**COMP 3540 Advanced Web Design and Programming**

Midterm Exam I – Winter 2018

Student Name: Student Number:

1. (0.5 marks for each) Fill in the blanks in each of the following.
2. The three tiers in the web application environment are \_client\_\_\_\_\_\_\_\_, \_server\_\_\_\_\_\_\_\_, and \_database\_\_\_\_\_\_.
3. The three components in the MVC web application architecture are \_model\_\_\_\_\_\_\_\_\_, \_view\_\_\_\_\_\_\_\_\_\_, and \_controller\_\_\_\_.
4. The four components in the box model are \_content\_\_\_\_\_\_\_, \_padding\_\_\_\_\_\_\_, \_margin\_\_\_\_\_\_\_\_, and \_border\_\_\_\_\_\_\_\_.
5. In the absolution positioning, the position is relative to \_the nearest positioned ancestor\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. The two HTML elements, that are used to group elements, are \_div\_\_\_\_\_\_\_\_\_\_\_, and \_span\_\_\_\_\_\_\_\_\_\_.
7. The document function \_getElementById\_ in JavaScript is used to get the reference of an HTML element with its id.
8. The window function \_getComputedStyle\_\_\_\_\_ in JavaScript is used to access all the CSS properties including the default values and the ones defined in the <style> tags.
9. The \_global\_\_\_\_\_ keyword in a PHP function is used to access the variables declared outside the function.
10. The array function \_array\_push\_\_\_\_\_\_\_\_ in PHP is used to insert a value at the end of the array.
11. The window function \_setInterval\_\_\_\_\_\_\_\_\_\_ in JavaScript is used to invoke a function repeatedly with a specified time interval.
12. (3 marks) Complete the HTML code that displays ‘Copyright © cs.tru.ca’ at the top of the window and at the exact horizontal center of the window. Note that you cannot change width and height of any inline elements.

<span style='width:100px; display:block; position:fixed;

top:10px; left:calc(50vw – 50px); text-align:center;

'>

Copyright &copy; <a href='//cs.tru.ca'>cs.tru.ca<a>

</span>

1. (3 marks) Complete the HTML code that show/hide an image when a button is clicked.

<script>

var displayed = true;

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

document.getElementById('p3-button').addEventListener('click', function() {

if (displayed) {

document.getElementById('p3-img').style.display = 'none'; displayed = false;

} else {

document.getElementById('p3-img').style.display = 'inline'; displayed = true;

}});

});

</script>

<img id='p3-img' src='html5.png'></img>

<button id='p3-button'>Click me!</button>

1. (4 marks) Complete the code that displays <ul> left side of an <li> only when the mouse moves over the <li>.

* The top position of the <ul> should be the same as the top position of the <li>.
* The right position of the <ul> should be the same as the left position of the <li>.
* Only the <ul> element in the <li> with id='p4-li' should be affected by the CSS code.

<style>

li#p4-li, li#p4-li > ul, li#p4-li li { list-style:none; padding:0; margin:0; }

li#p4-li { position: relative; }

li#p4-li > ul { position: absolute; top: 0; right: 100%; display: none; }

li#p4-li:hover > ul { display: block; }

</style>

<li id='p4-li'><img src='menu.jpg' width:'40px' height:'40px'></img>

<ul>

<li>SignIn</li>

<li>Join</li>

<li>Forgot Password</li>

</ul>

</li>

1. (6 marks) Complete the following code that displays a modal window when a button is clicked.

* The modal window should disappear when the window area outside the modal window is clicked.
* The modal window should be displayed over every other elements, and the outside of the modal window should be shaded.
* The form data should be submitted to 'controller.php' using the POST method.

<style>

div#p5-blanket {

width:100vw; height:100vh; opacity:0.5; background-color:Grey;

position:fixed; top:0; left:0; z-index:998; display:none;

}

div.p5-modal-window {

width:400px; height:300px; top:200px; left:200px;

border:1px solid Black;

position:fixed; z-index:999; display:none;

}

</style>

<button id='p5-modal-test'>Modal test</button>

<div id='p5-blanket'></div>

<div class='p5-modal-window' id=’p5-modal-window'>

<form method = 'post' action = 'controller.php'>

<!-- some inputs -->

<input type='submit'>

</form>

<h1>What a wonderful world!</h1>

</div>

<div>Other content</div>

<script>

document.getElementById('p5-model-test').addEventListener('click', function() {

document.getElementById('p5-blanket').style.display = 'block';

document.getElementById('p5-modal-window').style.display = 'block';

});

document.getElementById('p5-blanket').addEventListener('click', function() {

document.getElementById('p5-blanket').style.display = 'none';

document.getElementById('p5-modal-window').style.display = 'none';

});

</script>

1. (4 marks) Complete the PHP code that

* creates an associative array for – subject: COMP; number: 3540; year: 2018; semester: Winter.
  + creates a string of the <table> code that contains the above values in the associative array, and
  + sends the string back to the client.
  + The table head, i.e., <th>, should include the property names in the array, and the table row should include just property values.

You should use a foreach loop.

$data = array('Subject'=>'COMP', 'Number'=>3540, 'Year'=>2018, 'Semester'=>’Winter');

$str = '<table'>;

$str .= '<tr>';

foreach ( $data as $key => $value )

$str .= "<td>$key</td>";

$str .= '</tr>';

$str .= '<tr>';

foreach ( $data as $key => $value )

$str .= "<td>$value</td>";

$str .= '</tr>';

$str .= </table>;

echo $str;

1. (4 marks) Write the PHP code that reads the user input named 'command' that sent using the POST method.

* If the command value is 'Start', then send the client code in view\_start.php.
* If the command value is not 'Start', then sends the client code in view\_main.php.

if ($\_POST['command'] == 'Start')

include('view\_start.php');

else

include('view\_main.php');