



THE UNIVERSITY OF WESTERN AUSTRALIA

Department of Computer Science and Software Engineering

SEMESTER 1, 2019 MIDTERM EXAMINATIONS

**CITS3403/CITS5505
Agile Web Development**

FAMILY NAME: _____ GIVEN NAMES: _____

STUDENT ID: SIGNATURE: _____

This Paper Contains: **12 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 20% 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. [4 marks] Expand the following acronyms, and give a one sentence description of their purpose:

a. DOM

b. HTTP

c. NaN

d. CSS

2. a) [2 marks] Given the web address

<https://secure.csse.uwa.edu.au:443/run/csentry?p=np>

identify the following elements:

i. the *domain*

ii. the *parameters*

iii. the *protocol*

iv. the *route*

b) [2 marks] Write a regular expression to recognize PDF files hosted on UWA webpages. For example:

<http://teaching.csse.uwa.edu.au/cits3403/lectures/Intro.pdf>

or

<https://postgraduate.uwa.edu.au/forms/application.pdf>

3. [4 marks] Provide CSS that
- a. sets a red border around any paragraph with class `important`

 - b. makes the text in any paragraph immediately after an `H3` heading inside a `div` with class `literature`, bold and italic.

Testing page

This is for the CITS3403/CITS5505 midsemester test. This is an import paragraph.

This is an h3 inside a literature div

This is the first paragraph

This is the second paragraph

Another H3

...and another paragraph

The final paragraph, all inside a literature div.

4. [8 marks]

Use HTML, CSS, DOM, and javascript to write a webpage with the following specification:

- a) The page has a title, *Fickle*
- b) It has a button in the center of a green page, with the label *Press me!* on the button
- c) Whenever the button gains focus, or whenever the mouse goes over the button, the text changes to *Don't press me!*
- d) When the button loses focus, or the mouse leaves the button, the text changes back to *Press me!*
- e) If the button is pressed, the background changes to red, and button is replaced by the text *What have you done?*

Spare Page I

Spare Page II

HTML 5 NEW TAG	
TAG NOT SUPPORTED IN HTML5	
<!--...-->	Define a comment
<!DOCTYPE>	Defines the document type
<a>	Defines a hyperlink
href, hreflang, media, ping, rel, target, type	Used to define an embedded acronym
<abbr>	Defines an address element
Used to define an embedded applet	Defines an abbreviation
<acronym>	Defines an acronym
Used to define an area inside an image map	Defines an acronym
<area>	Defines a base URL for all the links in a page
alt, coords, href, hreflang, media, ping, rel, shape, target, type	Defines content aside from the page content
<aside>	Defines content aside from the page content
<article>	Defines an article
cite, pubdate	Defines bold text
<audio>	Defines sound content
autobuffer, autoplay, controls, src	Defines font size, and font size, or font-family for all the document
	Defines a definition term
<blockquote>	Defines a long quotation
<body>	Defines the body element
 	Inserts a single line break
<button>	Defines the direction of text display
<bdo>	Defines the direction of text display
<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 the direction of text display
<base>	Defines a base URL for all the links in a page
href, target	Defines external interactive content or plugin
<dd>	Defines a definition description
	Defines deleted text
<dfn>	cite, datetime
<details>	Defines details of an element
open	Used to define a directory list
<dialog>	Defines a dialog (conversation)
<div>	Defines a section in a document
<dt>	Defines a definition list
	Defines a definition term
<embed>	Defines emphasized text
alt, coords, href, hreflang, media, ping, rel, shape, target, type	Defines content aside from the page content
<fieldset>	Defines a fieldset
<form>	Defines a group of media content, and their accept-charset, action, autocomplete, enctype, method, name, novalidate, target, type, value
	Defines font face, font size, and font color of text
<footer>	Defines a footer for a section or page
<frameset>	Used to define one particular window (frame) within a frameset
<head>	Defines information about the document
<header>	Defines a header for a section or page
<hgroup>	Defines information about a section in a document
<hr>	Defines a horizontal rule
<html>	Defines an HTML document
<input>	Defines attributes for table columns
checkbox, disabled, form, formaction, formmethod, formnovalidate, formtarget, name, type, value	Defines groups of table columns
	Defines an image
alt, src, height, ismap, usemap, width	Defines attributes for table columns
	Defines a list item
<output>	Defines some types of output
for, form, name	Defines a table cell
<p>	Defines a paragraph
<param>	Defines a parameter for an object
name, value	Defines an ordered list
<pre>	Defines preformatted text
<progress>	Defines progress of a task of any kind
<q>	Defines a short quotation
<rp>	Used in ruby annotations to define what to show browsers that do not support the ruby element
<rt>	Defines explanation to ruby annotations
<ruby>	Defines ruby annotations
<s>, <strike>	Used to define strikethrough text.
<command>	Defines a command button checked, disabled, icon, label, name, pattern, placeholder, readonly, required, size, src, step, type, value, width
<ins>	
<ins>	Defines inserted text
cite, datetime	Defines sample computer code
<samp>	
<samp>	Defines a generated key in a form
<script>	
<script>	Defines a definition list
async, type charset defer, src	Defines a definition list
<source>	
<source>	Defines a selectable list
media, src, type	Defines a selectable list
<small>	
<small>	Defines small text
	
	Defines strong text
<style>	
<style>	Defines a style definition
type, media, scoped	Defines a style definition
<sub>, <sup>	
<sub>, <sup>	Defines sub/super-scripted text
<table>	
<table>	Defines a table
summary	Defines a table
<tbody>	
<tbody>	Defines a table body
summary	Defines a table body
<tfoot>	
<tfoot>	Defines a table footer / head
<thead>	
<thead>	Defines a table header
<th>	
<th>	Defines a table cell
colspan, headers, rowspan	Defines a table cell
<tr>	
<tr>	Defines a table row
<time>	
<time>	Defines a date/time
datetime	Defines a date/time
<title>	
<title>	Defines the document title
<u>	
<u>	Used to define underlined text
	
	Defines an unordered list
<var>	
<var>	Defines a variable
<video>	
<video>	Defines a video
autoplay, controls, height, loop, src, width	Defines a video

HTML5 TAG CHEAT SHEET

Created by WebsiteSetup.org

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
 toDate
 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
 getElementsByName
 getElementById
 write

Node

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

Form

submit

DOM Collections

item

Range

collapse
 createContextualFragment
 moveEnd
 moveStart
 parentElement
 select
 setStartBefore

Style

getPropertyValue
 setProperty

Event

initEvent
 preventDefault
 stopPropagation

XMLSerializer

serializeToString

XMLHTTP

open
 send

XMDOM

loadXML

DOMParser

parseFromString

CSS Cheat Sheet



Syntax

```
/* Comments */  
@media type {  
  selector {  
    property: value;  
  }  
}
```

Note:
media type is optional

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

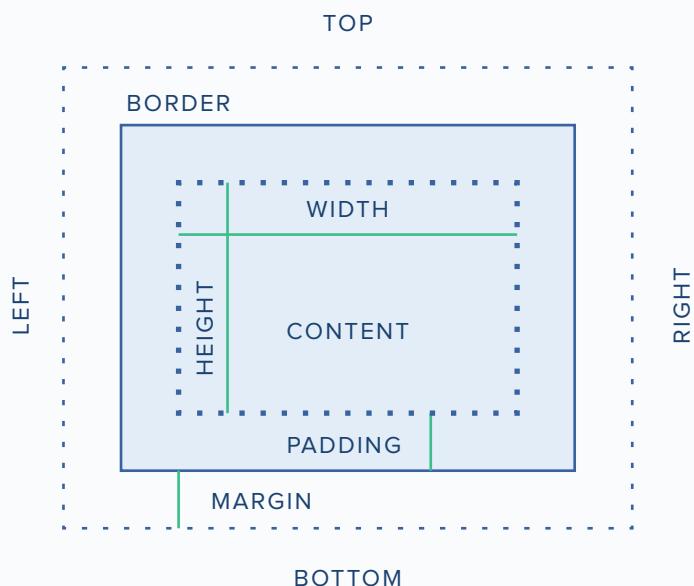
Embedded Style
`<head>
 <style type="text/css">
 selector { property: value; }
 </style>
</head>`

External Style Sheet
`<head>
 <link rel="stylesheet"
 type="text/css" href="style.css" />
</head>`

Selectors

*	All elements
tag	All tag elements
tag *	All elements within tag
tag tag2	tag2 elements within tag
tag, tag2	All tag and tag2 elements
tag > tag2	tag2 is a child of tag
tag + tag2	tag2 preceded by tag
.class	Elements with class 'class'
tag.class	All tags with class 'class'
#id	Element with id 'id'
tag#id	Tag with id 'id'

Box Model



Boxes

margin	margin-top margin-right margin-bottom margin-left
padding	padding-top padding-right padding-bottom padding-left
border	border-top border-right border-bottom border-left
border-color	border-top-color border-right-color border-bottom-color border-left-color
border-style	border-top-style border-right-style border-bottom-style border-left-style
border-width	border-top-width border-right-width border-bottom-width border-left-width

Pseudo-selectors	
:active	Adds style to active element
:after	Adds content after element
:before	Adds content before element
:first-child	Adds style to first child
:first-letter	Adds style to first character
:first-line	Adds style to first line
:focus	Adds style to focused element
:hover	Adds style when mouse is over
:link	Adds style to unvisited link
:visited	Adds style to visited link
Text	
font-family	Specifies the font family
font-size	Specifies the font size
font-style	normal italic oblique inherit
font-variant	normal small-caps inherit
font-weight	normal bold bolder lighter int (100- 900) inherit
color	Sets the color of text
line-height	normal int % inherit
text-align	left right center justify inherit
text-decoration	none underline overline line-through blink inherit
text-indent	int % inherit
text-transform	none capitalize uppercase lowercase inherit
vertical-align	int % baseline sub super top text-top middle bottom text-bottom inherit
white-space	normal nowrap pre pre-line pre-wrap inherit
word-spacing	normal length inherit
Size and colors	
Relative sizes	em rem ex ch vw vh vmin vmax %
Absolute sizes	cm mm in px pt pc
Colors	Hex #ff00ff RGB rgb(255,0,255)
Positioning	
position	absolute fixed relative static inherit
float	left right none inherit
top, right, bottom, left	Sets the offset from the edge
clear	left right both none inherit I fixed the document now
display	Specifies element placing in the document flow
overflow	visible hidden scroll auto inherit
visibility	visible hidden collapse inherit
z-index	auto int inherit
Dimensions	
height	auto int % inherit
max-height	none int % inherit
max-width	none int % inherit
min-height	int % inherit
min-width	int % inherit
width	auto int % inherit
Other	
background	Format: background (color) (image) (repeat) (position)
cursor	Set the type of cursor
quotes	Set type of quotation marks