**COMP 3540 Advanced Web Design and Programming**

Midterm Exam II – Fall 2016

Student Name: Student Number:

1. (8 marks) Fill in the blanks in each of the followings.
2. An \_\_\_\_\_\_Cookie\_\_\_\_\_\_\_\_ is a small piece of data sent from a website and stored on the user’s computer by the user’s web browser while the user is browsing.
3. \_\_\_\_\_\_\_Bootstrap\_\_\_\_\_\_\_\_ is a JavaScript framework for developing responsive, mobile-first web sites.
4. \_\_\_\_\_\_\_jQuery\_\_\_\_\_\_\_\_ is the most popular JavaScript framework designed to simplify the client-side scripting of HTML.
5. A \_\_\_\_\_\_\_\_SPA\_\_\_\_\_\_\_ is a web application or web site that fits on a single web page with the goal of providing a user experience similar to that of a desktop application.
6. The \_\_\_\_\_\_\_iframe\_\_\_\_\_\_\_\_ tag creates an inline frame, which embeds an independent HTML document into the current document.
7. \_\_\_\_\_\_\_AJAX\_\_\_\_\_\_\_\_ is a set of web development techniques using many web technologies on the client-side to create asynchronous web applications.
8. \_\_\_\_\_\_\_JSON\_\_\_\_\_\_\_\_ is a lightweight data-interchange format.
9. \_\_\_\_\_\_\_SSE\_\_\_\_\_\_\_\_ is a technology where a browser receives automatic updates from a server.
10. (2 marks) Write the PHP code that sends a cookie with

* Name: ‘username’
* Value: the value stored in $username

setcookie(‘username’, $username);

1. (3 marks) Write the PHP code that starts a session and saves a session variable with
   * Name: ‘username’
   * Value: the value stored in $username

session\_start();

$\_SESSION[‘username’] = $username;

1. (3 marks) Write the Bootstrap-HTML code that uses 3 columns within a container. The sizes of 3 columns are 2, 8, and 2 respectively. You do not have to include anything in the columns.

<div class=’container’>

<div class=’row’>

<div class=’col-md-2’></div>

<div class=’col-md-8’></div>

<div class=’col-md-2’></div>

</div>

</div>

1. (3 marks) Write the jQuery code that responses to the click event on the button with id=‘button-submit’. When the click event is triggered, the code submits the form with id=‘form-signin’.

$(‘#button-submit’).click(function() {

$(‘#form-signin’).submit();

});

1. (4 marks) Write the jQuery code that sends POST data to ‘controller.php’. The data to send is

* Command: ‘SignIn’
* Name: the value stored in the variable username
* Password: the value stored in the variable password

The code receives data back from ‘controller.php’, and displays the data into the HTML element with id=‘result-pane’.

You should not use a form.

$.post(‘controller.php’, {

Command: ‘SignIn’,

Name: username,

Password: password

}, function(data) {

$(‘#result-pane’).html(data);

});

1. (4 marks) Write the PHP code that creates an associative array for the following table.

|  |  |  |
| --- | --- | --- |
| ***Name*** | ***Stock*** | ***Sold*** |
| Volvo | 22 | 18 |
| BMW | 15 | 13 |

The code also converts the array to the JSON string and sends the string back to the client.

$data = array();

$data[0] = array(“Name” => “Volvo”, “Stock” => 22, “Sold” => 18);

$data[1] = array(“Name” => “BMW”, “Stock” => 15, “Sold” => 13);

$s = json\_encode($data);

echo $s;

1. (2 marks) Give an example of SSE message that sends ‘COMP 3540 is an amazing course!’. You do NOT have to write the PHP code.

“data: COMP 3540 is an amazing course!\n”

1. (4 marks) Write the PHP code that checks the validity of username and password sent from the client. When they are not valid, the code sends ‘Wrong username or password’. Otherwise, ‘Valid’.
   * Username and password sent from the client are stored in the PHP super global array with the names, ‘user’ and ‘pswd’.
   * Hashed passwords are stored in a DB table.
   * The function check($n, $hp) should be used to check if the username $u and the password $hp are stored in the DB table. This function returns true when they exist in the DB table. Otherwise, false.

$username = $\_POST[‘user’];

$password = $\_POST[‘pswd’];

$hp = sha1($password);

if (check($username, $hp))

echo "Valid";

else

echo "Wrong username of password";