## **Introduction**

A question that may be asked is how would I benefit from this game?

This game involves the user to answer a series of questions. At the start of the game, lecture notes are shown to the player. According to the teachings of the lecture, questions are asked. If the player answers a question incorrectly, they are redirected to the lecture notes to educate them properly. Therefore, the player would be exposed to topic notes and based on the notes they would be tested to see how knowledgeable they were with the game. To answer a question, player will have to move horizontally using the left and right arrow keys through a keyboard; also, the player will need to jump using the up-arrow key via keyboard; all mentioned directions are there to make the player move around and hit the right answer. If the player succeeded in answering a question, they would be directed to the next designed question. If not, they would be brought back to the lecture notes where answers can be found. Each game will have a question placed at the top, just under the question multiple answers will be placed randomly.

## **HTML Overview**

The language HTML (Hypertext Markup Language) is a standard based language, which is used for the development of web pages and applications; along with the two other technologies known as the JavaScript and the CSS (Cascading Style Sheets). Sir Tim Berners-Lee, is believed to be the originator of the 'www', World Wide Web back in 1989.

## **Page Creation**

By the end of this tutorial we will have an HTML page that has the following text centered:

“Algoma University; Small University Big Education”, in which 'Algoma University' is written on a line and 'Small University Big Education' is written on another line; both are in red colour’. The page name will have the following title: “First Page”. See figure below.

From the Tools sections, we learned that one way to establish a website is to use a text editor. Let’s open a new Text Document (Notepad). Now write the following code in it.

<html>

<head>

<title> ... </title>

</head>

<body>

</body>

</html>

As you can see from the above code structure, we always start with <html> tag. One might argue and say why shouldn't we start with <!DOCTYPE> tag? To clarify, <!DOCTYPE> declaration is agreed upon not to be an HTML tag; however, it is just an instruction to the web browser about what version of HTML the page is written in. Therefore, we will start with <html> tag. Whether you write all letters in lower case or upper case both will work fine. You will then need to use <head> as it is where your page title takes place.

Where the three-dots are placed between <title> and </title> is the place where our page title is put. Let’s delete the three-dots and write ‘First Page’ instead; the code will look like the following:

<title>First Page</title>

Moving on to the <body> tag, between <body> and </body> is the content that will appear to the user on the page. In the beginning of this tutorial we said that we wanted to write “Algoma University; Small University Big Education” on two separate lines, and we also wanted to have the two lines centered and in the colour red. To do so, we will need to write the following code under the <body> tag.

<center>

<font color=”red”>

Algoma University

<br>

Small University Big Education

</font>

</center>

We can also write all the above coding in one line as follows:

<center><font color=”red”> Algoma University <br>Small University Big Education</font></center>

Just remember any tag you open it first will be the last to be put. See below figure illustration

(Let’s play)

## **Image Implementation**

Undoubtedly, images are the most commonly used in webpages. Almost every website nowadays has at least one image impeded. In this tutorial we will learn how to add an image by the help of 'img' tag.

Most customarily elements that are used with the <img src=" "> tags are: ‘height’, ‘with’, and ‘alt’. Height is where the image gets stretched on Y coordinate which is vertically. Width, is where the image gets stretched on X coordinate which is horizontally. Alt, is very useful element because it provides a semantic description of your image when the mouse pointer stops on it. Even when there is a problem with viewing a target picture, people will be able to see the title or the description that was used in ‘alt’ element to see what the image is about. Let’s try to do the below figure.

The above figure shows the Algoma University logo with 100px for height, and 200px for width. Let’s see the special code snippets for this image implementation

<img src="wordmark-white-highres.jpg" height="100px" width="200px">

‘wordmark-white-highres.jpg’, is the image name followed by dot and the image format. Keep in mind the image must be in the same folder where your html is located. Let’s see the full-page code:

<html>

<head>

<title> Image Testing </title>

</head>

<body>

<center>

<img src="wordmark-white-highres.jpg" height="100px" width="200px" alt=”AlgomaU logo”>

</center>

</body>

</html>

What if we want to link a photo from the Internet? We will then need its complete URL.

For example, if the URL is:

<https://algomau.ca/wp-content/uploads/2016/06/wordmark-white-highres.jpg>

Your image tag will be:

<img src="https://algomau.ca/wp-content/uploads/2016/06/wordmark-white-highres.jpg" >

The above image is on its full size, we can change its width and height by making code as follow:

<img src="https://algomau.ca/wp-content/uploads/2016/06/wordmark-white-highres.jpg" 100px" width="200px">

Let’s try to make the image clickable; takes the user to link when they click our image

<a href="index.html"><img src="algomaUFlag.png" alt="AlgomaU logo"></a>

If you look at the above code you will notice that <img src=" "> is placed between <a href=””> and </a>, it is very important that it be written this way to allow the image to be clicked to said link or page.

Code illustration, ‘index.html’ is where you want the user to be directed when they click on an image. ‘algomaUFlag.png’, is the image name followed by dot and the format.

## **CSS**

*What is CSS?*

CSS is an acronym for Cascading Styles Sheets; it is a way to style and present HTML. The purpose of using CSS is to style and lay out a web page. For instance, it is used to change a font name, colour name, size and spacing of our content, or adding some decorative features

*How CSS works?*

If we have an HTML file with an embedded style sheet, we probably want it to grow, as we want all pages to have the same style. There is a better way than to keep copying the style sheet into every page. For example, CSS allows us to put the style sheet in a separate file, and all pages can point to it.

To apply a red background colour and white text colour of an element in CSS we need to make a style sheet file. However, we will first need to create another empty text file, then type the following inside our created file:

body {

background-color: #FF0000;

color: #FFFFFF;

}

**OR**

body {

background-color: red;

color: white;

}

Both above code snippets work perfectly, they show you the fundamental CSS model which is:s

selector {

property: value;

}

1. Sector: What HTML tag(s) does the property apply to (e.g. "body")
2. Property: For example, it could be a colour for the background (e.g. "background-color:")
3. Value: The value of the property background colour could be red (e.g. "#FF0000" or "red" without the pound sign before the txt")

After we type either snippet codes from above we would have to save the file and give it any name followed by .css. For example, if I want to name the file 'style' then I would save the file as follows:

'style.css'.

**Applying CSS to an HTML document**

There are three ways you can apply CSS to an HTML document

### **Method 1: In-line**

<html>

<head>

<title>Example</title>

</head>

**<body style="background-color: #FF0000;">**

<p>This is a red page</p>

</body>

</html>

### **Method 2: Internal**

<html>

<head>

<title>Example</title>

**<style type="text/css">**

**body {background-color: #FF0000;}**

**</style>**

</head>

<body>

<p>This is a red page</p>

</body>

</html>

### **Method 3: External (link to a style sheet)**

<html>

<head>

<title>My document</title>

**<link rel="stylesheet" type="text/css" href="style/style.css" />**

</head>

<body>

...