest current threats? (6 points)

Facebook now are losing their young people users because TikTok has attracted lots of young people using more attractive short video features. More than 90% of TikTok's users are now in their 20s, a group of people Facebook has struggled to retain and exploit.As a social networking giant, Facebook strives to compete for consumer time, and any other application that attracts a large number of users is threatening the prospects of Facebook.

TikTok is a product that integrates content and social connections. It can not only provide users with information content, but also consume users' time with high interactivity and high interest. And more importantly, the integration of content, music, and dating interactions is likely to lead to new shifts in user relationships. Facebook's core competency is social and interactive, and when an app contains both Facebook's core social features and the kind of fun that Facebook doesn't have, it can then affect related revenue lifelines such as advertising. The rise of TikTok is to seize the market that previously belonged to Facebook and Instagram.

* 1. What is Blockchain? Explain to someone who may not understand tech (e.g. your grandparents) and to someone who does (e.g. the professors). (6 points)

To someone who may not understand tech: The blockchain is like a distributed digital ledger that records all transactions that have occurred and have been unanimously approved by the system. Each block is a ledger. For example, before blockchain, you have an account book in your house and you will keep all account of your family by yourself. Mom and Dad will hand over the salary to you, and you will put it on the account. But if you want to buy snacks or toys in the middle, there may be some dollar less records on the ledger. In order to hide, you can eliminate these records from the account book. However, after using blockchain technology,you are keeping accounts, your parents are also keeping accounts, they can all see the books. So you can’t change it, neither can mom and dad. So if any of you want to buy something privately, you can’t.

To someone who does understand tech: Blockchain technology is essentially a database technology. Each block is like a hard disk, all information is saved, and then encrypted by cryptography technology. The saved information cannot be tampered with. Because the blockchain has the characteristics of "unforgeable", "left trace", "traceable", "open and transparent", and "collective maintenance", blockchain technology has laid a solid "trust" foundation and created a reliable "cooperation" mechanism , and therefore, it has broad application prospects.

* 1. How might blockchain technology be applied to help with the delivery of news and information on social media? (8 points)

The convenience and low threshold of social media dissemination of information facilitate the dissemination of false news and rumors. The decentralized and unchangeable attributes of the blockchain can be used to help the journalism get rid of false news of many areas such as business and politics, and re-establish the benchmark of journalism authenticity.

Also, Blockchain will give users freedom to control their information. Now, the user's control over his information is transferred at the moment of uploading. This information can be used to display to advertisements. However, because of blockchain, users could decide who and when could someone access their personal information. Therefore, blockchain could protect users’ information security.

1. Introduction to ITWS Term Projects: (15 points)
   1. What was one thing you learned this semester that would have made it easier to implement your project if you were able to do it over?

One thing I learned this semester that is important and useful to implement my project is using SQL to build the database and using PHP to access the database. It could be very helpful to implement my project since our project build up a table that displays all the assignment data that users insert through our form which is built by PHP. If I could learn PHP earlier and be more familiar with PHP and SQL, I could work on my project more smoothly and make up a more efficient website.

When I was working on my project, I met a problem that there are two table on the web page, one is “to do” table, another is “completion” table, but there are both selected from one database. When we need to “move” the data from one table to another, we actually change one variable in that chosen element, so another table could select it from the database, and the first table could not. This can form a visual "movement" on the screen. However, we need to refresh the page every time when we want to “move”. Although finally we use Javascript to make the page automatically refresh itself, I think there may be a way to make the process more efficiently by using PHP skillfully.

* 1. Discuss one excellent characteristic from each of two (2) other Term Projects in this Class that you will try to incorporate in future ITWS Projects. Name each of the other Term Projects and the characteristic that you found to be excellent in each. Answer in complete sentences.

For Group one “stressless website’, I really like their design of their website which could change the color scheme of their page and the order of the icons in the header. It is a very useful point for me to learn and use in my future website design which could make the website conform to the aesthetics of various groups and make the website more acceptable.

For Group three, I think the registration page is an excellent characteristic that I really want to learn. Since our project just use Google account to log in, I think having one more choice for users to sign up a unique account for the website would also be a great way. The user could use different profile photo and user name and does not need to be bundled with Google. Therefore, it is also a great feature that I will try to add to my future project.