ASSIGNMENT 1

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a) Define and explain the use of the following technologies in the field of web development

(2 Marks)

1) HTML

Hypertext Markup Language

It is a standard markup language for creating webpages.ie, it describes the structure of the webpage.

2) HTTP

Hypertext Transfer Protocol

It is the protocol used for transferring data over the internet. It defines how messages are transmitted of formatted, for example when you type a URL in your browser, it sends a HTTP request to the server and the URL sent is fetched for you.

3) FTP

File Transfer Protocol

It is a standard network protocol used for the transfer of computer files between clients and servers over a computer network.

It is often used for uploading webpages and other documents from a private development machine to a deployment server over the internet.

4) Browsers

It is a software application used for retrieving, locating and displaying the contents of the webpage on the world wide web.

b) Outline with clear examples HTML tags that can be used to display the following items

on a web page (4 Marks)

1) An image

The <img> tag is used to embed an image in a webpage

The <src> attribute is used to specify the image path

Example: <img src="path_to_image.jpg" alt="Description of image">

2) A link

The <a> tag is used to create a hyperlink. The href attribute is used to specify the destination of the link.

Example of a link.   Visit youtube.com

3) A heading of a page

The <h1> to <h6> are used as headers with <h6> being the smallest header and <h1> being the largest

Example: <h1>This is a Heading</h1>

4) A paragraph

The <p> tag is used to define a paragraph, for example

<p>This is a paragraph. </p>

c) Identify and explain any four elements used in writing HTML markup (2Marks)

1) <!DOCTYPE html> - it is an instruction to the web server about the version of html being used.

It is placed at the very beginning of the html document. In this case, it is HTML5.

2) <html> - it is sometimes known as the root element

It wraps all the contents on the html file or entire page.

3) <body> - encloses the contents displayed in the webpage like texts, images, video and audios.

4) <head> - acts as the container for the metadata and is placed between the <html> and <body> tags

Metadata components contain information about the webpage, it typically contains components like title, style sheets and script tags.

d) Explain the difference between the following terms as used in web development.

1) Absolute Path & Relative path (1 Mark)

- Absolute path – This is the full path to a specific resource; it includes all the details needed to locate s resource regardless of the current location in the system.

- Relative path – This path is relative to the current location in the file system, it doesn't include all the details but start from the current directory.

2) <style> (style tag) & <script> (script tag) (1 Mark)

The script tag is used to include JavaScript code to the html document

The style tag is used to include CSS code in the html document

e) Create a simple webpage that can be used to display the records of students as shown in the table below. The marks of the students should be cantered. (6 Marks)

Student Name Mathematics English Kiswahili Science

Index.html

<!DOCTYPE html>

<html>

<head>

<link rel ="stylesheet" href="style.css">

  <title>Student Records</title>

</head>

<body>

```html
<h1>Student Records</h1>

<table>

  <tr>

    <th>NAME</th>

    <th>MATH</th>

    <th>Home science </th>

    <th>ENG </th>

    <th>ScCIE</th>

  </tr>

  <!-- Add more rows as needed -->

  <tr>

    <td>Mallin </td>

    <td>78</td>

    <td>60</td>

    <td>86</td>

    <td>69</td>

  </tr>

  <tr>

    <td>Kelvin </td>

    <td>57</td>

    <td>68</td>

    <td>77</td>

    <td>70</td>
```

```html
            </tr>

<tr>

        <td>Dareen </td>

        <td>65</td>

        <td>70</td>

        <td>48</td>

        <td>49</td>

    </tr>

<tr>

        <td>Rachael </td>

        <td>90</td>

        <td>80</td>

        <td>65</td>

        <td>79</td>

    </tr>


    </table>

</body>

</html>
```

Style.css

```css
    table {

        width: 100%;
```

```css
        border-collapse: collapse;

    }

    th, td {

        border: 1px solid black;

        text-align: center;

        padding: 8px;

    }

    th {

        background-color: #f2f2f2;

    }
```

f) A University is planning to host a cultural week event, to participate in the event one is
required to register online. The University has employed you to design the web
registration form that participants will use to register. Using HTML & CSS outline how
you would design the
registration form.(10mks)

```html
<!DOCTYPE html>

<html>

<head>

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

    <title>Registration Form</title>

</head>

<body>
```

```html
<div class="container">

    <form action="/submit_registration" method="post">

        <label for="fname">First Name</label>

        <input type="text" id="fname" name="firstname" placeholder="Your first name..">



        <label for="lname">Last Name</label>

        <input type="text" id="lname" name="lastname" placeholder="Your last name..">



        <label for="email">Email</label>

        <input type="email" id="email" name="email" placeholder="Your email..">



        <label for="country">County</label>

        <select id="country" name="country">

            <option value="Kericho ">Kericho </option>

            <option value="Nairobi">Nairobi </option>

            <option value="Machakos ">Machakos</option>

<option value="Nandi ">Nandi </option>

<option value="Kisumu ">Kisumu</option>

<option value="Mombasa "><Mombasa </option>

        </select>

        <input type="submit" value="Submit">

    </form>

</div>
```

```
</body>

</html>
```

Style.css

```css
body {

    font-family: Arial, sans-serif;

}

.container {

    width: 300px;

    padding: 16px;

    background-color: white;

    margin: 0 auto;

    margin-top: 100px;

    border: 1px solid black;

    border-radius: 4px;

}

input[type=text], input[type=email], select {

    width: 100%;

    padding: 12px 20px;

    margin: 8px 0;

    display: inline-block;

    border: 1px solid #ccc;

    border-radius: 4px;

    box-sizing: border-box;
```

```
        }

    input[type=submit] {

        width: 100%;

        background-color: #4CAF50;

        color: white;

        padding: 14px 20px;

        margin: 8px 0;

        border: none;

        border-radius: 4px;

        cursor: pointer;

    }

    input[type=submit]:hover {

        background-color: #45a049;

    }
```

g) Create a simple webpage that displays two images as shown in the diagram below (8 Marks)

```html
<!DOCTYPE html>

<html>

<head>

    <title>Display images</title>

    <style>

        img {
```

```
        width: 300px;

        height: auto;

        margin: 10px;

      }

  </style>

</head>

<body>

  <h1>Display Images</h1>

  <img src="kevin.jpg" alt=" Kevins image">

  <img src="emily.jpg" alt=" Emilys image">

</body>

</html>
```