**COMP 3540 Advanced Web Design and Programming**

Term Test III – Winter 2016

Student Name: Student Number:

1. (10 marks) Fill in the blanks in each of the followings.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a protocol for secure communication over a computer network which is widely used for web applications.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a process that allows users to verify the identity of a system that the users connect and use.
4. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can be used to map data of arbitrary size to data of fixed size. It can be used for user authentication.
5. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tag is used to embed another document within the current HTML document.
6. The SQL \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ keyword selects all rows from two tables as long as there is a match between the columns in both tables.
7. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a small piece of data sent from a website and stored in the user’s web browser while the user is browsing.
8. At the server side, a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a way to store information (in variables) to be used across multiple pages.
9. At the client side, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ object is used to receive server-sent event messages. (You should answer with the object name.)
10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a set of web development techniques using many web technologies on the client-side to create asynchronous web applications.
11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a lightweight data-interchange format.
12. (3 marks) Write the PHP code that authenticates username and password.

* Username and password are sent from the client with the names ‘user’ and ‘pwd’, using the ‘GET’ method.
* is\_valid(..., ...) is used to check the validity of username and hashed password.
* When they are valid, the code sends ‘Valid’ to the client, otherwise ‘Invalid’.

1. (3 marks) Write the PHP code that redirects to a secure communication channel.
2. (3 marks) Complete the HTML code that displays the web content into an iframe.

<form method='get' action='multiply.php' \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_>

First value: <input type='text' \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_='first-value'>

Second value: <input type='text' \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_='second-value'>

<input \_\_\_\_\_\_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ value='Submit'> <!-- submit button -->

</form>

<iframe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_></iframe>

1. (3 marks) Complete the JavaScript code that accesses the data in <iframe>.

* '<script> var result = 34; </script>' is sent from the server script and displayed in the <iframe>.
* The data in <iframe> should be displayed in the JavaScript code, using alert().

<script>

</script>

<iframe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_></iframe>

1. (3 marks) Write the SQL statement that selects all the questions including ‘TRU’ and theirs answers from the two tables ‘answers’ and ‘questions’.

* The table ‘questions’ has two columns – question\_id, question.
* The table ‘answers’ has three columns – answer\_id, question\_id, answer

1. (7 marks) Complete the JavaScript code that sends ‘command=sign-out’ to ‘controller.php’ when there is no user activity for 10 minutes. The two events, mouse move and key down, are used to check the user activity.

<script>

var count = 0;

window.addEventListener('load', function() {

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(function() {

count++;

if (count >= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

sign\_out();

}, 1000); // every 1 second

document.addEventListener(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, function() {

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = 0;

});

document.addEventListener(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, function() {

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;

});

});

function sign\_out() {

var form = document.createElement('FORM'); // Is this new form visible?

form.method = 'get';

form.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = 'controller.php';

var input1 = document.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_('INPUT'); // create a DOM element

input1.type = 'text';

input1.name = 'page';

input1.value = 'MainPage';

form.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(input1); // append a child

var input2 = document.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_('INPUT'); // create a DOM element

input2.type = 'text';

input2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = 'command';

input2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = '\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_';

form.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(input2); // append a child

form.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_();

}

</script>

1. (3 marks) Write the PHP code that receives a value of ‘command’ from the user, and

* When the ‘command’ value is ‘sign-out’,
  + destroys the session variables ‘signed-in’ and ‘username’,
  + destroys the session, and
  + includes ‘start\_page.php’.

$cmd = $\_GET['command'];

1. (3 marks) Write the JSON file, ‘courses.json’, that includes

|  |  |  |
| --- | --- | --- |
| *Major* | *Number* | *Title* |
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The JSON data should be like a linear array of two associative arrays of the same kind.

1. (8 marks) Complete the JavaScript code that retrieve ‘courses.json’ in the above question 9), and displays a table of the course information into a DOM object of id ‘result’.

* Ajax should be used.
* The ‘get’ method should be used.
* The request should be sent to ‘get.php’, NOT directly to ‘courses.json’, with the value ‘file=courses.json’.
* When you construct the code of table, you should not assume any fixed <th> values and the numbers of <th> values.
* You should not use any framework.

var ajax = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(); // Creation of an AJAX object

ajax.addEventListener(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, function() {

if (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ == \_\_\_\_\_ && \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ == \_\_\_\_\_)

display(JSON.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(ajax.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_));

});

ajax.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, true);

ajax.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_();

function display(books) { // books: a linear array of associative arrays

// of the same kind

var table = '<table>';

// Table header

table += '<tr>’;

for (

table += '</tr>’;

// Rows

table += '</table>';

document.getElementById('display').\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;

}