

Lab 4 – Bootstrap and JavaScript

Purpose

- Implement a Web Design Template (Header, Footer, and Menu) using Bootstrap 4
- Implement a web page using JavaScript
- Upload your website to a Web server

Due Date

- This lab must be handed in:
Friday Oct 01, 2021 – before midnight

Assessment

- This Lab is worth 2% of your total course mark.

Assigned Readings

- **Lecture Slides** posted on Brightspace:
 - Module 1 -> Part 4
 - Module 2
- The following chapters of **Fundamentals of Web Development** will be useful in completing this exercise:
 - Chapter 5
 - Chapter 6

Lab Supplies

To complete this lab you will require the following lab supplies:

- Textbook: **Fundamentals of Web Development**
- Code Samples (**BootstrapSample.zip**)
- Notepad++ (or other text editor, or IDE)

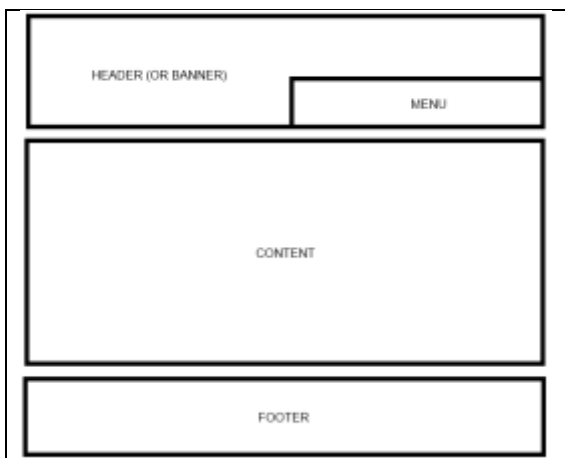
Summary of Tasks

1. Implement a Web Design Template using Bootstrap 4
2. Create a web page for length conversion using JavaScript
3. Upload your website to a webserver
4. View your webpage using a web browser
5. Submit Lab Link on Brightspace

Task 1

Before getting started with the following tasks review the 'Common Look and Feel' examples provided on Brightspace (under: Course Content → Extra Materials). Using the knowledge gained in these examples, create a 'Common Look and Feel' to be used on every page of your website.

You must implement the specified Design Template (**Course Content → Extra Materials → Common Look and Feel → Design Template4.png**) using **Bootstrap 4**.



The web design template must have the following elements: Header, Footer, and Menu.

- Header
 - Program Name and Course Name
- Menu
 - Links to both Lab 2 and Lab 3.
- Footer
 - Student Number, First Name, Last Name, Email Address

Create a web page named '**index.html**' that implements the specified 'Design Template' for Lab 4. The title of the web page will be '**Bootstrap and JavaScript**'.

Task 2

Sub-task1- Merge *index.html* and *LengthConverter.html*

Download '**LengthConverter.html**' template file from Brightspace (Course Content -> Labs-> Lab4 -> LengthConverter.zip) and save it to your computer.

Merge *LengthConverter.html* into *index.html* such that the Content Area of *index.html* should have the contents of *LengthConverter.html*.

Here is the screenshot of the merged webpage.

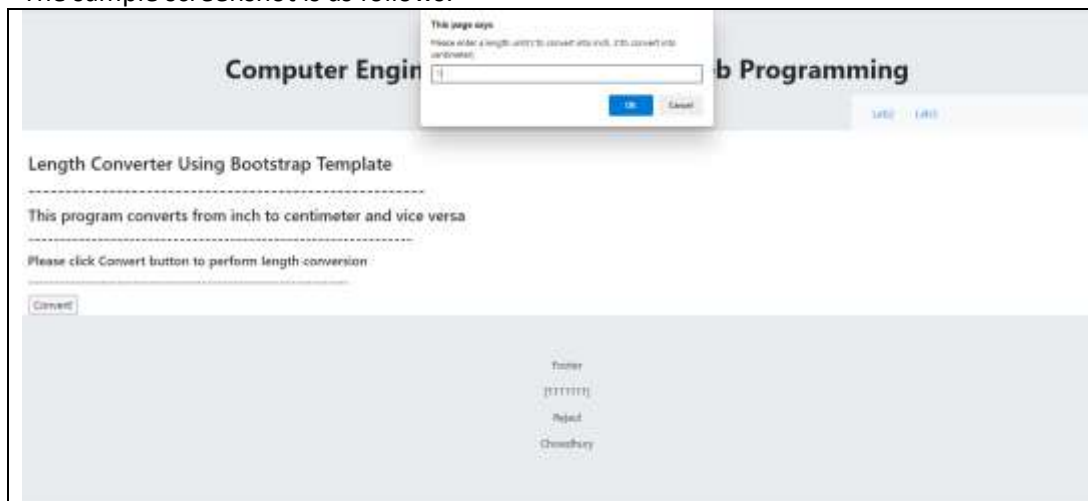


Sub-task2- Write JavaScript function

You need to write a JavaScript function inside the template file that

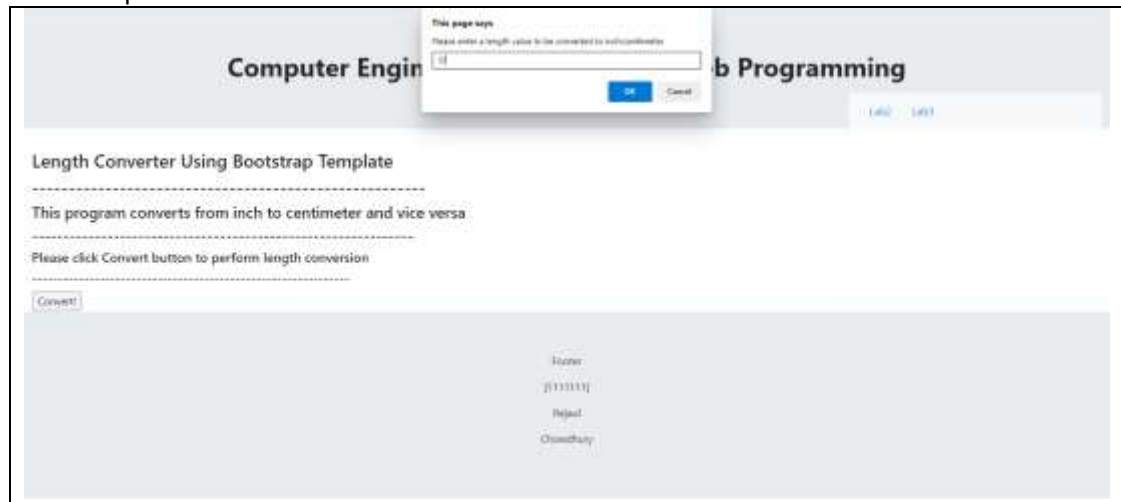
- Displays a prompt asking the user to select the length unit to be converted to (i.e., inch/centimeter). [Hint: you will need to use the prompt() Method].

The sample screenshot is as follows:



- Displays another prompt asking the user to input the value of the length to be converted to inch/centimeter.

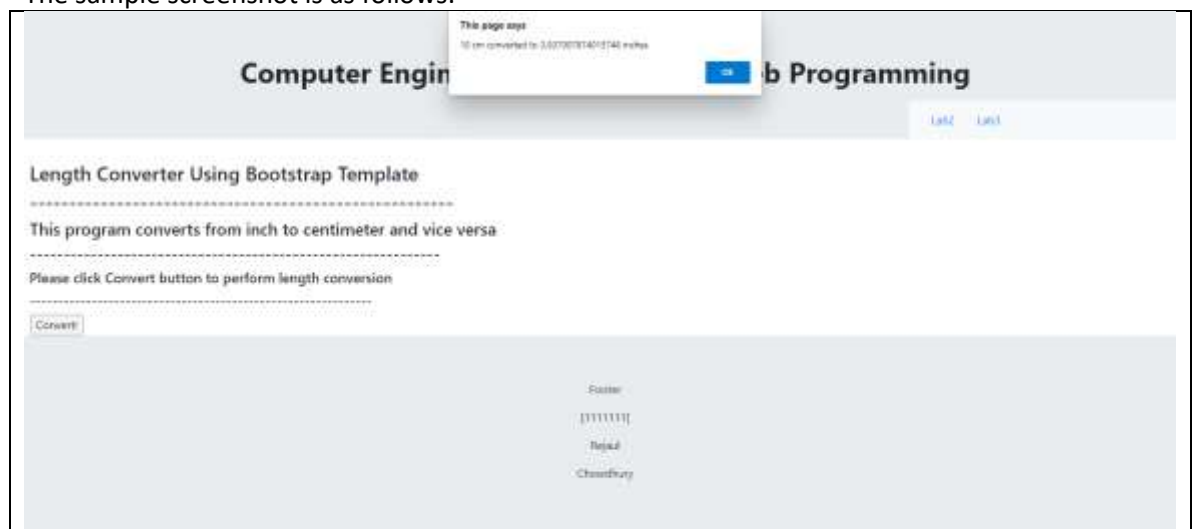
The sample screenshot is as follows:



- The length value entered should be validated to ensure it is a number.
- Then, the appropriate formula should be applied to the entered value to convert the length to the selected length unit (i.e., from inch to centimeter or vice versa).
- Finally, an alert should be displayed indicating the original length that the user entered and the converted length. You need to format your result (i.e., converted length) to display 2 decimal places.

[Hint: you will need to use the alert() method to display your answer variable].

The sample screenshot is as follows:



- The function should be called when the appropriate button (i.e., **Convert!**) is pressed.

Task 3

Create Lab 4 submission folder '**Lab4**' and copy **index.html** into this folder.

Task 4

Upload your website for Lab 4 into a Web Hosting Server by uploading '**Lab4**' folder inside the 'public_html' directory of 'SiteGround' Web Hosting domain using DashBoard.

The 'File Upload' instruction is posted on Brightspace (**Course Contents -> Module 1 -> Part 2 -> SiteGround_FileUpload_Instruction.docx**).

Task 5

View your website for Lab 4 using a web browser. Open a web browser and navigate to the following web address:

`http://your_web-hosting_domain_name/Lab4/<filename>`

For example, the sample URL for Lab 4 on an arbitrary web hosting domain is:

rejaulc.sgedu.site/Lab4/index.html

where '*rejaulc.sgedu.site*' is the name of an arbitrary web hosting domain, '*[Lab4](#)*' is the submission folder for Lab 4, '*[index.html](#)*' contains the source code for Lab 4.

Task 6

Once you have confirmed that your webpage is available online, you are ready to hand in your lab.

Create a word document (Lab4.doc) in which write the following Information:

- Student Number, First Name, Last Name
- The URL, or hyperlink, for Lab 4

To hand in your lab go to Brightspace and navigate to Course Content → Labs and click on 'Lab 4 – Bootstrap and JavaScript' link.

Upload the word document (Lab4.doc) on Brightspace.

IMPORTANT NOTE:

If the URL, or hyperlink, does not direct the professor to the lab you will receive a ZERO for the lab assignment.