Q.1 <!DOCTYPE html> is it a tag of html? If not, what is it and why do we use it?

Ans. The DOCTYPE declaration is placed at the very beginning of an HTML document, before the <html> tag.

It is used to specify the version of HTML or the document type that the web page is using. The declaration informs the web browser or other

HTML processors about the rules and standards to be followed when rendering the page.

Q.2 Explain Semantic tags in html? And why do we need it?

Ans. Semantic tags in HTML are a set of elements that provide meaning and structure to the content of a web page.

These tags go beyond just specifying the appearance of the content; they convey the semantic meaning of different sections or elements on a web page.

Some examples of semantic tags introduced in HTML5 include <header>, <nav>, <section>, <article>, <footer>, and <aside>.

The purpose of semantic tags is to improve the accessibility, maintainability, and search engine optimization (SEO) of web pages.

Here's why we need them:

Accessibility: Semantic tags help screen readers and other assistive technologies understand the structure and meaning of the content.

By using semantic tags appropriately, we make our web pages more accessible to users with disabilities. For example, using <nav> for

navigation links or <h1> to <h6> for headings allows screen readers to navigate and understand the content more effectively.

Maintainability: Semantic tags enhance the readability and organization of the HTML code. By using tags that reflect the purpose

of the content, it becomes easier for developers to understand and maintain the codebase. Semantic tags also help in separating the structure of a web page from its presentation,

making it easier to update the design without affecting the underlying content.

SEO: Search engines aim to understand the content and context of web pages to provide relevant search results.

By using semantic tags, we provide clear signals to search engines about the importance and hierarchy of different parts of our content.

For instance, using <header> and <footer> tags helps search engines identify the header and footer sections of a page, while <article> and <section> tags assist in identifying distinct content areas.

Overall, semantic tags play a vital role in creating well-structured and accessible web pages. They improve the user experience, facilitate code maintenance, and contribute to better search engine visibility.

Q.3 Differentiate between HTML Tags and Elements?

Ans. In HTML, there is a distinction between tags and elements. Here's the difference between the two:

HTML Tags: Tags are the markup labels or keywords that define the structure and behavior of HTML elements within an HTML document.

They are enclosed in angle brackets (< and >). Tags are used to mark up or define different parts of the content and provide

instructions to the web browser or other HTML processors. For example, <h1>, <p>, <div>, and <img> are all examples of HTML tags.

HTML Elements: Elements are made up of tags, along with their content and attributes.

An HTML element represents a structure or component within an HTML document.

It consists of an opening tag, content (if any), and a closing tag. The opening tag is written with the tag

name enclosed in angle brackets, while the closing tag has the tag name preceded by a forward slash (</).

The content between the opening and closing tags is the actual content that is displayed or rendered on the web page.

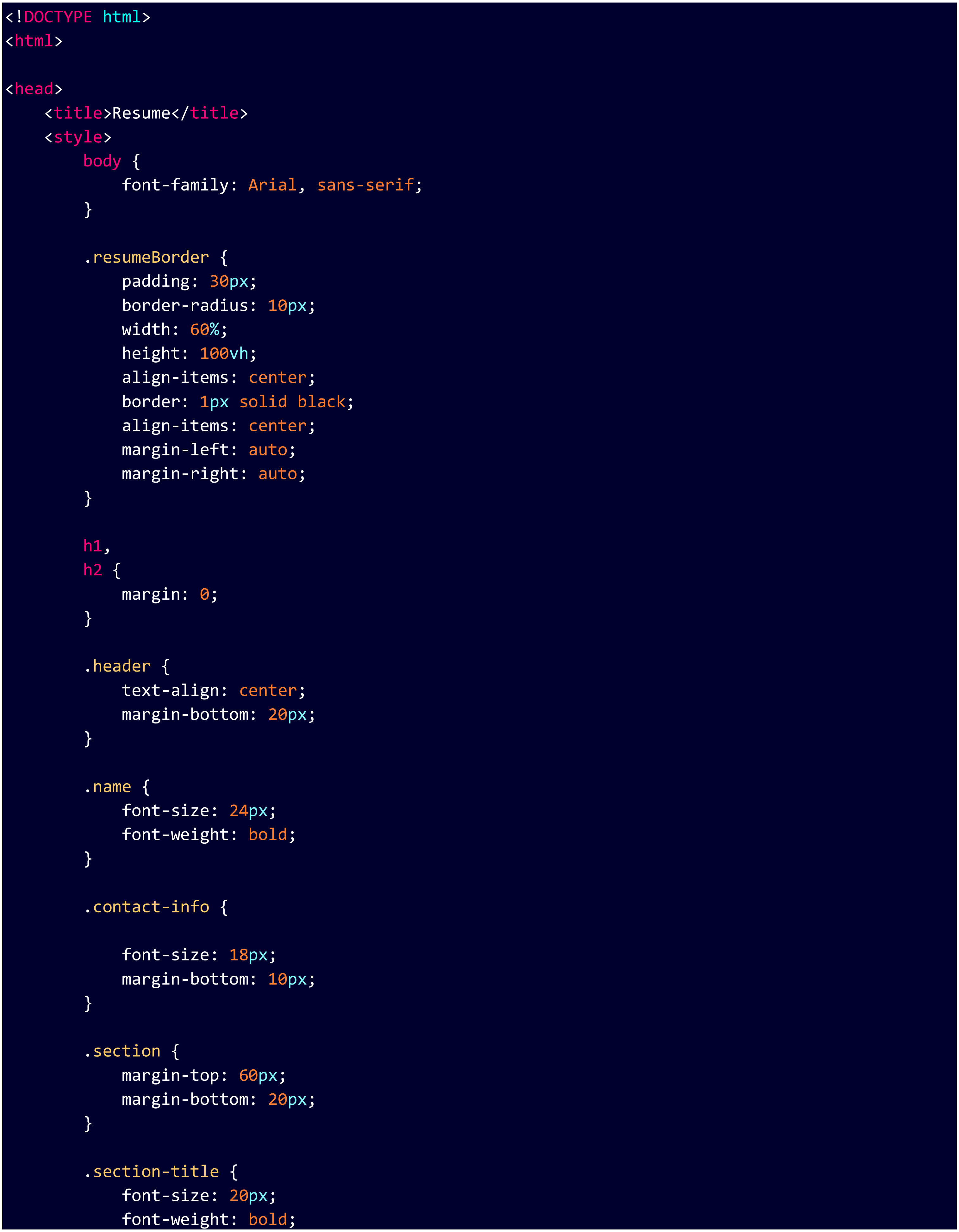
For example:

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

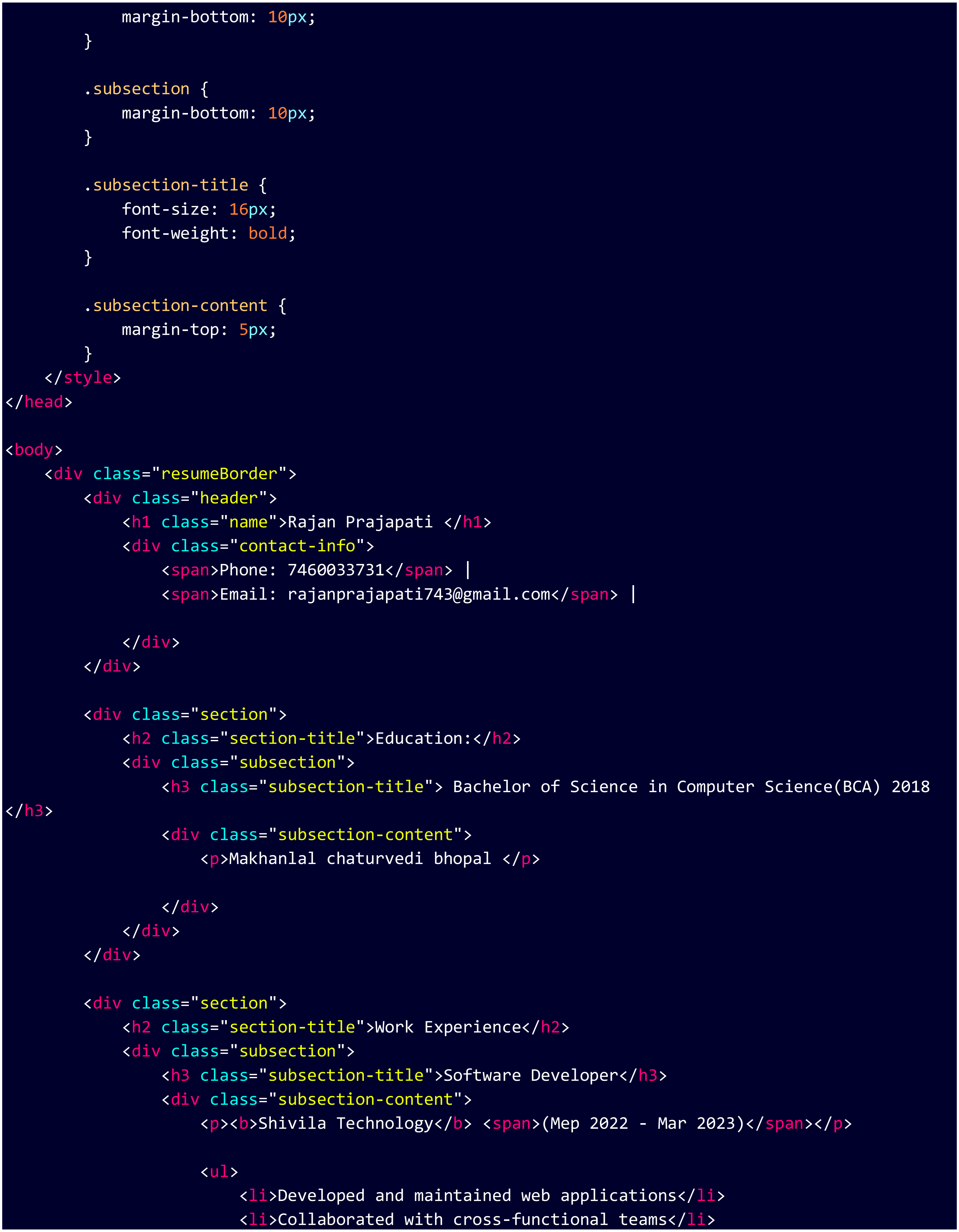
In the above example, <p> is the opening tag, This is a paragraph element. is the content, and </p> is the closing tag.

Together, they form the <p> element.

Q.4 Build Your Resume using HTML only?



```
<!DOCTYPE html>
<html>

<head>
    <title>Resume</title>
    <style>
        body {
            font-family: Arial, sans-serif;
        }

        .resumeBorder {
            padding: 30px;
            border-radius: 10px;
            width: 60%;
            height: 100vh;
            align-items: center;
            border: 1px solid black;
            align-items: center;
            margin-left: auto;
            margin-right: auto;
        }

        h1,
        h2 {
            margin: 0;
        }

        .header {
            text-align: center;
            margin-bottom: 20px;
        }

        .name {
            font-size: 24px;
            font-weight: bold;
        }

        .contact-info {

            font-size: 18px;
            margin-bottom: 10px;
        }

        .section {
            margin-top: 60px;
            margin-bottom: 20px;
        }

        .section-title {
            font-size: 20px;
            font-weight: bold;
```



```
            margin-bottom: 10px;
        }

        .subsection {
            margin-bottom: 10px;
        }

        .subsection-title {
            font-size: 16px;
            font-weight: bold;
        }

        .subsection-content {
            margin-top: 5px;
        }
    </style>
</head>

<body>
    <div class="resumeBorder">
        <div class="header">
            <h1 class="name">Rajan Prajapati </h1>
            <div class="contact-info">
                <span>Phone: 7460033731</span> |
                <span>Email: rajanprajapati743@gmail.com</span> |

            </div>
        </div>

        <div class="section">
            <h2 class="section-title">Education:</h2>
            <div class="subsection">
                <h3 class="subsection-title"> Bachelor of Science in Computer Science(BCA) 2018
</h3>
                <div class="subsection-content">
                    <p>Makhanlal chaturvedi bhopal </p>

                </div>
            </div>
        </div>

        <div class="section">
            <h2 class="section-title">Work Experience</h2>
            <div class="subsection">
                <h3 class="subsection-title">Software Developer</h3>
                <div class="subsection-content">
                    <p><b>Shivila Technology</b> <span>(Mep 2022 - Mar 2023)</span></p>

                    <ul>
                        <li>Developed and maintained web applications</li>
                        <li>Collaborated with cross-functional teams</li>
                        <li>Implemented new features and resolved bugs</li>
                    </ul>
                </div>
            </div>
        </div>

        <div class="section">
            <h2 class="section-title">Skills</h2>
            <div class="subsection">
                <h3 class="subsection-title">Programming Languages</h3>
                <div class="subsection-content">
                    <p>HTML5,CSS3,JavaScript</p>
                </div>
            </div>
            <div class="subsection">
                <h3 class="subsection-title">Frameworks</h3>
                <div class="subsection-content">
                    <p>React js,Bootstrap </p>
                </div>
            </div>
        </div>
    </div>

</body>

</html>
```

Q.5 Write HTML code so that it looks like the below image?

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<style>
    .main {
       margin-top: 50px;
       border-radius: 10px;
        border: 1px solid black;
        width: 80%;
        margin-right: auto;
        margin-left: auto;
        padding-left: 50px;
    }

    .image {
       display: flex;
       justify-content: center;
       align-items: center;
       margin-top: 20px;

    }
</style>

<body>
    <div class="main">
        <div class="image">
            <img src="https://plus.unsplash.com/premium_photo-1661767865046-92001f56c8d4?ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxzZWFyY2h8MXx8cmVhZGluZ3xlbnwwfHwwfHx8MA%3D%3D&auto=format&fit=crop&w=500&q=60"
                alt="">

        </div>
        <div class="desc1">
            <h3>We will be learning the following things this week:</h3>
            <br />
            <table>
                <thead>
                    <tr>
                        <th>Day1</th>
                        <th>Day2</th>
                        <th>Day3</th>
                        <th>Day4</th>
                    </tr>
                </thead>
                <tbody>
                    <tr>
                        <td> Linux1</td>
                        <td> HTML</td>
                        <td> Linux2</td>
                        <td> Linux3 </td>
                    </tr>
                    <tr>
                        <td> Git1</td>
                        <td> CSS</td>
                        <td> Git2</td>
                        <td> Git3 </td>
                    </tr>
                </tbody>
            </table>

            <h4>If you want to contact me, Plase fill the form:</h4>
            <form action="">
                <table>
                    <tbody>
                        <tr>
                            <td><label for=""> Name:</label></td>
                            <td><input type="text"></td>
                        </tr>
                        <tr>
                            <td><label for=""> Phone no:</label></td>
                            <td><input type="number"></td>
                        </tr>
                        <tr>
                            <td><label for=""> Email:</label></td>
                            <td><input type="email"></td>
                        </tr>
                    </tbody>
                </table>

            </form>

            <div class="programmer">
                <h2>Following things are important to be a programmer</h2>
                <br>
                <ul>
                    <li>A problem Solving Mindset</li>
                    <li>Consistency</li>
                    <ul>
                        <li>clean code</li>
                        <li>Through Knowledge of core consept</li>
                        <li>Readable code</li>
                    </ul>
                    <li>Speed</li>
                </ul>
            </div>



        </div>



    </div>

</body>

</html>
```

Q.6 What are some of the advantages of HTML5 over its previous versions?

Ans: Improved Semantics: HTML5 introduced new semantic elements such as <header>, <nav>, <section>, <article>, <footer>, etc.

These elements provide more meaningful structure to web content, making it easier for search engines, assistive technologies,

and developers to understand and manipulate the page structure.

Rich Multimedia Support: HTML5 provides native support for embedding multimedia content without the need for plugins like Flash. The <audio> and <video> elements allow developers to easily embed and control audio and video content directly within the web page, enhancing the multimedia experience for users.

Canvas and WebGL: HTML5 introduced the <canvas> element, which allows dynamic rendering of graphics, animations, and interactive visualizations directly within the browser, without relying on third-party plugins. Additionally, WebGL provides a powerful API for rendering 3D graphics, enabling the development of immersive and interactive web applications.

Offline and Storage Capabilities: HTML5 introduced the ability to store data locally on the client-side through the Web Storage API (localStorage and sessionStorage) and IndexedDB. This enables web applications to function even when offline or with limited connectivity, providing a more seamless user experience.

Improved Form Controls and Validation: HTML5 introduced new input types (date, email, url, etc.) and attributes (required, pattern, autocomplete, etc.) for form elements. These enhancements simplify form development, improve user experience, and provide built-in form validation capabilities, reducing the need for JavaScript-based validation.

Geolocation and Device Access: HTML5 includes geolocation APIs that enable web applications to access the user's location information.

This feature is useful for location-based services and personalized experiences. Additionally, HTML5 provides APIs for accessing device features such as the camera, microphone, accelerometer, and more, enabling developers to create innovative web applications with increased interactivity.

Enhanced Performance and Efficiency: HTML5 introduced several performance optimizations, including native support for asynchronous script loading (async and defer attributes), improved parsing algorithms, and reduced markup overhead. These optimizations contribute to faster page loading, better rendering performance, and improved overall efficiency.

Q.7 Create a simple Music player using html only?

Ans:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Music player</title>
    <style>
        .music-player {
            margin-right: auto;
            margin-left: auto;
            width: 300px;
            padding: 10px;
            background-color: #4d4a4a;
            border: 1px solid #ccc;
            border-radius: 4px;
            text-align: center;
        }

        .music-player h2 {
            margin-top: 0;
        }

        .music-controls {
            display: flex;
            justify-content: center;
            margin-top: 10px;
        }

        .music-controls button {
            padding: 5px 10px;
            margin: 0 5px;
        }
    </style>
</head>

<body>
    <div class="music-player">
        <h2>Music Player</h2>
        <audio src="path_to_audio_file.mp3" controls></audio>
        <div class="music-controls">
            <button>Play</button>
            <button>Pause</button>
            <button>Stop</button>
        </div>
    </div>
</body>

</html>
```

Q.8 What is the difference between <figure> tag and <img> tag?

Ans: 1. <img> tag:

The <img> tag is used to insert an image into an HTML document. It does not require a closing tag and is a self-closing tag. The <img> tag is primarilyused for displaying standalone images and does not provide any specific semantic meaning or additional content.

example: <img src="image.jpg" alt="Image description">

2. <figure> tag:

The <figure> tag is used to encapsulate self-contained content that is referenced from the main content of the document. It represents a unit of content that is usually referenced as a whole, such as an image, a diagram, or a piece of code. The <figure> tag should typically be used in conjunction with a <figcaption> tag to provide a caption or description for the content enclosed within it.

Example:
<figure> <img src="image.jpg" alt="Image description"> <figcaption>This is a beautiful image.</figcaption></figure>

Q.9 What's the difference between html tag and attribute and give example of some global attributes?

Ans:
HTML Tag: Tags are the markup labels or keywords that define the structure and behavior of HTML elements within an HTML document. Tags are enclosed in angle brackets (< and >).
They indicate the start and end of an element and provide information about how the content within the element should be displayed or behave. Examples of HTML tags include <div>, <p>, <h1>, and <a>.

HTML Attribute: Attributes are used within HTML tags to provide additional information or modify the behavior of an element.
Attributes are added to the opening tag of an HTML element and are composed of a name-value pair.
They provide extra details about the element, such as its appearance, behavior, or functionality.
Examples of HTML attributes include class, id, src, href, and alt.
Here are some examples of global attributes, which are attributes that can be applied to any HTML element:

class: Specifies one or more class names to associate with an element, allowing CSS styling or JavaScript manipulation.
id: Provides a unique identifier for an element, which can be used for CSS or JavaScript purposes.
style: Defines inline CSS styles to be applied to an element.
title: Specifies a tooltip or advisory text that appears when the mouse is hovered over the element.
accesskey: Defines a keyboard shortcut to quickly focus or activate the element.
tabindex: Specifies the tabbing order of elements when navigating through them using the keyboard.
data-*: Allows the inclusion of custom data attributes that can be used for storing extra information or data.

Example usage of global attributes:

```
<div class="container" id="main" style="background-color: red;" title="Main Container">

  <p class="highlight">Hello, World!</p>

  <a href="https://www.example.com" target="_blank" rel="noopener noreferrer">Link</a>

  <button onclick="myFunction()" data-custom-value="123">Click me</button>

</div>
```