**INTERNET PROGRAMMING**

**420-311-VA**

**LAB-1-**

**Open Book**

**Instructions:**

1. Add your answers inline with the questions and submit this word document.
2. Also submit a web page .html file where you put the code answers to the questions that you can apply.
3. You might need to read and research for some answers.
4. Write full comprehensive English statements where applicable.

**Technique for writing definitions and answers to questions:**

For example, let's say we want to define what ‘water’ is.

1. Think what to include in the definition in a structured manner to make the definition clear, comprehensive covering all aspects and leaving less room for questions.

**How do we define water? / What is water?**

* **Nature**: liquid
* **Purpose**: necessary for most life
* **Composition/elements**: made of hydrogen and oxygen
* **Usage**: it could be consumed as fresh water or found in nature as salt water
* **Properties**: changes form, translucid**,** odorless
* **What it is not**: it is not a solid
* **Examples**: tap water

1. Then write a full statement that include all the information listed above:

Water is a liquid necessary for most life on earth; it is composed of two atoms of hydrogen and one atom of oxygen. Water could be consumed as fresh water or found in nature as salt water, it is translucent and odorless. It is not a solid and can evaporate when boiled at 100 degree celsius. For example humans consume water running from a tap for hydration.

## Part-1: Type the answers in a Word document

**Questions:**

1. Using the definition technique, define HTML:

|  |
| --- |
| **What are a Two-dimensional array’s characteristics?**   * **Nature**: Elements organized in rows and columns. All together they make a structure. * **Purpose**: To store information or elements and manage them withing a structured format. * **Composition/elements**: They consist of elements/ data which are arranged in rows and columns; data are identified by their columns and row position. * **Usage**: Used in programming. They are used for matrices, tables or grids. * **Properties**: It has an fixed size. Can store data in it. * **What it is not**: It is not a regular array. * **Examples (give a specific example of a group of data that could be stored in the array)**: a 3x3 matrix that represents a tic tac toe board |

|  |
| --- |
| **Write a full comprehensive statement defining a two-dimensional array putting all the characteristics listed above together in good English writing style:**    **A Two-dimension array is elements/data organized in rows and columns; they make a structure. With the use of a two-dimensional array, you can store and manage elements/ data of any kind within a structure. The data in a two-dimensional array are arranged in rows and columns and use those rows and columns to identify them. We typically use two dimensional arrays in programming to make matrices, tables, and grids. It has a fixed size to store data in it. A two-dimensional array is not a regular one dimensional array. An example of a use for it is to make a 3x3 matrix to represent a tic tac toe board.** |

1. Following is the formal HTML specification:

<https://html.spec.whatwg.org/multipage/>

When was HTML created (check section 1.6)?

|  |
| --- |
| HTML was created in 1990 |

What version of HTML is currently in use?

|  |
| --- |
| The version of HTML that is currently in use is HTML 5. |

**Research the internet:**

1. What is a Hyperlink?

|  |
| --- |
| A hyper link is a an online link from an image, button, drawing or Hypertext to another webpage. |

1. What is a Hypertext (Notice that HTML stands for Hypertext Markup Language)?

|  |
| --- |
| A Hypertext is a text that contains a link to other texts. |

1. What is a Hypermedia?

|  |
| --- |
| A Hypermedia is an extension of HyperText that includes multiple forms of media such as text, graphics, audio or video. |

1. What is a URI?

|  |
| --- |
| A URL is a unique identifier used to locate a resource on the internet. |

1. What is a URL, give an example?

|  |
| --- |
| https://www.youtube.com/ |

**Refer to the following link:**

<https://www.w3schools.com/html/html_intro.asp>

1. What is a doctype declaration? How do we specify the doctype for an HTML5 document?

|  |
| --- |
| A doctype declaration is a declaration defining the type of document. Using <!DOCTYPE html> defines that the document in an HTML5 document. |

1. In the following HTML code:

**<h2 id="h2id"> Heading 2 </h2>**

* What do we call the h2 heading in HTML? : h2 is an element that defines a large heading.
* What do we call <h2>? : The start tag.
* What do we call </h2>? : The end tag.
* What do we call the text “Heading 2”? : We call it the element content.
* What do we call “id” with respect to h2? : We call “id” the attribute.

1. What type of elements are the Header, Body and Footer?

|  |
| --- |
| ??? |

1. What type of elements are P and DIV?

|  |
| --- |
| ??? |

1. What type of elements are a, b, and br?

|  |
| --- |
| ??? |

1. What is incorrect about the following code? Suggest a possible revision of the code to correct the error.

**< p>< strong> Curbside Thai now delivers!< /p>< /strong>**

|  |
| --- |
| The end tag of strong is wrongly placed. It needs to be placed before the end tag of the p attribute.  <p><strong> Curbside Thai now delivers! </strong></p> |

1. Provide code to mark “Internet Programming” as the ­document title.

|  |
| --- |
| <title>Internet Programming</title> |

1. Write the HTML that makes “This is a level 3 Heading” as an h3.

|  |
| --- |
| <h3>This is a level 3 Heading</h3> |

1. How do you add a tooltip to the below heading (when the user hovers the mouse over the heading it will display a text)?

|  |
| --- |
| <h1>This is a heading with a tooltip</h1> |

1. Write the code to include the following text as a comment in the HTML document: “This is just a comment”.

|  |
| --- |
| <!— This is just a comment 🡪 |

1. What element should you use to mark page content as a sidebar (research the answer)?

|  |
| --- |
| The element that you should use to mark page content as a sidebar is <aside> |

1. Provide the code to mark the text “This is a bold text” as emphasized, or bold text.

|  |
| --- |
| <p><strong>This is a bold text</strong></p> |

1. Provide the code to mark the text H2O with the number 2 as a subscript.

|  |
| --- |
| <p>H<sub>2</sub>O</p> |

1. Provide the code to include an image in an HTML page and set its alt text.

|  |
| --- |
| <img src=”link of the photo” alt= “It can be whatever”> |

1. How do we make a list in HTML, provide the code to mark the unordered list containing the items: Packers, Vikings, Bears, Lions.

|  |
| --- |
| <ul>  <li>Packers </li>  <li>Vikings </li>  <li>Bears </li>  <li>Lions </li>  </ul> |

1. Provide the code to mark the following list of the top-five most popular movies ranked in descending order:

5. Pulp Fiction

4. The Dark Knight

3. The Godfather: Part II

2. The Godfather

1. The Shawshank Redemption

<ol reversed>

<li>Pulp Fiction</li>

<li>The Dark Knight</li>

<li>The Godfather : Part II </li>

<li>The Godfather </li>

<li>The Shawshank redemption </li>

</ol>

1. The initial h1 heading in a document has the ID top. Provide a style rule to display the text of this h1 heading according to the font stack: Century Gothic, Helvetica, or a sans-serif font.

|  |
| --- |
| #top{  font-family: “Century Gothic”, Helvetica, sans-serif  } |

1. Calculate the specificity for each of the following style rules, and what is the font size of the h1 heading in pixels?

body {font-size: 16px;}

body > article {font-size: 0.75em;}

body > article > h1 {font-size: 1.5em;}

|  |
| --- |
| ??? |

1. Provide a style rule to set the size of body text to 2% of the viewport width.

|  |
| --- |
| ??? |

1. Provide style rules to set the size of text in the paragraph element, contained in a div element, to the 50% of the size of the defined html base element’s font size.

|  |
| --- |
| <div>  <p>  This is a paragraph with a text size of 50% of the defined html base element’s font size.  </p>  </div> |

## Part-2: Apply the answers to the given HTML and CSS documents

Starting with an HTML page we need to fix its style to make it look like a target style. The HTML file and its styles are given.

1. Download the LAB folder called **HTML-LAB**
2. Open the image TARGET-STYLES.png in any image viewer
3. From the HTML folder open the web page **ph\_plays.html** in the web browser
4. Examine the differences between the image and the web page, you will notice a change in Font, backgrounds and other styles.
5. All the changes will be made in the CSS file **ph\_styles.css**
6. There is a comment in the CSS file where you need to make each change

For example Step 1 will be applied under the comment /\*Step-1\*/

Follow the below steps in order to make the webpage look like the image:

|  |  |
| --- | --- |
| Step | Change |
| 1. 1 | Add a rule to reference the **Grunge** Font, that font is defined in the 1942.woff and 1942.tff font files included in the HTML folder |
|  | Set the background for the entire document using **hsl** to 91 degree of hue, 8% saturation and 56% lightness |
|  | * Set the background color of the body of the document using hsl to 58 degree hue, 31% saturation and 84% lightness * Set the font family of the body to 'Palatino Linotype', 'Book Antiqua' * Add the **Palatino** and **serif** to the font stack so that if the browser does not support the listed fonts it will use these fonts |
|  | Set the header background to black |
|  | * Align the text of the concerned paragraph in the center * Set the font size to 110% relatively to its parent but using the **em** unit |
|  | Set the font style of the address element to normal |
|  | Set the background-color of the play1 section using its id as a selector to hsl(240, 100%, 88%) |
|  | Reorganize the website files into the following structure, and move the files accordingly:   * HTML   + ph\_plays.html   + styles   + assets     - fonts     - images |