



**JARAMOGI OGINGA ODINGA UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

DIPLOMA IN LINUX ENGINEERING

COURSE CODE: ICT 2115

COURSE TITLE- INTRODUCTION TO WEB PROGRAMMING

EXAMINATIONS 2012/2013

TIME 2HRS

INSTRUCTIONS:

This paper contains five (5) questions. Question ONE is Compulsory and any other TWO questions

QUESTION ONE –COMPULSORY [30 MARKS]

- a) State what the following acronyms stand for and highlight their significance in web development: **[4 Marks]**
- i) XHTML
 - ii) HTTP
 - iii) ODBC
 - iv) FTP
- b) Highlight the following expressions as used in Web Applications Programming: **[10 Marks]**
- i) Static Websites
 - ii) Dynamic and Interactive Websites
 - iii) Free and Open Source Software
 - iv) Client/Server Applications
 - v) CGI Programming
- c) Discuss how a you can install XAMPP Server in any Linux distributions **[4 marks]**
- d) Using examples, clearly differentiate between following as used in PHP scripts and Web Applications Development. **[6 Marks]**
- i) Numerical Arrays and Associative arrays
 - ii) Sessions and Cookies
 - iii) Variables and Functions
- e) While creating a website, it a good practice to ensure that the styles are separated from the content by employing Cascading Style Sheets (CSS). As a web developer, list and explain the THREE types of CSS. **[6 Marks]**

QUESTION TWO [20 MARKS]

- a) Write a HTML script that simulates the Comedy Show Survey. The fans can enter their Name(s), Gender, and their favourite show as indicated in the form below. **[6 Marks]**

COMEDY SHOW SURVEY

Surname:	<input type="text"/>	Other Name:	<input type="text"/>
Gender:	<input checked="" type="radio"/> Male	<input type="radio"/> Female	
What is your favourite show?			
	<input checked="" type="radio"/> Naswa	<input type="radio"/> Kaa Rada	
	<input type="radio"/> Pasua	<input type="radio"/> Others	
	<input type="button" value="Submit"/>	<input type="button" value="Reset"/>	

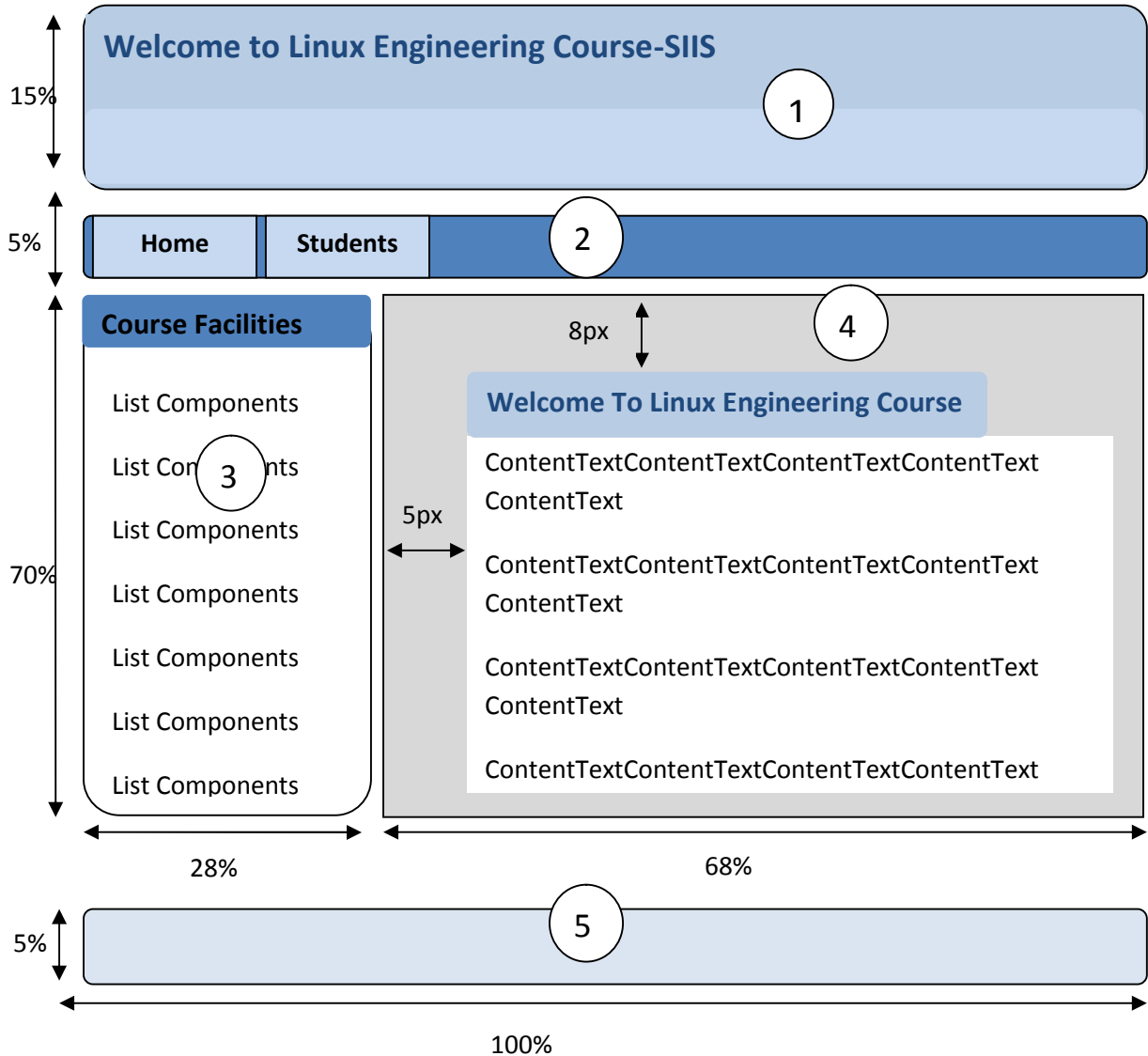
The data is sent to a php script accessible at show.php.

- b) Write a PHP script that displays the names and their favourite show. **[6 Marks]**
- c) Explain the difference between the Margin and the CSS Padding properties as used in web page styling **[4 Marks]**
- d) State the SYNTAX of an external CSS and briefly explain why its preferred over inline CSS

[4 Marks]

QUESTION THREE [20 MARKS]

Figure 1 below shows a snapshot of the web page of the Linux Engineering course with dimensions shown on components.



The web page consists of 6 components. Each one is described as follows:

Component 1 (Banner): Where height is 15% and width is 100%. The background is an image called jooust.jpg. The component contains the text "Welcome To Linux Engineering Course - SIIS" written in a heading h1 tag and a blue color, and is aligned on the left side with sensible paddings.

Component 2 (Menu): A horizontal menu that contains two items named Home and Students. Each item is bordered using a solid green line. The background is dark blue. When each item is hovered, the item text is underlined.

Component 3 (Course Facilities): The component consists four items. Each of them is bulletined using a picture called leftarrow.jpg. Font color is grey. The items are separated by a solid grey border. The component heading is written in bold blue font and with a light blue background.

Component 4 (Welcome & Home Page): Is a light grey rectangle border. The component contains a heading text written in a blue color, and a paragraph in black color.

Component 5 (Footer): Light blue wide rectangle that is bordered from top and bottom using grey color. The text in this rectangle is written using Tahoma font and is 8px sized.

Notices: The font size of all text in all components is of 11px size and type Tahoma unless stated otherwise. Use your judgment to specify any margins or paddings not clearly mentioned.

You can always assume anything unclear, or you think is necessary for you, to solve the problem. Use proper naming in your solution. Write comments as much as you can.

Problem Requirements: Page General Layout: [20 Marks]

Write the HTML and CSS code required to lay out the six components on the page as they appear with the dimensions and white spaces shown. Don't be concerned with the content of the components.

Simply place your components on the page, and ensure that you specify the dimensions of each one in your CSS code.

QUESTION FOUR [20 MARKS]

a) Explain how you can use the SQL code in PHP to login to a MySQL database. Save the code in a file called userlogin.php

[8 Marks]

b)

i) Design a static web page using html tables only.

[5 Marks]

ii) Design a similar page using the div component of CSS

[5 Marks]

iii) Explain why division is a better option.

[2 Marks]

QUESTION FIVE [20 MARKS]

- a) Web programs will rarely work correctly whenever errors exist in the scripts/code. It is recommended that a developer debugs the program from time to time.
- i) Define the term debugging **[2 Marks]**
 - ii) Explain any four strategies you can use while debugging your programs **[4 Marks]**
- b) PHP and JavaScript scripting languages are said to be “loosely typed”. While Perl is strongly typed: Explain the terms “Strongly typed” vis a vis “loosely typed” **[4 Marks]**
- c) Comments, htmlentities() functions, indentation & Whitespace are important aspects of good programming practices.
- i) Using examples differentiate between a PHP comment, CSS comment and an HTML comment. **[3 Marks]**
 - ii) State reasons why writing whitespaces, htmlentities() function, comments and indenting are considered to be one of the best practices **[5 Marks]**

END