Strathmore
UNIVERSITY

FACULTY OF INFORMATION TECHNOLOGY
BACHELOR OF BUSINESS AND INFORMATION TECHNOLOGY
END OF SEMESTER EXAMINATION
BBIT2101: Web Application Development

DATE: 10th July 2017   Time: 2 Hours

Instructions
1.   This examination consists of **FIVE** questions.
2.   Answer **Question ONE (COMPULSORY)** and any other **TWO** questions.

Question 1(30 marks)

a. Explain the three main ways in which CSS can be integrated in a web page **(3 marks)**

b. Explain the difference between client-side scripting and server-side scripting, outlining at least two tools for each scripting. **(4 marks)**

c. Using JavaScript, write a script that will change the following contents of HTML paragraph to **"I have learnt Web Development",** on click of a button **(4 marks)**

```
<p id="demo">JavaScript can change HTML content.</p>
```

d. With the aid of a well labelled diagram, discuss the steps performed by a client(web browser) to resolve a DNS name like www.google.com for the first time **(6 marks)**

e. The following code on figure 1 is a simple CSS rule modifying a web page's section. The CSS has some errors. Identify these errors and rewrite the code**. (3 marks)**

```
leftside
COLOR: #000000
FONT-FAMILY: lucida-sans, sans-serif;
FONT-SIZE 10pt
FONT-STYLE: normal
FONT-VARIANT: normal
background-image: url bkgnd.gif)
}
```

Figure -1

f. Using PHP create an associative array that stores students names and their ages. Using for each loop, display the data stored in the array. **(5 marks)**

g. Write a HTML code that creates the webpage on figure 2 **(5 marks)**

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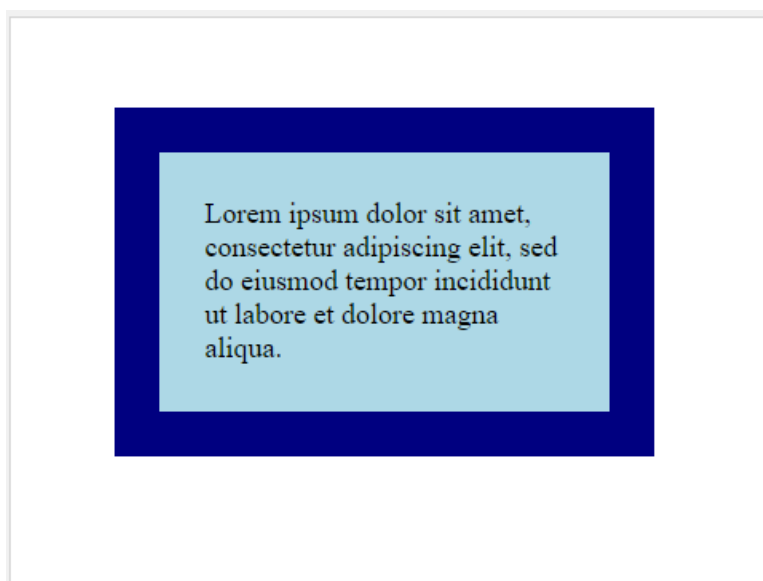Welcome to web development where we will learn:

- HTML
- CSS
- JavaScript
- PHP

Figure-2

Question 2 (15 marks)

a. Using code snippets, show how we can insert JavaScript into a HTML 5 document **(2 marks)**

b. With code examples, explain 2 ways in which we comments are applied in JavaScript **(3 marks)**

c. Create a JavaScript function named sum that takes in the marks of 3 students as parameters and returns the total marks. **(4 marks)**

d. Create another JavaScript function called average that gets the average of the total marks calculated by the sum function in **(2c)** above and displays the average mark to the user using a pop up, when the user clicks on a link **(6 marks)**

Question 3 (15 marks)

a. Using code snippets, show how we can insert CSS in a HTML 5 page **(2 marks)**

b. Explain two different ways in which CSS supports the DRY (Do not repeat yourself) principle **(2 marks)**

c. With the aid of a well labelled diagram, describe the four properties of the CSS Box model, for styling HTML elements **(5 marks)**

d. Using HTML and CSS write a code that will produce the following: **(6 marks)**

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Question 4 (15 marks)

Suppose you wish to create a system that will capture information from students applying for admission in the University. The information needed from the students are shown in **Table 1** :

FirstName	Gender	Course	Email	KCSE
Joseph	Male	BBIT	jose@gmail.com	A
Judith	Female	BCOM	judy@gmail.com	B+
Jerry	Male	ICS	jerry@ymail.com	A-

Table 1 Admission

a. Write HTML code to create a form that will capture information in **Table 1.** The user should be able to select Gender using a dropdown. Use POST method, to send form data to a PHP file **admission.php (5 marks)**

b. Write HTML 5 and PHP code to create a table that will be used to display information shown on **Table 1 (4 marks)**

c. Using valid HTML 5 code, create the page **cv.html** that contains the following: **(6 marks)**

- Page title as **Resume**
- Links to Home, About us and Services pages
- A heading i.e. **This is My Curriculum Vitae**
- A paragraph on your competencies

Question 5 (15 marks)

a. Explain what sessions are as applied in PHP? **(2 marks)**

b. Create a HTML 5 form that can be used to capture the first name and email address of a user and post the data to a PHP file (**welcome.php**) using the POST method. **(6 marks)**

c. Write a code that will be used to store the information received in **5b** above in a database **(7 marks)**