

CONCORDIA UNIVERSITY
Department of Computer Science
SOEN 287 Web Programming

MIDTERM EXAM: Oct 27, 2016 (ANSWER)

IDENTIFICATION:

First Name _____ **Last Name** _____ **ID** _____

Signature _____

Information:

1. This is a close book exam.
2. Please answer all questions – 100 points as shown.
3. Please put your answer to the multiple choice questions in the table below.

Questions		Mark
Section I	Answer	
1		/5
2		/5
3		/5
4		/5
5		/5
6		/5
7		/5
8		/5
9		/5
10		/5
Section II		
1		/10
2		/10
Section III		
1		/10
2		/10
3		/10
Total		/100

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Section I: Multiple Choices (50 points)

1. When a form is submitted by using http GET method, the query string is included in:

- A. HTTP head
- B. HTTP body
- C. HTML head
- D. HTML body
- E. None of the above

Answer: A

2. What happens when you access the page www.google.com ? [Select ALL the correct answers]

- A. Multiple GET requests are sent to the server
- B. One POST request is sent to the server
- C. Some JavaScript code is possibly downloaded from the server
- D. One GET request is sent to the server

Answer: A,C

3. Which of the following MIME type definitions are possibly correct? [Select ALL the correct answers]

- A. text/plain,
- B. text/gif
- C. image/html,
- D. text/css
- E. text/javascript

Answer: A, D, E

4. Who is the inventor of HTML?

- A. Tim Berners-Lee
- B. Marc Andreessen
- C. Bill Gates
- D. Larry Ellison
- E. Al Gore

Answer: A

5. Which HTTP Status Code represents “success” status?

- A. 200
- B. 300
- C. 400
- D. 500
- E. 600

Answer: A

6. How do you add a background color for all <h1> elements?

- A. all.h1 {background-color:#FFFFFF}

- B. h1.all {background-color:#FFFFFF}
- C. h1 {background-color:#FFFFFF}
- D. . h1 {background-color:#FFFFFF}

Answer: C

7. In which color will the level 2 heading be displayed after applying the style defined in the box at right?

- A. Blue
- B. Green
- C. Red
- D. Black

Answer: D

```
<!-- this is for question 7-->
<head>
  <style type="text/css">
    h1.blue {color:blue;}
    h1 {color:green;}
    #highlight {color: red;}
  </style></head>
<body>
  <h2 class = "blue">This is level 2 heading.</h2>
</body>
```

8. Which of the following choice is valid XHTML code?

- A. <p> This is a paragraph </p>
- B. <P> This is a paragraph </P>
- C. <p> This is a paragraph
- D. <p> This is nested </p>

Answer: A

9. Write the result of a JavaScript express the the box blow:

```
//below is a JavaScript statement
'$' + (4+5)
```

- A. \$9
- B. \$45
- C. NaN
- D. undefined
- E. error

Answer: A

10. What is the final value of variable **sum** after the following JavaScript code is executed?

```
var sum = 0;
function add_t()
{
    var sum = sum + 20;
}

add_t();
sum = sum + 1;
```

- A. 20
- B. 0
- C. 1
- D. 21
- E. none of the above

Answer: C

Section II: Short Answer Questions (20 points)

1. Write the answers to the JavaScript function call. (10 points)

- A. test("2", "3", "4") returns _____
- B. test(2, 3, 4) returns _____
- C. test("2", 3, "4") returns _____
- D. test(3, "a", 4) returns _____
- E. test(false, true, false) returns _____

```
test(a, b, c){
    return a + b*c == b*c+a;
}
```

answer:

- A. test("2", "3", "4") returns ____false____
- B. test(2, 3, 4) returns __true____
- C. test("2", 3, "4") returns ____false____
- D. test(3, "a", 4) returns ____false____
- E. test(false, true, false) returns __true____

2. Fill the blank lines with the color used to show the strings on a browser. For example, if the line is showed in blue, fill the line with "blue" (10 points).

```

<head>
  <style type="text/css">
    h2.blue {color:blue;}
    h1 em {color:green;}
    .red {color: red;}
    * {color: yellow; font-size: 5mm}
  </style>
</head>
<body>
  <h1 class="blue">Heading 1 <em> This is _____</em> </h1>
  <h1> this is _____</h1>
  <h2 > this is _____</h2>
  <p class="red"> This is _____. <em> This is _____</em></p>
</body>

```

Answer:

```

<head>
  <style type="text/css">
    h2.blue {color:blue;}
    h1 em {color:green;}
    .red {color: red;}
    * {color: yellow; font-size: 5mm}
  </style>
</head>
<body>
  <h1 class="blue">Heading 1 <em> This is green</em> </h1>
  <h1> this is yellow</h1>
  <h2 > this is yellow</h2>
  <p class="red"> This is red. <em> This is yellow</em></p>
</body>

```

Section III: Answer the Following Questions with Code (30 points)

The box at the right shows a Web page to receive the orders for popcorn.

1. (10 points) Finish the XHTML document for this Web page.

```
<?xml version = "1.0" encoding = "utf-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
    "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <_____> Popcorn Sales Form </_____>
  </head>
  <_____>
    <h2> Welcome to Millenium Gynmastics
      Booster Club Popcorn Sales
    </h2>
  <!-- The next line gives the address of
    the CGI program -->
  <form _____ =
    "../cgi-bin/chap9/popcorn.php"
    method = "post" id = "myForm">

  <!-- A borderless table of text widgets for
    name and address -->
    <table>
      <tr>
        <td> Buyer's Name: </td>
        <td> <_____ type = "_____" name =
"name" size = "30" />
        </td>
      </tr>
      <tr>
        <td> Street Address: </td>
        <td> <_____ type = "_____" name = "street" size = "30" />
        </td>
      </tr>
      <tr>
        <td> City, State, Zip: </td>
        <td> <_____ type = "_____" name = "city" size = "30" />
        </td>
      </tr>
    </table>
    <p />

  <!-- A bordered table for item orders -->
    <table border = "border">
  <!-- First, the column headings -->
    <tr>
      <th> Product Name </th>
      <th> Price </th>
      <th> Quantity </th>
    </tr>
  <!-- Now, the table data entries -->
    <tr>
      <td> Unpopped Popcorn (1 lb.) </td>
      <td> $3.00 </td>
      <td> <_____ type = "_____" name = "unpop" size = "2" />
      </td>
    </tr>
```

Popcorn Sales Form - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Computer Science & S... Faculty of Engineering... English-French Diction...

Popcorn Sales Form x Popcorn Sales Form

Welcome to Millenium Gynmastics Booster Club Popcorn Sales

Buyer's Name:

Street Address:

City, State, Zip:

Product Name	Price	Quantity
Unpopped Popcorn (1 lb.)	\$3.00	<input type="text"/>
Caramel Popcorn (2 lb. cannister)	\$3.50	<input type="text"/>
Caramel Nut Popcorn (2 lb. cannister)	\$4.50	<input type="text"/>
Toffee Nut Popcorn (2 lb. cannister)	\$5.00	<input type="text"/>

Payment Method:

☒ Visa
☐ Master Card
☐ Discover
☐ Check

Done

```
|  |  |  |
| --- | --- | --- |
| Caramel Popcorn (2 lb. cannister) </td>  $3.50 </td>  <_____ type = "_____" name = "caramel" size = "2" /> </td> | | |
| Caramel Nut Popcorn (2 lb. cannister) </td>  $4.50 </td>  <_____ type = "_____" name = "caramelnut" size = "2" /> </td> | | |
| Toffey Nut Popcorn (2 lb. cannister) </td>  $5.00 </td>  <_____ type = "_____" name = "toffeynut" size = "2" /> </td> | | |

</table>
<p />

<!-- The radio buttons for the payment method -->
<h3> Payment Method: </h3>
<p>
<label> <_____ type = "_____" name = "payment"
value = "visa" checked = "checked" /> Visa
</label>
<br />
<label> <_____ type = "_____" name = "_____"
value = "mc" /> Master Card
</label>
<br />
<label> <_____ type = "_____" name = "_____"
value = "discover" /> Discover
</label>
<br />
<label> <_____ type = "_____" name = "payment"
value = "check" /> Check
</label>
<br />
</p>

<!-- The submit and reset buttons -->
<p>
<_____ type = "_____" value = "Submit Order" />
<_____ type = "_____" value = "Clear Order Form" />
</p>
</form>
</_____>
</html>

```

Answer:

```

<?xml version = "1.0" encoding = "utf-8" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<!-- popcorn.html
This describes popcorn sales form page>
-->

```

```

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <title> Popcorn Sales Form </title>
  </head>
  <body>
    <h2> Welcome to Millenium Gynmastics Booster Club Popcorn
      Sales
    </h2>

    <!-- The next line gives the address of the CGI program -->

    <form action = "popcorn.php" method = "post" id = "myForm">

    <!-- A borderless table of text widgets for name and address -->

      <table>
        <tr>
          <td> Buyer's Name: </td>
          <td> <input type = "text" name = "name"
              size = "30" />
          </td>
        </tr>
        <tr>
          <td> Street Address: </td>
          <td> <input type = "text" name = "street"
              size = "30" />
          </td>
        </tr>
        <tr>
          <td> City, State, Zip: </td>
          <td> <input type = "text" name = "city"
              size = "30" />
          </td>
        </tr>
      </table>
    <p />

    <!-- A bordered table for item orders -->

    <table border = "border">

    <!-- First, the column headings -->

      <tr>
        <th> Product Name </th>
        <th> Price </th>
        <th> Quantity </th>
      </tr>

    <!-- Now, the table data entries -->

      <tr>
        <td> Unpopped Popcorn (1 lb.) </td>
        <td> $3.00 </td>
        <td> <input type = "text" name = "unpop"
            size ="2" />
        </td>
      </tr>

```



```

        <tr>
            <td> Caramel Popcorn (2 lb. cannister) </td>
            <td> $3.50 </td>
            <td> <input type = "text"   name = "caramel"
                    size = "2" />
            </td>
        </tr>
        <tr>
            <td> Caramel Nut Popcorn (2 lb. cannister) </td>
            <td> $4.50 </td>
            <td> <input type = "text"   name = "caramelnut"
                    size = "2" />
            </td>
        </tr>
        <tr>
            <td> Toffey Nut Popcorn (2 lb. cannister) </td>
            <td> $5.00 </td>
            <td> <input type = "text"   name = "toffeynut"
                    size = "2" />
            </td>
        </tr>
    </table>
    <p />

<!-- The radio buttons for the payment method -->

    <h3> Payment Method: </h3>
    <p>
        <label> <input type = "radio"   name = "payment"
                    value = "visa"   checked = "checked" />
                    Visa
        </label>
        <br />
        <label> <input type = "radio"   name = "payment"
                    value = "mc" /> Master Card
        </label>
        <br />
        <label> <input type = "radio"   name = "payment"
                    value = "discover" /> Discover
        </label>
        <br />
        <label> <input type = "radio"   name = "payment"
                    value = "check" /> Check
        </label>
        <br />
    </p>

<!-- The submit and reset buttons -->

    <p>
        <input type = "submit"   value = "Submit Order" />
        <input type = "reset"   value = "Clear Order Form" />
    </p>
</form>
</body>
</html>

```

2. (10 points) Please write css code to change the display. You need to use proper selectors and NOT use inline style.

a) Change the background color of the whole page to green.

Answer: `body {background-color: green}`

b) All the headings (H1-H6) of this page should be displayed in italic, bold, and Arial font.

Answer:

`h1, h2, h3, h4, h5, h6 {font-style: italic; font-family: Arial; font-weight: bold}`

c) Style the table to take 50% of the browser window.

Answer: `#order {width: 50%};`

3. (10 points) Please finish the following two JavaScript functions for the functionality described below. You do not need to program how the two functions are called.

- 1) function `paymentChoice (value)`: the value is obtained from the query string "payment". You need to pop up a window to show one of the following strings according to the selection: "you have chosen Visa", "you have chosen Master Card", "you have chosen Discovery Card", "you have chosen Check".
- 2) function `validate(quantity)`: the quantity should be a positive number. Please use this function to validate it. You should use regular expression to do it.

Answer:

```
// popcorn_validatorr.js
// Produce an alert message about the chosen payment
function paymentChoice (value) {
    switch (value) {
        case "visa":
            alert("you have chosen Visa");
            break;
        case "mc":
            alert("you have chosen Master Card");
            break;
        case "discover":
            alert("you have chosen Discovery Card ");
            break;
        case "check":
            alert("you have chosen Check");
            break;
    }
}
```

```
default:
  alert("Error in JavaScript function paymentChoice");
  break;
}

function validation(value){

  if(!value.match(/^\d+$/)) || value < 0{
    // /^\d+$/ // \d+: works for 9.9
    alert("Invalid input: \" "+value+ "\". Quantity should be non-empty, large than 0 and all digits.");
    return false;
  }
  return true;
}
```