Q1. Discuss in detail the concept of DOM for an HTML page. (5 points)

Note: This answer will be present in your main PDF file.

The abbreviation DOM stands for Document Object Model. In DOM, the Document is basically a file, it can be HTML or anything, the Object is the HTML tags and elements, the Model means the layout structure

DOM is like a programming interface for HTML files. It uses a tree structure to represent the content of an HTML document. You can read, access, and edit the contents of a document, which can be an HTML page, using this approach.

All of the children nodes can also be accessed through their parent nodes because the DOM model represents the HTML page as a tree structure, programs may easily read, access, and alter the document structure itself, as well as the style of the structures and the information within them.

The Document Object Model (DOM) is an object-oriented representation of a webpage that may be changed with scripting languages such as JavaScript. This Document Object Model is used by all browsers to make the webpage accessible via JavaScript.

Q2. Write a sample HTML code of your choice for a web page consisting of at least 5 HTML elements

(excluding elements such as <html>, <head>, and <body>) and represent it as a DOM. (5 points)

Note: The DOM will be present in your main PDF file. In addition, you will have an .html file and name

the html file as follows: question2\_lastName.html

Document



ROOT Element

<html>



Element

<head>

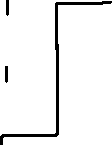
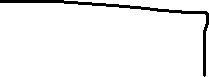
Element

<body>



Element

<title>



text

Element

<a>

Element

<u>



text

Element

<p>

Element

<h1>

Element

<img>

attribute

<html>

Element

<li>

Element

<li>

Element

<l1>



text

text

text



image

text

text

Q3. Comment on the following statement, “Learning HTML is more about learning the semantic than

the syntax”. Explain your answer with the help of an example use-case scenario. (5 points + 5 points)

Note: the first part of this answer will be in your main PDF file. For the second half if you choose to write

HTML code, then include the .html file and name it as follows: question3\_lastName.html. Further, for

part 2, you can take screenshots of your HTML code and include it in the main PDF file to explain your

answer.

HTML is a markup language. It stands for Hypertext markup language. HTML is used to create web pages and websites. In HTML semantic interpret the meaning of elements, attributes, and the logical relationship between them. Syntax is basically related to grammar, structure and rules and regulations for writing any statement in that language.

There are various tags in HTML such as <b> <i> <p> <h1> <div> <br> <a> and so on. For an example the <p> tag. This tag used for paragraphs. <p> tag convey the messages to the browser that the content that is between the <p> tag is a paragraph and browser will display it accordingly.

It is not a good practice to write HTML code without closing tags it may lead to unwanted styled pages. In an HTML page if you want to write a paragraph you can directly write it between the body tag but this is not semantically correct. In order to tell the browser, you have to add a <p> tag which conveys to the browser the this is a paragraph. So it is clear that semantics are important in HTML and web pages depends on the correct semantic to tell the correct meaning to the use as well as the browser.

Following are the advantages of the HTML semantics, Improve SEO(Search engine optimization) of the website, Code becomes clearer and it is also easy to maintain and to make the webpage more accessible.

A screenshot of a computer

Description automatically generated with medium confidence

HERE we can see the semantics being used for PARAGRPAHS, HEADER, and DIV. these are what make the page clear and complete. The syntax is important but without the correct semantics we will not have a correctly formatted page making it impossible to view correctly.

Q4. State and explain the semantics behind the three main elements of all HTML pages. (5 points)

Note: This answer will be present in your main PDF file. You may include screenshots of HTML code to

better explain your answer if you want to. However this is optional.

The three main elements of all HTML page are ARTICLE, ASIDE and DETAILS.

The <article> tag determines free, independent substance. An article should bode well all alone and it ought to be feasible to appropriate it freely from the remainder of the site.

Possible hotspots for the <article> component: Discussion post and Blog entry

The <aside> tag characterizes some substance beside the substance it is set in. The to the side substance ought to be in a roundabout way identified with the encompassing substance.

The <details> tag indicates extra subtleties that the client can open and close on request.

The <details> tag is regularly used to make an intuitive gadget that the client can open and close. Of course, the gadget is shut. At the point when open, it grows, and shows the substance inside. Any kind of content can be put inside the <details> tag