

CITY UNIVERSITY OF HONG KONG

Course code & title : CS2204 Fundamentals of Internet Applications Development

Session : Semester A 2015/16

Time allowed : Two hours

This paper has eight pages (including this cover page).

1. There are 4 questions in total.
 2. Answer ALL questions.
 3. A set of reference pages is provided at the end.
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This is a closed-book examination.

No materials or aids are allowed during the whole examination. If any unauthorized materials or aids are found on a candidate during the examination, the candidate will be subject to disciplinary action.

Answer all questions in this paper.

City-Hotel.com

Find a Hotel

Destination:

Furano

Check In:

yyyy/mm/dd

Check Out:

yyyy/mm/dd

No. of Room:

1

Search

<

November 2015

>

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Promotion & Featured

DAICHI TOKYO

KEO OSAKA

ROYAL KYOTO

Things to Do

TASTE

Kaiseki, closely associated with tea ceremony (chanoyu), is a high form of hospitality through cuisine. The style is minimalist, extolling the aesthetics of wabi-sabi. Like the tea ceremony, appreciation of the diningware and vessels is part of the experience.

SCENERY

There are three populations of the Hokkaido brown bear (*Ursus arctos yesoensis*). There are more brown bears than anywhere else in Asia. The Hokkaido brown bear is separated into three distinct lineages. There are only eight lineages in the world.[22] Those on Honshu died out long ago.

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Figure 1 - Screen shot of the Web page

Question 1 (25%)

Write down only the HTML in `<body>` section for the Web page according to the requirements below. You may use empty strings for values that are not given. Include all structural tags (with possible ids) which would enable you to define styles in Question 2. Ignore all styles or layout related attributes and HTML not asked for.

The Web site has 4 folders, *html*, *css*, *js* and *images* under the root folder holding Web pages, style sheets, Javascripts and images respectively. Appropriate URL should be used in your answer.

The Page

The whole page is on top of the body, consists of information blocks marked by border lines. They are described in a sequence below and you are free to change the sequence if necessary.

Block 1

- a) This is the header block containing a logo image and the Web site title. They could be selected as a unit [3 marks]

Block 2

- b) Contains a photo. [1 mark]

Block 3

- c) Contains a form for searching hotels and a calendar. The form has a selection box showing 3 destination choices, check-in, check-out dates (do not use date type), number of rooms required and a submit button. Provide defaults and values as shown. The search form will be sent to another page `y.html` [7 marks]

- d) The calendar is a table with the first 2 rows being heading. Write HTML for the first 3 rows only (including the heading), full table structure should be used. [6 marks]

Block 4

- e) A heading (answer not required).

Block 5

- f) Contains 3 sub-blocks, each of them has a title and a photo of a hotel. [5 marks]

Block 6

- g) Another heading (answer not required).

Block 7

- h) A Definition List with the titles containing a text and an image and list items being passages of text. [3 marks]

Question 2 (25%)

Add styles to the Web page by writing CSS rules (i.e. no inline styles and no table for layout control) for the HTML in Question 1 according to the requirements below. No need to write styles not asked for even if they are shown in the screen shot.

Remember to add structural tags, e.g. `<div>` and identification attributes (e.g. `id` or `class`) to your answer in Question 1 or clearly state which and how HTML elements are changed in the answer of this question. You should select elements as specific as possible but at the same time not over using the `id` attribute. Use *liquid layout* with NO absolute values for block dimensions. The dimensions could be estimated with reference to the screen shot and exact values are not important.

The Page

- a) The whole page is on top of the body, 90% in width relative to the body and centered. [2 marks]

Block 1

- b) The logo has a circle border, 3px in width and green in color. The title is 3 times of normal character size. The logo and the title together are centered. [4 marks]

Block 2

- c) Set the appropriate width for this block and put it at the right and Block 3 at the left. [1 mark]

Block 3

- d) Set widths to labels and data fields in the form; align them as shown in the screen shot. All texts in the table are centered and table cells (exclude heading) have background color silver when pointed by mouse cursor. Without affecting the layout, the table is not shown when the page is loaded [7 marks]

Block 5

- e) The 3 sub-blocks are in the same row and take up equal width with hotel photos fill up the whole sub-block. The titles are on top of the photos and aligned with an angle as shown in the screen shot. [8 marks]

Block 7

- f) Images in titles of the *Definition List* are put at the right. Make sure the list item passages occupy new lines with text justified. [3 marks]

Question 3 (25%)

Add Javascript to the Web page to achieve the following requirements. You should highlight changes to the HTML codes, if any, in the answer of this question.

- a) An external script *slidesLib.js* is provided in the *js* folder. In the script a function *getSlides()* is defined and when called, an array containing file names of photos will be returned.

Write the line of HTML to use the external script library. [1 mark]

Add Javascript to the Web page to perform a slide show in Block 2 after the page is loaded. All photos supplied by the external script are shown in turn circularly every 3 seconds. [9 marks]

- b) Add Javascript to the Web page to enable the calendar to create check-in and check-out dates as described below.

Set up and write an event handler for both the check-in and check-out fields so that when the fields are selected, the calendar in Block 3 will be shown. The field that causes the event to occur should be recorded for later use. [6 marks]

Set up and write an *onclick* event handler for all dates (table cells) in the calendar. Cells with no date assigned should be excluded. On clicking, the date assigned to the table cell will be created in either check-in or check-out field depending on which has been selected to show the calendar. After the date creation, the calendar will be hidden again.

[Hint: assume there is a hidden table caption holding the year and month of the calendar, e.g. `<caption>2015/11/</caption>`]

[9 marks]

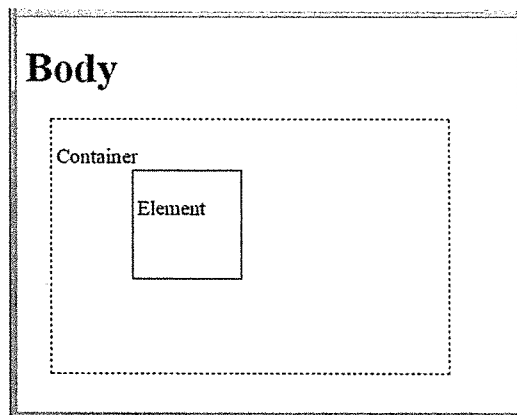
Question 4 (25%)

- a) Briefly describe the setup of the following Internet applications by identifying servers, clients and protocols involved. Also explain very briefly what the protocols are used for.

- i) File Transfer
- ii) Web Mail
- iii) SSH (Secure Shell access to a host computer) [10 marks]

- b) Use the sketch diagram below, explain how the position of "Element" can be controlled by the following positioning schemes. Give one example for each scheme.

- i) Static (normal flow)
- ii) Relative
- iii) Fixed
- iv) Absolute



[9 marks]

- c) Event handler is Javascript used to respond to certain events. Explain with examples two methods to setup event handler in Web page. Briefly compare their strengths and limitations. [6 marks]

CS2204 Fundamentals of Internet Application Dev

CSS Reference

Name	Values
'background-color'	<color> transparent inherit
'background-image'	<uri> none inherit
'background-position'	[[<percentage> <length> left center right] [<percentage> <length> top center bottom]?] [[left center right] [top center bottom]] inherit
'background-repeat'	repeat repeat-x repeat-y no-repeat inherit
'background'	['background-color' 'background-image' 'background-repeat' 'background-attachment' 'background-position'] inherit
'border-color'	[<color> transparent]{1,4} inherit
'border-radius'	<length> <percentage>
'border-collapse'	collapse separate inherit
'border-spacing'	<length> <length>? inherit
'border-style'	<border-style>{1,4} inherit
'border'	[<border-width> <border-style> 'border-top-color'] inherit
'bottom'	<length> <percentage> auto inherit
'box-shadow'	none <h-shadow> <v-shadow>[blur] [spread] [color] inherit
'color'	<color> inherit
'display'	inline block list-item inline-block table inline-table table-row-group table-header-group table-footer-group table-row table-column-group table-column table-cell table-caption none inherit
'float'	left right none inherit
'font-size'	<absolute-size> <relative-size> <length> <percentage> inherit
'font-style'	normal italic oblique inherit
'left'	<length> <percentage> auto inherit
'height'	<length> <percentage> auto inherit
'list-style-image'	<uri> none inherit
'list-style-position'	inside outside inherit
'list-style-type'	disc circle square decimal decimal-leading-zero lower-roman upper-roman lower-greek lower-latin upper-latin armenian georgian lower-alpha upper-alpha none inherit
'list-style'	['list-style-type' 'list-style-position' 'list-style-image'] inherit
'margin-right' 'margin-left'	<margin-width> inherit
'margin-top' 'margin-bottom'	<margin-width> inherit
'margin'	<margin-width>{1,4} inherit
'overflow'	visible hidden scroll auto inherit
'padding-top' 'padding-right'	<padding-width> inherit
'padding-bottom'	
'padding-left'	
'padding'	<padding-width>{1,4} inherit
'position'	static relative absolute fixed inherit
'text-align'	left right center justify inherit

- f -

Name	Values
'text-decoration'	none [underline overline line-through blink] inherit
'text-indent'	<length> <percentage> inherit
'text-transform'	capitalize uppercase lowercase none inherit
'top'	<length> <percentage> auto inherit
'transform'	translate(x,y) scale(x,y) rotate(angle)
'vertical-align'	baseline sub super top text-top middle bottom text-bottom <percentage> <length> inherit
'visibility'	visible hidden collapse inherit
'width'	<length> <percentage> auto inherit
'word-spacing'	normal <length> inherit
'z-index'	auto <integer> inherit

Javascript Reference

Array Object Properties

Property	Description
constructor	Returns the function that created the Array object's prototype
length	Sets or returns the number of elements in an array
prototype	Allows you to add properties and methods to an Array object

Document / Window / String Object Properties and Methods

Property / Method	Description
document.forms	Returns a collection of all the forms in the document
document.getElementById()	Returns the element that has the ID attribute with the specified value
document.getElementsByName()	Accesses all elements with a specified name
document.getElementsByTagName()	Returns a NodeList containing all elements with the specified tagname
document.URL	Returns the full URL of the document
document.write()	Writes HTML expressions or JavaScript code to a document
document.querySelector()	Returns the first element that match the selector
document.querySelectorAll()	Returns a collection of all elements that meatch the selector
window.localStorage.getItem()	Returns a string/object based on a key/attribute
window.localStorage.setItem()	Sets a string/object based on a key/attribute
window.location.search	Returns the query portion of the URL including the "?" character
substring(start [,end])	Extracts the characters from a string, between two specified indices
split([separator])	Splits a string into an array of substrings