



THE UNIVERSITY OF WESTERN AUSTRALIA

School of Computer Science and Software Engineering

SEMESTER 1, 2017 MIDTERM EXAMINATIONS

CITS3403
Agile Web Development

FAMILY NAME: _____ GIVEN NAMES: _____

STUDENT ID: SIGNATURE: _____

This Paper Contains: **11** pages (**including title page**)

Time allowed: **45 minutes**

INSTRUCTIONS:

This midterm test consists of 4 questions, and is worth a total of 20 marks. The midterm contributes to 10% of the unit's final assessment.

Answer all questions. Answer the questions in the space provided. If not enough space, you can write the answers on the spare pages, but make sure you clearly identify which question you are answering.

You need to submit this test paper to the invigilator, but can keep the references with you.

PLEASE NOTE

Examination candidates may only bring authorised materials into the examination room. If a supervisor finds, during the examination, that you have unauthorised material, in whatever form, in the vicinity of your desk or on your person, whether in the examination room or the toilets or en route to/from the toilets, the matter will be reported to the head of school and disciplinary action will normally be taken against you. This action may result in your being deprived of any credit for this examination or even, in some cases, for the whole unit. This will apply regardless of whether the material has been used at the time it is found.

Therefore, any candidate who has brought any unauthorised material whatsoever into the examination room should declare it to the supervisor immediately. Candidates who are uncertain whether any material is authorised should ask the supervisor for clarification.

Supervisors Only - Student left at:

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1. [5 marks] Explain, using a simple example, the technologies that allow web developers to separate content, style and functionality in websites.

2. [5 marks] Provide CSS code that sets the style of the first item in an unordered list to be bold and every subsequent item to be in italics.

3. [5 marks]

Use DOM2 events and javascript to add functionality to a page such that whenever an element on the page is clicked, the text on that element is set to white, and the background is set to purple.

4. [5 marks]

Write a javascript function that will look for any web addresses that appear in a paragraph element anywhere on the page. The function should then append an unordered list to the bottom of the page where each list item is the text of the web address hyperlinked to the actual web address. You can make your own assumptions about what a web address is, but you may ignore all characters other than alpha-numerics, '' (space), '/' and '.'

Spare Page I

Spare Page II

HTML 5 NEW TAG	
TAG NOT SUPPORTED IN HTML 5	
<!--...-->	Define a comment
<!DOCTYPE>	Defines the document type
<dd>	Defines a dropdown list
<dd>	Defines a definition description
	Defines deleted text
	Define a comment
<details>	Defines details of an element
<details>	Defines deleted text
<dialog>	Defines a dialog (conversation)
<dfn>	Defines a definition term
<dir>	Used to define a directory list
<div>	Defines a section in a document
<dl>	Defines a definition list
<dt>	Defines a definition term
	Defines emphasized text
<embed>	Defines external interactive content or plugin
<area>	Defines an area inside an image map
<article>	Defines an article
<aside>	Defines content aside from the page content
<audio>	Defines sound content
	Defines bold text
<base>	Defines a base URL for all the links in a page
<basefont>	Used to define a default font-color, font-size, or font-family for all the document
<big>	Used to make text bigger
<blockquote>	Defines a long quotation
<body>	Defines the body element
 	Inserts a single line break
<button>	Defines a push button
<canvas>	Defines graphics
<caption>	Defines a table caption
<center>	Used to center align text and content
<cite>	Defines a citation
<code>	Defines computer code text
<col>	Defines attributes for table columns
<colgroup>	Defines groups of table columns
<command>	Defines a command button

<ins>	Defines inserted text
<samp>	Defines sample computer code
<script>	Defines a generated key in a form
<section>	Defines a section
<small>	Defines keyboard text
<source>	Defines an inline sub window for, form
<select>	autofocus, challenge, disabled, form, keytype, name
	Defines a title in a fieldset
	Defines a list item value
	Defines a resource reference href, hreflang, media, rel, sizes, type
	Defines a section in a document
	Defines strong text
	Defines style definition type, media, scoped
<sup>	Defines sub/super-scripted text
<table>	Defines a table summary
<tbody>	Defines a table body summary
<td>	Defines a table cell colspan, headers, rowspan
<meta>	Defines meta information charset, content, http-equiv, name
<meter>	Defines measurement within a predefined range
<nav>	Defines navigation links high, low, max, min, optimum, value
<noframes>	Used to display text for browsers that do not handle frames
<noscript>	Defines a noscript section
<object>	Defines an embedded object data, form, height, name, type, usemap, width
	Defines an ordered list reversed, start
<optgroup>	Defines an option group label, disabled
<option>	Defines an option in a drop-down list disabled, label, selected, value
<output>	Defines some types of output for, form, name
<p>	Defines a paragraph
<param>	Defines a parameter for an object name, value
<pre>	Defines preformatted text
<progress>	Defines progress of a task of any kind max, value
<q>	Defines a short quotation alt, src, height, ismap, usemap, width
<rp>	Defines an input field accept, alt, autocomplete, autofocus, checked, disabled, form, formmethod, formnovalidate, formtarget, height, list, max, maxlen, min, multiple, name, pattern, placeholder, readonly, required, size, src, step, type, width
<rt>	Defines explanation to ruby annotations
<ruby>	Defines ruby annotations
<s>, <strike>	Used to define strikethrough text

HTML5 TAG CHEAT SHEET
Created by WebsiteSetup.org

CSS CHEAT SHEET

Shorthand*

background
border
border-bottom
border-left
border-right
border-top
font
list-style
margin
padding

Comments

/* Comment */

Pseudo Selectors

:hover
:active
:focus
:link
:visited
:first-line
:first-letter

Media Types

all
braille
embossed
handheld
print
projection
screen
speech
tty
tv

Units

Length %
em
pt
px
Keywords
bolder
lighter
larger

SYNTAX

Syntax

selector {property: value;}

External Style Sheet

```
<link rel="stylesheet" type="text/css"
      href="style.css" />
```

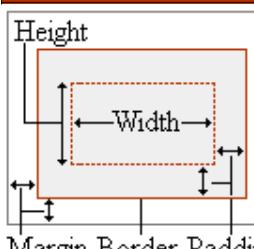
Internal Style

```
<style type="text/css">
  selector {property: value;}
</style>
```

Inline Style

```
<tag style="property: value;">
```

BOX MODEL



height; width; margin-top;
margin-right; margin-bottom;
margin-left; padding-top;
padding-right; padding-bottom;
padding-left;

BORDER

border-width Width of the border

border-style	dashed; dotted; double; groove; inset; outset; ridge; solid; none
--------------	---

border-color Color of the border

POSITION

clear Any floating elements around the element?
both, left, right, none

float Floats to a specified side
left, right, none

left The left position of an element
auto, length values (pt, in, cm, px)

top The top position of an element
auto, length values (pt, in, cm, px)

position static, relative, absolute

z-index Element above or below overlapping elements?
auto, integer (higher numbers on top)

BACKGROUND

background-color Background color

background-image Background image

background-repeat repeat, no-repeat, repeat-x, repeat-y

background-attachment Background image scroll with the element?
scroll, fixed

background-position (x y), top, center, bottom, left, right

TEXT

letter-spacing Space between letters

line-height Vertical distance between baselines

text-align Horizontal alignment

text-decoration blink, line-through, none, overline, underline

text-indent First line indentation

text-transform capitalize, lowercase, uppercase

vertical-align Vertical alignment

word-spacing Spacing between words

LIST

list-style-type Type of bullet or numbering in the list
disc; circle; square; decimal; lower-roman;
upper-roman; lower-alpha; upper-alpha; none

list-style-position Position of the bullet or number in a list
inside; outside

list-style-image Image to be used as the bullet in a list

* The properties for each selector are in the order they should appear when using shorthand notation.

Methods

Object
 toString
 toLocaleString
 valueOf
 hasOwnProperty
 isPrototypeOf
 propertyIsEnumerable

String
 charAt
 charCodeAt
 fromCharCode
 concat
 indexOf
 lastIndexOf
 localeCompare
 match
 replace
 search
 slice
 split
 substring
 substr
 toLowerCase
 toUpperCase
 toLocaleLowerCase
 toLocaleUpperCase

RegEx
 test
 match
 exec

Array
 concat
 join
 push
 pop
 reverse
 shift
 slice
 sort
 splice
 unshift

Number
 toFixed
 toExponential
 toPrecision

Date
 parse
 toDateString
 toTimeString
 getDate
 getDay
 getFullYear
 getHours
 getMilliseconds
 getMinutes
 getMonth
 getSeconds
 getTime
 getTimezoneOffset
 getYear
 setDate
 setHours
 setMilliseconds
 setMinutes
 setMonth
 setSeconds
 setYear
 toLocaleTimeString

JavaScript

XMLHttpRequest

Safari, Mozilla, Opera:
`var req = new XMLHttpRequest();`

Internet Explorer:
`var req = new ActiveXObject("Microsoft.XMLHTTP");`

XMLHttpRequest Object Methods

abort()
 getAllResponseHeaders()
 getResponseHeader(header)
 open(method, URL)
 send(body)
 setRequestHeader(header, value)

XMLHttpRequest Object Properties

onreadystatechange
 readyState
 responseText
 responseXML
 status
 statusText

XMLHttpRequest readyState Values

0 Uninitiated
 1 Loading
 2 Loaded
 3 Interactive
 4 Complete

JAVASCRIPT IN HTML

External JavaScript File
`<script type="text/javascript" src="javascript.js"></script>`

Inline JavaScript
`<script type="text/javascript">
 <!--
 // JavaScript Here
 -->
</script>`

Functions

Window

alert
 blur
 clearTimeout
 close
 focus
 open
 print
 setTimeout

Built In

eval
 parseInt
 parseFloat
 isNaN
 isFinite
 decodeURI
 decodeURIComponent
 encodeURI
 encodeURIComponent
 escape
 unescape

REGULAR EXPRESSIONS - FORMAT

Regular expressions in JavaScript take the form:
`var RegEx = /pattern/modifiers;`

REGULAR EXPRESSIONS - MODIFIERS

/g	Global matching
/i	Case insensitive
/s	Single line mode
/m	Multi line mode

REGULAR EXPRESSIONS - PATTERNS

^	Start of string
\$	End of string
.	Any single character
(a b)	a or b
(...)	Group section
[abc]	Item in range (a or b or c)
[^abc]	Not in range (not a or b or c)
a?	Zero or one of a
a*	Zero or more of a
a+	One or more of a
a{3}	Exactly 3 of a
a{3,}	3 or more of a
a{3,6}	Between 3 and 6 of a
!(pattern)	"Not" prefix. Apply rule when URL does not match pattern.

EVENT HANDLERS

onAbort	onMouseDown
onBlur	onMouseMove
onChange	onMouseOut
onClick	onMouseOver
onDblClick	onMouseUp
onDragDrop	onMove
onError	onReset
onFocus	onResize
onKeyDown	onSelect
onKeyPress	onSubmit
onKeyUp	onUnload
onLoad	

FUNCTIONS AND METHODS

A method is a type of function, associated with an object. A normal function is not associated with an object.

Available free from
AddedBytes.com

DOM Methods

Document
 clear
 createDocument
 createDocumentFragment
 createElement
 createEvent
 createEventObject
 createRange
 createTextNode
 getElementsByTagName
 getElementById
 write

Node
 addEventListener
 appendChild
 attachEvent
 cloneNode
 createTextRange
 detachEvent
 dispatchEvent
 fireEvent
 getAttributeNS
 getAttributeNode
 hasChildNodes
 hasAttribute
 hasAttributes
 insertBefore
 removeChild
 removeEventListener
 replaceChild
 scrollIntoView

Form
 submit

DOM Collections
 item

Range
 collapse
 createContextualFragment
 moveEnd
 moveStart
 parentElement
 select
 setStartBefore

Style
 getProperty
 setProperty

Event
 initEvent
 preventDefault
 stopPropagation

XMLSerializer
 serializeToString

XMLHTTP
 open
 send

XMDOM
 loadXML

DOMParser
 parseFromString