



COMSATS University Islamabad (CUI), Lahore Campus
Department of Electrical & Computer Engineering

CSC336 – Web Technologies

Lab Manual v 1.0.1

Lab Resource Person

Muhammad Babar Ali

Theory Resource Person

Muhammad Babar Ali

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Name:		Registration No:	
Program:		Batch:	
Semester:			

Laboratory 03

To reproducing a web page using CSS Text Decorations, Borders, Backgrounds and Positioning

INTRODUCTION TO CSS USING DECORATION AND POSITIONING RULES

1 Objective

The purpose of the lab is to introduce students to commonly used styling language, namely Cascading Style Sheets (CSS). The students will learn about the basic structure of the CSS stylesheets, selectors, declaration blocks, browser operation on webpage rendering and cascading multiple styles. It also introduces students to an important module of CSS, called CSS Positioning. The students will also learn about the basic techniques to position the HTML elements on the page.

2 Introduction to CSS

2.1 Why use CSS?

In the previous laboratory activities, you have learned Hypertext Markup Language (HTML). The user agents render this plain HTML document with normal flow and certain basic styling. However, followings questions still need to be answered:

1. Do we still need a more friendly user interface (UI) of the web application?
2. Do we still need animations for better user experience (UX) of the web application?

The basic HTML page with default styling from user agent (i.e., internal style sheet in a browser, normally referred as User Agent Stylesheets) might be suitable for small web applications and simple UIs with average or below average UXs. However, in almost every web design case, the above questions are answered in “Yes”. Here, CSS stylesheets come to rescue the developers.

2.2 What is CSS?

The cascading stylesheets (CSS) is a styling language which specifies display options such as color or font in a certain syntax called style ruleset (CSS ruleset or simply CSS rule). The CSS rule has the following two components, as shown in Figure 2.1:

1. Selector
2. Declaration block

One or more style rules can be applied to one HTML Element to enhance its style on the web page.

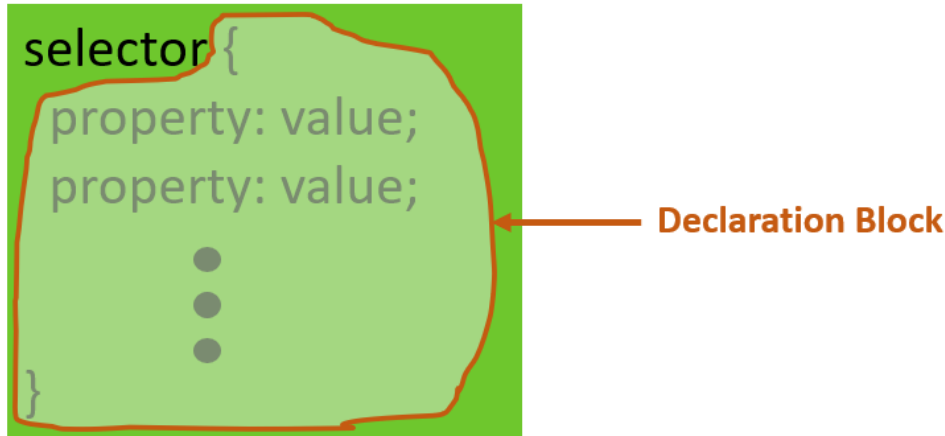


Figure 2.1: Structure of CSS ruleset

2.3 Structure of CSS stylesheet

The structure of the CSS style sheet is shown in Figure 2.2. This is a simple example of a CSS stylesheet. The structure consists of multiple rulesets. The first ruleset is applied to elements matching the selector, h1. The second ruleset is applied to elements matching the selector, p.



Figure 2.2: Semantic structure of HTML document/Web page

The stylesheet shown in Figure 2.2 must have .css extension with any reasonable name. The most common choice for naming the CSS stylesheet is style.css.

3 Text Styling

The following CSS modules deal with text styling. You must click on these hyperlinks to explore these modules.

Module	Properties		
CSS colors	color	opacity	
CSS color adjustment	color-scheme forced-color-adjust	print-color-adjust	
CSS text	hanging-punctuation hyphenate-limit-chars hyphens letter-spacing line-break overflow-wrap	tab-size text-align text-align-last text-indent text-justify text-size-adjust	text-transform white-space word-break word-spacing
CSS writing modes	direction text-orientation	text-orientation unicode-bidi	writing-mode
CSS text decoration	text-decoration shorthand text-decoration-color text-decoration-line text-decoration-style text-decoration-thickness text-decoration-skip-ink	text-shadow text-emphasis shorthand text-emphasis-color text-emphasis-style text-emphasis-position	text-underline-offset text-underline-position
CSS lists	list-style shorthand list-style-type	list-style-position list-style-image	
CSS fonts	font shorthand font-size font-family font-stretch font-style font-weight font-synthesis shorthand font-synthesis-small-caps font-synthesis-style font-synthesis-weight	font-variant shorthand font-variant-alternates font-variant-caps font-variant-east-asian font-variant-emoji font-variant-ligatures font-variant-numeric font-variant-position font-variation-settings	font-feature-settings font-kerning font-language-override font-optical-sizing font-palette font-size-adjust

4 Background and Borders

The following CSS modules deal with background and/or borders. You must click on these hyperlinks to explore these modules.

Module	Properties	
CSS backgrounds and borders	background shorthand background-color background-image background-origin	border-bottom shorthand border-bottom-color border-bottom-style border-bottom-width

	background-position background-repeat background-size background-attachment background-clip border-top shorthand border-top-color border-top-style border-top-width	border-left shorthand border-left-color border-left-style border-left-width border-right shorthand border-right-color border-right-style border-right-width
	border shorthand border-color shorthand border-style shorthand border-width shorthand border-radius shorthand border-bottom-left-radius border-bottom-right-radius border-top-left-radius border-top-right-radius	border-collapse border-image shorthand border-image-outset border-image-repeat border-image-slice border-image-source border-image-width box-shadow

5 CSS Positioning and Layout

The following CSS modules deal with text styling. You must click on these hyperlinks to explore these modules.

Module	Properties		
CSS positioned layout	position inset shorthand top right bottom left	float clear z-index transform	inset-inline shorthand inset-inline-start inset-inline-end inset-block shorthand inset-block-start inset-block-end
CSS display	display		
CSS flexible box layout	flex shorthand flex-shrink flex-grow flex-basis	flex-flow shorthand flex-direction flex-wrap order	
CSS grid layout	grid grid-template grid-template-columns grid-template-rows grid-template-areas grid-auto-columns	grid-auto-rows grid-auto-flow grid-area grid-column grid-column-start grid-column-end	grid-row grid-row-start grid-row-end gap row-gap column-gap
CSS multi-column layout	break-after break-before break-inside column-fill column-gap	column-span column-rule shorthand column-rule-color column-rule-style column-rule-width	columns shorthand column-count column-width

6 Lab Activity

6.1 Task 1

Develop the online web form (Login Page) with the colors as shown in Figure 6.1. Use CSS rules to color the text and borders. Use user and lock icons from which are freely available on the internet.

lab03-task1-email-login.html

Unimail webmail login

User name

password

REGISTER

Change Password

UniAccounts must be activated before they can be used for the first time: **Activation**

Roundcube Webmail • Support

Figure 6.1: Login Page

6.2 Task 2

Update the “placeOrder.html” namely, “The Famous Restaurant” web application developed in [Lab 2](#), where its first view should resemble the image shown in Figure 6.2.

[Home](#)
[Menus](#)
[Deals](#)
[Place order](#)
[About](#)
[Contact](#)

Place Order

Dish:

Number of servings:

First Name:

Last Name:

Delivery Date and Time:

Additional Instructions:

Are you interested to subscribe us for latest deals? ☐

Are you sure, you want to place the order? ☐

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Figure 6.2: Initial view of the page (default home page view)

When user scrolls the page downwards, it should not move the navigation bar and footer bar as shown in Figure 6.3.

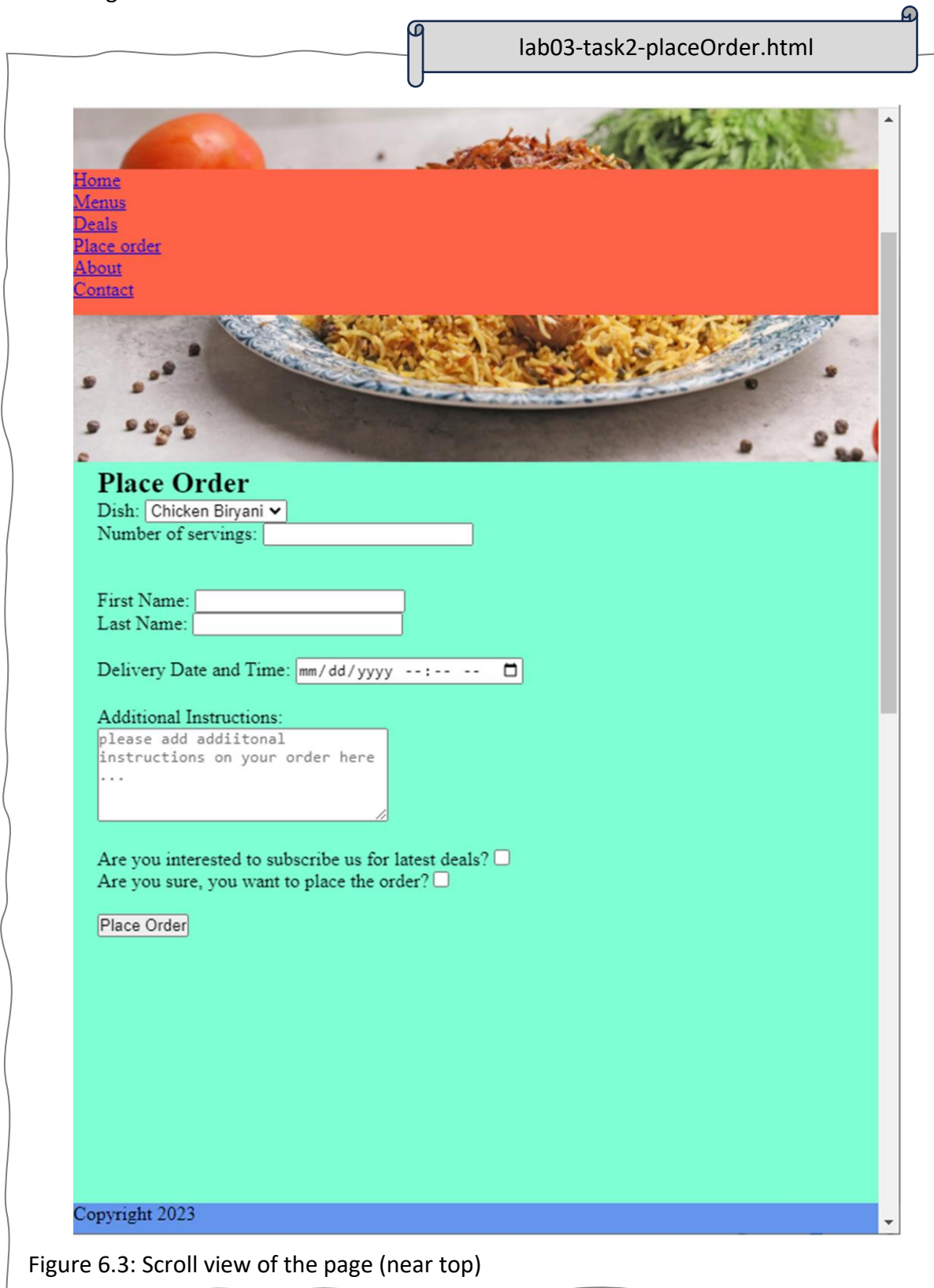


Figure 6.3: Scroll view of the page (near top)

When user scroll towards bottom of the page, the “Place order” form will hit the navigation bar. The form should stick here until it touches the bottom of its parent element (Figure 6.4).

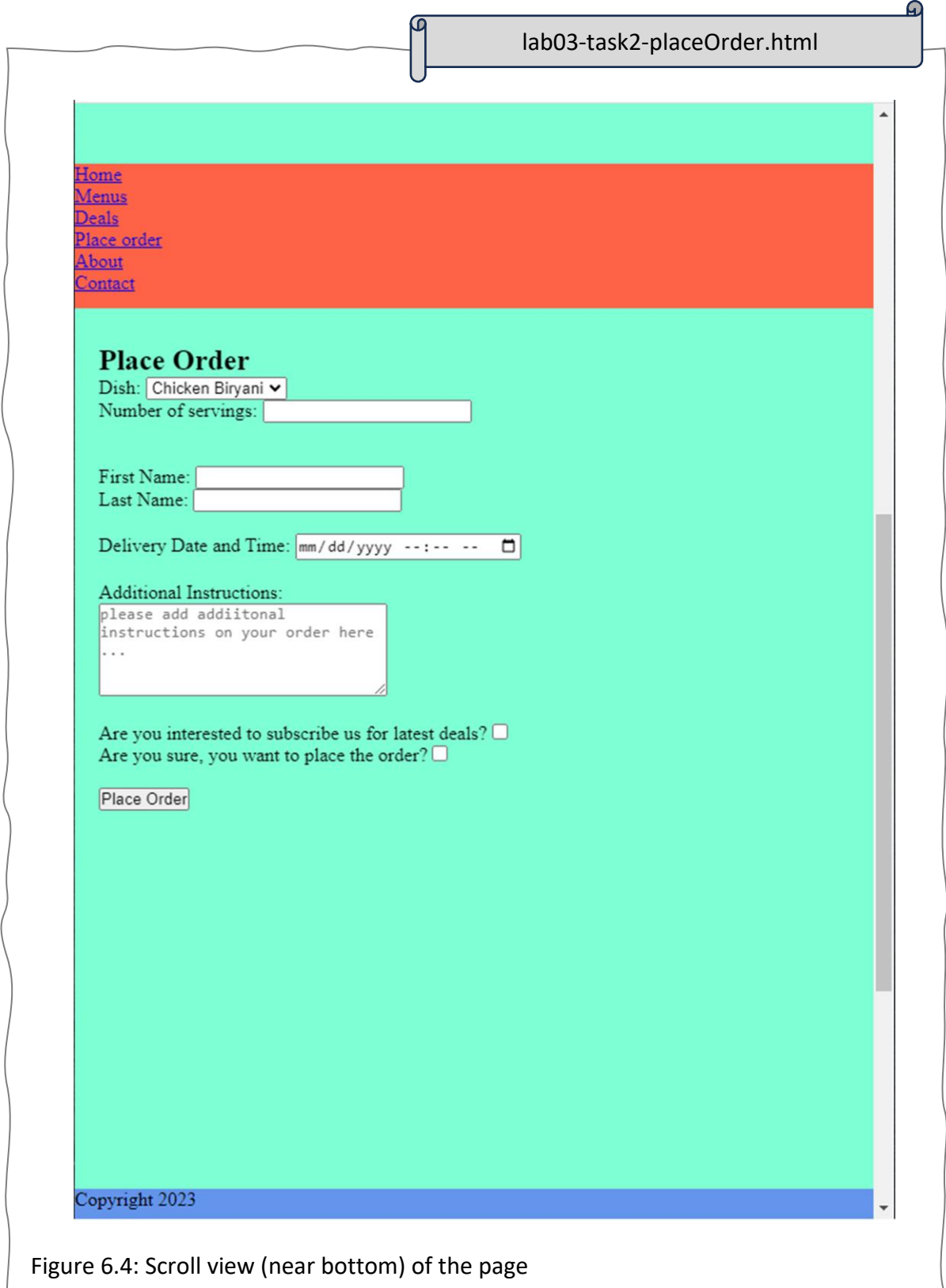


Figure 6.4: Scroll view (near bottom) of the page

7 Rubric for Lab Assessment

The student performance for the assigned task during the lab session was:			
Excellent	The student completed assigned tasks without any help from the instructor and showed the results appropriately.	4	
Good	The student completed assigned tasks with minimal help from the instructor and showed the results appropriately.	3	
Average	The student could not complete all assigned tasks and showed partial results.	2	
Worst	The student did not complete assigned tasks.	1	

Instructor Signature: _____ Date: _____