CIT336 Midterm Exam Spring 2017

Code/Database will be 50% of the total grade, and the questions will be the other 50%, with each question having a value of 5 points.

We’re going to create an application that allows us to keep track of all of the dogs that are adopted through a pet adoption organization. The adoption organization has Lab-mixes, Pitbull-mixes, Chihuahua-mixes, Shepherd-mixes, and Hound-mixes available for adoption. Dogs are denoted to the organization by their name.

Whenever a dog is adopted, the agency wants to keep track of the name of the dog adopted, its breed (Lab-mix, Chihuahua-mix, etc), and how old it is.

So first, we will create a database to store this information.

We need one table, called ‘adoptions’, that will store each adoption, including the name, breed, and age of the dog.

1. What would be the SQL to create this database and table?

SQL is Standard Query Language, which is the language that we use to communicate with a relational database. What SQL is used for in terms of data is Insert, Update, Query, Delete. In this project, we use MySQL.

Now that we have a database set up, we need to create a form to allow the organization to enter each adoption. It should look like this:



(Font is Arial, text is white, background color is maroon)

Now we need to write a PHP file that will allow us to add the information from the form to the database.

2. What type of software do we need to have running on our computers to run PHP?

We need a software that turns a computer into a web server.

3. What type of variable must $link be if we’re using it throughout the document?

$link is a global variable.

Now we will write an AJAX function to send that data to the database without refreshing the page.

4. We’re using a GET request in this situation. In what situations might we choose to use a POST request instead?

We use POST request when there is sensible information in the request. For example, if we want to send password, a POST request will be a better choice.

5. What is AJAX and why are we using it?

AJAX (Asynchronous JavaScript and XML) is a JavaScript-based technique that allows the client and server to pass tiny pieces of information back and forth, so the whole page does not need to reload.

6. What is an HTTP request?

Whenever your web browser fetches a file (a page, a picture, etc) from a web server, it does so using HTTP - that's "Hypertext Transfer Protocol". HTTP is a request/response protocol, which means your computer sends a request for some file, and the web server sends back a response.

7. Where do we tell the client-side code what to do with the response from the server?

We use JavaScript. When the server receives the Request, it formulates a response; then it sends response back to Client and changes Ready State to 4, and status to 200.

8. Is the AJAX on the server-side or client-side? Is the PHP on the client-side or server-side?

AJAX is on the client-side while PHP is on the server-side.

Double-check in your database that the information is being submitted.

Make a few theoretical adoption entries.

Now we just want to take a quick peek at the adoptions we’ve had. Write a PHP file that displays a table that shows all of those adoptions. Add a link to the main page to this table.

It should look like this:

**Breed Name Age**

Chihuahua-mix Douglas 6

Lab-mix Bambi 1

Pitbull-mix Meatball 2

9. This application now does two of the functions of CRUD. Which two functions?

Create and Read.

10. Give me an example of 3 key-value pairs from your data.

Breed is the key; Chihuahua-mix is the value.

Name is the key; Douglas is the value.

Age is the key; 6 is the value.

11. If you were going to add this application to Github, what would be the steps to do that? Include the commands.

1. Create a new repository in your Github account.

2. Open Git Bash.vbs from the git folder in Programs: will open command window

3. Type cd path/to/directory, and press enter  
4. Type git add ., and press enter  
5. Type git commit -m "what this commit does to the software", and press enter  
6. Type git push origin master, and press enter

12. What would be the benefits of using Github?

You won’t lose your work! When you break things, you can easily revert back to how the code was before it was broken. You can develop in a separate branch, so that you don’t break the production code. You need it to work in a team! You can find out who broke things, and when and how they did it. Also, when employers look for your profile, they can see code samples in your Github.

Did you document your code? Put in comments that explain what your code is doing.

Zip up a file with all of your code and this document and upload it to Blackboard.

Great job! Next week we are going to look at taking this data, and creating ways to visualize it.