

School of Computer Science and Engineering

Module: **Web Design & Development**

Module Code: 4COSC011W
4COSC011C (IIT Sri Lanka)

Date: May 2019

Duration: 1:30 hour

Instruction:

You are advised (but not required) to spend the first ten minutes of the examination reading the questions and planning how you will answer.

You are required to answer ALL questions.

- Section A is multiple choice (questions 1-19) – 57 Marks
- Section B has one question (question 20) – 43 Marks

Both sections are compulsory.

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Section A – Multiple Choice

Each question is followed by 4 possible answers, only one of which is correct. On your answer paper, write the question number and the letter of the answer you think is correct. Each correct answer is worth 3 marks.

Question 1

[3 marks]

Convert access permission **644** from *octal* to *rwX* format:

- (a) `rwX rw- rw-`
- (b) `rw- r-X r-X`
- (c) `rw- r-- r--`
- (d) `-WX r-X r-X`

Question 2

[3 marks]

Which is the correct HTML for inserting an image?

- (a) ``
- (b) ``
- (c) ``
- (d) `"banner.gif"`

Question 3

[3 marks]

Which element is used to create a numbered list?

- (a) ``
- (b) ``
- (c) `<nl>`
- (d) `<list>`

Question 4

[3 marks]

HTML form methods – which is TRUE?

- (a) `get` is the default method **and** appends form data to the URL
- (b) `post` is the default method **and** appends form data to the URL
- (c) `get` is the default method **and** appends data in the body of the HTTP request
- (d) `post` is the default method **and** appends data in the body of the HTTP request

Question 5

[3 marks]

Which of the following statements is true? `some text `

- (a) is a link to a file called *text*
- (b) is a link to a point in the document defined by `<p id="#text">here</p>`
- (c) is a link to a point in the document defined by `<p id="text">here</p>`
- (d) is a link to a file called *text.html*

Question 6

[3 marks]

The tags used to define HTML headings are:

- (a) `<h1>` to `<h9>`
- (b) `<h1>` to `<h8>`
- (c) `<h1>` to `<h7>`
- (d) `<h1>` to `<h6>`

Question 7

[3 marks]

What is the correct HTML for making a drop-down list?

- (a) `<list>`
- (b) `<select>`
- (c) `<input type="list">`
- (d) `<input type="select">`

Question 8

[3 marks]

Which of the following demonstrates an *explicit* label?

- (a) `<label for="firstName">Name</label> <input type="text" name="firstName">`
- (b) `<label>Name </label> <input type="text" name="firstName" id="firstName">`
- (c) `<label>Name <input type="text" name="firstName"></label>`
- (d) `<label for="firstName">Name</label> <input type="text" id="firstName">`

Question 9

[3 marks]

Which form control element is NOT correct?

- (a) `<input type="email">`
- (b) `<input type="password">`
- (c) `<input type="number">`
- (d) `<input type="textarea">`

Question 10

[3 marks]

How do you create a set of radio buttons?

- (a) Give the group of radio buttons the same value and different names
- (b) Give the group of radio buttons the same name and different values
- (c) Give the group of radio buttons the same name and same value
- (d) Give the group of radio buttons the different names and different values

Question 11

[3 marks]

Which HTML tag is used to define an **external style sheet**?

- (a) <style>
- (b) <link>
- (c) <stylesheet>
- (d) <a>

Question 12

[3 marks]

How do you give the link element a particular style when the user hovers over it?

- (a) a: hover
- (b) a: over
- (c) a: mouseOver
- (d) a: onHover

Question 13

[3 marks]

Which does the following select? `ol, ul {color:green; }`

- (a) only ol and ul tags that are green
- (b) both ol and ul tags
- (c) ul tags nested inside ol tags
- (d) ol tags nested inside ul tags

Question 14

[3 marks]

How do you display hyperlinks without an underline?

- (a) `a {underline:none;}`
- (b) `a {text-decoration:none;}`
- (c) `a {text-decoration:no-underline;}`
- (d) `a {decoration:no-underline;}`

Question 15

[3 marks]

Which of the following are XML well-formed rules?

- i. XML documents must have a root element
- ii. All XML elements must have a matching closing tag
- iii. All attributes must be quoted

- (a) i and ii
- (b) i and iii
- (c) ii and iii
- (d) i, ii and iii

Question 16

[3 marks]

Which of the following is based on XML?

- (a) SVG
- (b) CSS
- (c) HTML5
- (d) JavaScript

Question 17

[3 marks]

Which of the following is NOT a JavaScript popup box:

- (a) msgBox()
- (b) confirm()
- (c) prompt()
- (d) alert()

Question 18

[3 marks]

This question relates to **Part B**. What action from the user will result in the appearance of a popup message stating:

"27 iconic chocolates, handpicked by you. This star-studded milk, dark and white chocolate gift box collection houses our top-selling chocolates, ever."?

The user will need to do one of the following.

- (a) Order a box of "everything chocolates"
- (b) Hover over of the image of "everything" chocolate box
- (c) Click on the image of "everything" chocolate box
- (d) Change the number of selected "everything" chocolate boxes

Question 19

[3 marks]

Exam	Coursework	
60%	Tutorials	30%
	Coursework	10%

What is the missing HTML to display the above table? CSS is not used.

```
<table border="1">
  <tr>
    <th>Exam</th>
    ..... (missing line 1)
  </tr>
  <tr>
    ..... (missing line 2)
    <td>Tutorials</td>
    <td> 30%</td>
  </tr>
  <tr>
    <td> Coursework</td>
    <td> 10%</td>
  </tr>
</table>
```

- (a) <th width="2">Coursework </th>
<td height="2"> 60%</td>
- (b) <th extend="2">Coursework </th>
<td span="2"> 60%</td>
- (c) <th colspan="2">Coursework </th>
<td rowspan="2"> 60%</td>
- (d) <th rowspan="2">Coursework </th>
<td colspan="2"> 60%</td>

Section B

Question 20

[43 marks]

You have been asked to create the Web Page displayed in Appendix A. The corresponding HTML code is displayed in Appendix B, and you just need to fill-in the gaps numbered from 1 to 35. Write your answers on your answer book.

Please note:

- Level 1 heading will be displayed using the font alex-brush, the colour code #000, and font size 60px. The text will also be aligned in the centre, and it will have a margin on left and right of 20px, 40px at the top and 20px at the bottom.
 - 'Anne & Wendy's Chocolates' is a level 1 heading.
 - The title of the page is "Chocolates".
 - 'sign in' is a link to signin.html, and the default underline text effect is removed. The text colour of the link is white.
 - The menu items for the Anne and Wendy's chocolates are:
 - Everything Chocolate:
 - Image File: sleekster.jpg
 - alternative text is 'Box of all types of chocolates'
 - Milk to Caramel:
 - Image file: caramel.jpg
 - alternative text is 'Box of milk and caramel chocolates'
 - Exuberantly Fruity:
 - Image file: fruity.jpg
 - alternative text is 'Box of fruity chocolates'
 - All the chocolate boxes are at £25 each.
 - Choosing the Gift option adds £2 per chocolate box to the order.

The order is updated via the `updateOrder()` function when any of the chosen item quantities is changed, when the gift option is changed, or when the form is reset.

The `updateOrder()` function calculates the order price and displays it together with the gift charge if selected.


When the place order button is pressed, the `placeMyOrder` function is called. This calls the `updateOrder` function (see description above). The function checks that at least one item has been ordered. If no item is ordered, it will provide a popup message specifying "Your order is empty. Please select items before submitting your order". The function also checks whether a name has been entered and will provide a popup message if this is missing. Finally if at least one item is ordered and a name is provided, the function will display a popup with a summary of the order.

Appendix A

Anne & Wendy's Chocolates

The Everything Chocolate Box


£25.00



0

The Milk to Caramel Box


£25.00



0

The Exuberantly Fruity Box

£25.00



0

Your Order: Collection

Chocolate Boxes:

0 x Everything = 0

0 x Milk to Caramel = 0

0 x Fruity = 0

Supplement:

Gift Wrap = 0

Total:

£ 0

Name:

This order contains a gift ☐


Already have an account? [Sign in](#)

[Clear your order](#) [Place your order](#)

Anne & Wendy's Chocolates

The Everything Chocolate Box


£25.00



1

The Milk to Caramel Box


£25.00



2

The Exuberantly Fruity Box

£25.00



3

Your Order: Collection

Chocolate Boxes:

1 x Everything = 25

2 x Milk to Caramel = 50

3 x Fruity = 75

Supplement:

Gift Wrap = 0

Total:

£ 150

Name:

This order contains a gift ☐

Already have an account? [Sign in](#)

[Clear your order](#) [Place your order](#)


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Anne & Wendy's Chocolates

The Everything Chocolate Box


£25.00



1

The Milk to Caramel Box


£25.00



2

The Exuberantly Fruity Box

£25.00



3

Your Order: Collection

Chocolate Boxes:	
1 x Everything =	25
2 x Milk to Caramel =	50
3 x Fruity =	75
Supplement:	
Gift Wrap =	12
Total: £	162

Name:

This order contains a gift ☒


Already have an account? [Sign in](#)

[Clear your order](#) [Place your order](#)

Anne & Wendy's Chocolates

The Everything Chocolate Box


£25.00



1

The Milk to Caramel Box


£25.00



2

The Exuberantly Fruity Box

£25.00



3

Your Order: Collection

Chocolate Boxes:	
1 x Everything =	25
2 x Milk to Caramel =	50
3 x Fruity =	75
Supplement:	
Gift Wrap =	0
Total: £	150

Name:

This order contains a gift ☐

Already have an account? [Sign in](#)

[Clear your order](#) [Place your order](#)

This page says

Please enter your name

OK


This page says

Your order is empty. Please select items before submitting your order.

OK

The Everything Chocolate Box


£25.00



0

The Milk to Caramel Box


£25.00



0

The Exuberantly Fruity Box

£25.00



0

Your Order: Collection

Chocolate Boxes:

0 x Everything = 0

0 x Milk to Caramel = 0

0 x Fruity = 0

Supplement:

Gift Wrap = 0

Total:

£ 0

Name:

This order contains a gift ☐

Already have a account? [Sign in](#)

[Clear your order](#) [Place your order](#)

This page says

Dear Anne,

You have ordered 6 boxes of chocolates as follows:


1 Everything Chocolates,
2 Milk to Caramel Chocolates, and
3 Fruity Chocolates.

We have added an additional £2 per box to wrap them up in beautiful gift paper, bringing your total bill to £162. Your order will be with you shortly.

Cancel OK

The Everything Chocolate Box


£25.00



1

The Milk to Caramel Box


£25.00



2

The Exuberantly Fruity Box

£25.00



3

Your Order: Collection

Chocolate Boxes:

1 x Everything = 25

2 x Milk to Caramel = 50

3 x Fruity = 75

Supplement:

Gift Wrap = 12

Total:

£ 162

Name:

This order contains a gift ☒

Already have a account? [Sign in](#)

[Clear your order](#) [Place your order](#)

Appendix B

```
1 _____  
<html>  
<2 _____>  
<meta charset="UTF-8">  
<title>Chocolates</title>  
<3 _____>  
@font-face {  
    font-family: "alex-brush";  
    src: url(AlexBrush-Regular.ttf)  
}  
body {  
    font-family: arial, sans-serif;  
    background-color: #f0efe7;  
}  
select {  
    margin-right: 5px;  
}  
.container {  
    width: 1000px;  
    margin-left: auto;  
    margin-right: auto;  
}  
h1 {  
    font-family: "alex-brush";  
    color: #000;  
    text-align: center;  
    font-size: 60px;  
    4 _____ /*margin definition on one line only*/  
}
```

```
.product {  
    margin: 10px 10px 0 0;  
    width: 234px;  
    background-color: white;  
    float: left;  
    text-align: center;  
    height: 371px;  
}  
  
.labelOrder {  
    margin: -65px 10px 0 0;  
    padding-top: 12px;  
    width: 258px;  
    height: 442px;  
    background-color: #997649;  
    float: left;  
    text-align: center;  
    font-size: 20px;  
    font-weight: bold;  
    color: white;  
}  
  
.description {  
    text-align: center;  
    font-size: 20px;  
    font-weight: bold;  
    color: #333;  
    height: 55px;  
    position: relative;  
    padding: 10px 10px 0 10px;  
}  
  
.price {  
    color: #997649;  
    width: 234px;
```

```
}

.priceInOrder {
    color: #997649;
    float: right;
}

.orderedItem {
    border-bottom: solid thin black;
    margin: 10px;
    padding: 10px;
}

#orderTotal {
    margin: -10px 10px;
    padding: 10px;
}

img {
    width: 234px;
}

#order {
    height: 361px;
    float: none;
    clear: both;
    margin-right: auto;
    margin-left: auto;
    font-weight: 200;
    font-size: 16px;
    color: #333;
    text-align: left;
    padding: 5px;
}

#orderDescription {
    font-size: 16px;
```

```
        height: 30px;
    }
    #detailsForm {
        clear: both;
        padding: 20px;
        background-color: #997649;
        position: relative;
        top: 20px;
        width: 950px;
    }
    button, input[type=reset] {
        float: right;
        margin-right: 10px;
    }
    5 _____ {
        text-decoration: none;
        color: white;
    }
    select {
        margin-left: 15px;
    }
    strong {
        font-weight: 600;
    }
    label.hidden {
        6 _____
    }
    .spacing {
        margin-left: 150px;
    }
    </3 _____>
    </2 _____>
```

<body>

7 _____

<div class="container">

<form>

<div class="product">

<div class="description">The Everything Chocolate Box</div>

<div class="price">£25.00</div>

<8_____ id="everything" 9_____ ="sleekster.jpg" alt="Box of all types of chocolates">

<label for="10_____ " class="hidden">Nb of Everything Boxes</label>

<11_____ name="10_____ " id="10_____ ">

<12_____ value="0">0</12_____ >

<12_____ value="1">1</12_____ >

<12_____ value="2">2</12_____ >

<12_____ value="3">3</12_____ >

<12_____ value="4">4</12_____ >

<12_____ value="5">5</12_____ >

</11_____ >

</div>

<div class="product">

<div class="description">The Milk to Caramel Box</div>

<div class="price">£25.00</div>

<8_____ id="caramel" 9_____ ="caramel.jpg" alt="Box of milk and caramel chocolates">

<label for="13_____ " class="hidden">Nb of Mild and caramel Boxes</label>

<11_____ name="13_____ " id="13_____ ">

<12_____ value="0">0</12_____ >

<12_____ value="1">1</12_____ >

<12_____ value="2">2</12_____ >

<12_____ value="3">3</12_____ >

```

        <12_____ value="4">4</12_____ >
        <12_____ value="5">5</12_____ >
    </11_____ >
</div>

<div class="product">
    <div class="description">The Exuberantly Fruity Box</div>
    <div class="price">£25.00</div>
    <8_____ id="fruity" 9_____ ="fruity.jpg" alt="Box of fruity
chocolates">
    <label for="14_____ " class="hidden">Nb of Fruity Boxes</label>
    <11_____ name="14_____ " id="14_____ ">
        <12_____ value="0">0</12_____ >
        <12_____ value="1">1</12_____ >
        <12_____ value="2">2</12_____ >
        <12_____ value="3">3</12_____ >
        <12_____ value="4">4</12_____ >
        <12_____ value="5">5</12_____ >
    </11_____ >
</div>

<div class="labelOrder">Your Order:
    <div id="orderDescription">Collection</div>
    <div class="product" id="order">
        <15_____ >Chocolate Boxes: </15_____ ><br>
        <div id="everythingOrder" class="orderedItem">
            <span id="everythingQuantity">0</span> x Everything =
            <span id="everythingTotal" class="priceInOrder">0</span>
        </div>
        <div id="caramelOrder" class="orderedItem">
            <span id="caramelQuantity">0</span> x Milk to Caramel =
            <span id="caramelTotal" class="priceInOrder">0</span>

```



```
</div>

<div id="fruityOrder" class="orderedItem">
    <span id="fruityQuantity">0</span> x Fruity =
    <span id="fruityTotal" class="priceInOrder">0</span>
</div>

<15_____ >Supplement:</ 15_____ ><br>

<div id="deliveryOrder" class="orderedItem">Gift Wrap =
    <span id="giftTotal" class="priceInOrder">0</span></div>
    <15_____ >Total: </15_____ ><br>
    £<span id="orderTotal" class="priceInOrder">0</span>
</div>

</div>

<div id="detailsForm">
    <label for="name">Name: </label>
    <input type="text" id="name" name="Name">
    <span class="spacing">
        <label for="giftOption">This order contains a gift </label>
        16_____
    </span><br><br>
    Already have a account? 17_____
    <button type="button" id="placeOrder">Place your order</button>
    <button type="button" id="resetOrder">Clear your order</button>
</div>

</form>

</div>

<script>
var everythingAmount = 0,
    caramelAmount = 0,
    fruityAmount = 0,
    deliveryValue = 0,
    totalAmount = 0,
    totalValue = 0,
```

```
        giftValue = 0,

        giftOption = 0;

document.getElementById("placeOrder").addEventListener( "click", function() {
    placeMyOrder(this.form);
});

document.getElementById("resetOrder").addEventListener( "click", function() {
    this.form.reset();
    updateOrder(this.form);
});

document.getElementById("everythingQ").addEventListener( "18_____ ", function() {
    updateOrder(this.form);
});

document.getElementById("caramelQ").addEventListener( "18_____ ", function() {
    updateOrder(this.form);
});

document.getElementById("fruityQ").addEventListener( "18_____ ", function() {
    updateOrder(this.form);
});

document.getElementById("giftOption").addEventListener( "click", function() {
    updateOrder(this.form);
});

document.getElementById("everything").addEventListener("click", function() {
    alert("27 iconic chocolates, handpicked by you. This star-studded milk, dark and white
    chocolate gift box collection houses our top-selling chocolates, ever.");
});
```

```
document.getElementById("caramel").addEventListener("click", function() {  
    alert("The cream of our caramel and milk chocolate crops, combined into one delicious box  
of caramel chocolates.");  
});
```

```
document.getElementById("fruity").addEventListener("click", function() {  
    alert("Bursts of tangy, zingy, zesty real fruit (we never use artificial colours or flavourings).  
This is balanced with just the right touch of milk, dark or white to create the perfect fruit  
chocolate.");  
})
```

```
function getRadioValue( radioArray ) {  
    var i;  
    for ( i = 0; i < radioArray.length; i++ ) {  
        if ( radioArray[ i ].checked ) {  
            return radioArray[ i ].value;  
        }  
    }  
    return "";  
}
```

```
function getSelectedValue( selectList ) {  
    return selectList[ selectList.selectedIndex ].value;  
}
```

```
function getSelectedText( selectList ) {  
    return selectList.options[ selectList.selectedIndex ].text;  
}
```

```
function updateOrder(formRef) {  
    var chocolatePrice = 25;  
    var giftPrice = 2;
```

```

    var totalPrice = 0;

    if ( document.getElementById("giftOption").checked ) {
        giftOption = 1;
    } else {
        giftOption = 0;
    }

    everythingAmount = parseInt( 19_____ ( document.getElementById(
"everythingQ" ) ));
    caramelAmount = parseInt( 19_____ ( document.getElementById( "caramelQ"
)));
    fruityAmount = parseInt( 19_____ ( document.getElementById( "fruityQ" ) ));
    document.getElementById("everythingQuantity").20_____ =
everythingAmount;
    document.getElementById("caramelQuantity").20_____ = caramelAmount;
    document.getElementById("fruityQuantity").20_____ = fruityAmount;
    totalAmount = everythingAmount + caramelAmount + fruityAmount;
    totalValue = 21_____ * ( chocolatePrice );
    giftValue = 21_____ * ( giftOption * giftPrice );
    document.getElementById("everythingTotal").innerHTML = everythingAmount *
22_____ ;
    document.getElementById("caramelTotal").innerHTML = caramelAmount *
22_____ ;
    document.getElementById("fruityTotal").innerHTML = fruityAmount * 22_____ ;
    document.getElementById("giftTotal").innerHTML = 23_____ ;
    totalValue = totalValue + giftValue;
    document.getElementById("orderTotal").innerHTML = totalValue;
}

function 24_____ (formRef) {
    updateOrder(formRef);
    var orderMessage = "";
    var userName = document.getElementById("name").25_____ ;
    var everythingText = "\n " + 26_____ + " Everything Chocolates, ";
    var caramelText = "\n " + 27_____ + " Milk to Caramel Chocolates, ";

```

```
        var fruityText = " and " + "\n " + 28_____ + " Fruity Chocolates";  
        if ( (26_____ + 27_____ + 28_____ == 0) ) {  
            29_____ ("Your order is empty. Please select items before submitting  
your order.");  
        } else if (userName == "") {  
            29_____ ("Please enter your name");  
        } else {  
            orderMessage = "Dear " + userName + ", \n\nYou have ordered " + totalAmount + "  
boxes of chocolates as follows: " + everythingText + caramelText + fruityText + ".\n";  
            if (giftOption == 30_____ ) {  
                orderMessage += 31_____ ;  
            } else {  
                orderMessage += "Your total bill is £" + totalValue + ".";  
            }  
            orderMessage += " Your order will be with you shortly."  
            32_____ (orderMessage);  
        }  
    }  
    }  
    33_____  
    34_____  
    35_____
```