

Q. Differentiate between HTML, CSS, JavaScript.

Ans:

HTML (Hypertext Markup Language):

Purpose: HTML is the standard markup language used to structure content on the web. It defines the elements of a web page such as headings, paragraphs, links, images, forms, and more.

Role: HTML provides the basic structure and semantics of a web page, outlining the relationships between different pieces of content.

Example:

```
<!DOCTYPE html>
<html>
<head>
  <title>My Web Page</title>
</head>
<body>
  <h1>Hello, World!</h1>
  <p>This is a paragraph of text.</p>
</body>
</html>
```

CSS (Cascading Style Sheets):

Purpose: CSS is used for styling and layout of web pages. It allows developers to control the visual presentation of HTML elements, defining aspects like colors, fonts, spacing, and positioning.

Role: CSS separates the structure (defined by HTML) from the presentation, enhancing the visual appeal and user experience.

Example:

```
body {
  font-family: Arial, sans-serif;
  background-color: #f4f4f4;
}

h1 {
  color: blue;
}

p {
  margin-bottom: 20px;
}
```

JavaScript:

Purpose: JavaScript is a scripting language that enables interactivity and dynamic content on web pages. It can manipulate the HTML and CSS in real-time, respond to user actions, and communicate with servers to fetch or send data asynchronously.

Role: JavaScript adds behavior to web pages, allowing for things like form validation, animations, updating content without refreshing the page, and more.

Example:

```
// JavaScript code to change the content of a paragraph
document.getElementById("demo").innerHTML = "Hello, JavaScript!";
```