Introduction to IT: ITWS 1100

Final Quiz: April 25, 2022



1. HTML, CSS, JavaScript, jQuery, PHP, and then some … (3 parts - 60 Points, 45 min)

In lab 3 you built a simple website using (primarily) static HTML. In Quiz 2, you enhanced your website with jQuery and jQueryUI. In Lab 9 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 your DBMS 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.

1. SQL – In the file named quiz3.sql, which is placed in the provided resources folder, enter the commands to: (20 points, 15 minutes)
   1. Create a database named, *iitQuiz3*
   2. Create a table named, *myProjects*
      1. Make sure you have a primary key which will autoincrement
      2. Create the fields necessary to store your project menu information – no data beyond what you stored in lab 9 is needed
   3. Insert data into your table containing the information necessary to match your project data from lab 9
2. PHP – Write the **PHP code** to do the following: (add it inline below) (20 points, 15 minutes)
   1. Check to see if the page was requested by a GET or POST (and explain how this works)

<?php

if($\_SERVER['REQUEST\_METHOD']==='GET'

echo “this is GET”;

else if($\_SERVER['REQUEST\_METHOD']==='POST')

echo “this is POST”;

?>

$\_SERVER is an associative array that stored data like request\_method. By using operator [] and key ’REQUEST\_METHOD’, we can get the value, which is what the question asked.

* 1. Connect to your SQL Database (and explain your choice)

<?php

$dbOk = false;

/\* Create a new database connection object, passing in the host, username,

password, and database to use. The "@" suppresses errors. \*/

@ $db = new mysqli('localhost', 'root','', 'myProjects');

if ($db->connect\_error) {

echo '<div class="messages">Could not connect to the database. Error: ';

echo $db->connect\_errno . ' - ' . $db->connect\_error . '</div>';

} else {

$dbOk = true;

}

?>

* 1. Select the relevant fields from your table in order of your projects (only include the field that would be shown on screen)

<?php

if ($dbOk) { // $dbOk is the variable above

// since every field is necessary

$query = 'select \* from actors order by last';

$result = $db->query($query);

$numRecords = $result->num\_rows;

for ($i=0; $i < $numRecords; $i++) {

$record = $result->fetch\_assoc();

// title is $record['id'];

// image\_over is $record['image\_over'];

// image\_out is $record['image\_out'];

}

}

?>

* 1. Insert new records into your table using a prepared statement (include all the necessary lines of code)

<?php

// I assume that the prepared statement means that every variable has been stored

$insQuery = "insert into myProjects (`title`,`image\_over`, `image\_out`) values(?,?,?)";

$statement = $db->prepare($insQuery);

// bind our variables to the question marks

$statement->bind\_param("sss",$title,$image\_over, $image\_out);

// make it so:

$statement->execute();

$statement->close();

?>

1. Using index.php (included and from the PHP examples), explain in your own words: (be thorough and explicit) (20 points, 15 minutes)
   1. Summarize what this page does
   2. When and how is the form data being validated? Why is it being done this way?
   3. What resource is being called when the form is submitted?
   4. How does the page on the server-side receive/utilize the data entered into the form on the client-side?
2. This page is basically what we did in Lab10. It has a table that lists every actor’s last\_name, first\_name, and date\_of\_birth. Moreover, it provides a form that users can use to insert other actors. When the user clicks submit, it would check whether there are characters in first\_name and last\_name and do the dob formatted right.
3. When the user clicks the submit button, validate function in the javascript file would be executed to check whether the format is right. What’s more, when it returns to the page with php values, php code would check again to make sure that the firstNames and LastName are not blank and the dob is formatted correctly.
4. the validate function in Javascript is called when the form is submitted. More than that, according to the action, it would return to the index.php page within the data.
5. firstly, when php received data, the code would check the format like part b described. If there is no problem, it would generate an insert sql code, which would be stored into a php variable. After that, it would bind those parameters( first name, last name, and dob) into the sql code. Since the php file has already been connected to the server by using newsql(), the sql code would be executed in the server, and then the data would be inserted into the server.
6. SkySpecs and WhatsApp Cases: (20 points, 10 minutes)
   1. Referencing the video we watched from Danny Ellis, which strategy did he state SkySpecs ultimately decided to pursue? (5 points)

He ultimately decided to use the depth strategy.

* 1. Describe SkySpecs reasoning for making this decision. (5 points)

The reason why SkySpecs is determined to use this strategy is just like what we discussed in the class: They have already had a solid customer base in the wind energy field and these customers are currently asking SkySpecs to cover more services in this area; It would be easier for them to improve compared with expanding into a completely new environment; They can be a master in this field.

* 1. Per the in-class discussion, what is the current biggest threat to the wind energy industry in the US (and by association, the SkySpecs business model)? (10 points)

In the past, the reason why wind energy can develop swiftly is because of the strong support, including low taxes and high funds, from the government. However, according to the latest news, the government is considering decreasing the degree of support since wind energy need to use lots of land. In fact, they have already canceled or rejected some expansion requests by wind-energy-relative companies.

1. Product Management: (20 points, 10 minutes)

Per the Guest Lecture:

* 1. What are KPRs and what are they used for? (10 points)

The full name of KPR is Key Performance Result, which is the outcome that employers should expect to see as a result of the activities that are being conducted on a regular basis.

* 1. What are 2 of the 4 most important traits of a great PMs? Describe them and include why they are important (10 points)

2 traits of a great PM are Curious and Leaders. For the curious, good PMs live in the future and work backward. In order to predict the future trend, they should keep the passion for new and strange technology and fields. They should think about whether these things can improve people’s living conditions, to some degree help people to decrease their workload, or make something convenient, which, as a result, would attract users to consume. For the leader part. Undoubtedly, a great PM should have the ability to amplify their teams. They listen to the member’s requirement and suggestions well. They can also infuse urgency to push other members. In that case, the team can stay active and solve things in quality and quantity.