3.**HTML 5 and Cascading Style Sheets, Types of CSS**

a. **Write a HTML program, that makes use of <article>, <aside>, <figure>, <figcaption>, <footer>, <header>, <main>, <nav>,<section>, <div>, <span> tags.**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>HTML5 Example - 2025</title>

</head>

<body>

<div>

<header>

<h2>ScholarHat.com</h2>

<nav>

<h1>nav tag</h1>

<a href=" ">Home</a>

<a href=" ">Contacts</a>

<a href=" ">index</a>

</nav>

</header>

</div>

<article>

<h2>Semantic tags in HTML</h2>

<p> The article element have independent, self-contained content</p>

</article>

<aside>

<h5>Note:</h5>

<p>Semantic tags examples.</p>

</aside>

<section>

<h2>ScholarHat</h2>

<pre>Learn live from Microsoft MVPs and Google GDEs to master in demand job skills.

Build real-world projects with recommended design patterns and best practices.

Empower yourself to crack your next job interviews at world top tech companies.</pre> </section>

<figure>

<img src="html.png" style="width:10%">

<figcaption>HTML logo.</figcaption>

</figure>

<h2>ScholarHat.com</h2>

<p> An educational website</p>

</header>

</body>

</html>

**b. Write a HTML program, to embed audio and video into HTMLweb page.**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>My First HTML5 Page</title>

</head>

<div style="border-style:solid;border-color:red;">

<audio controls>

<source src="sample.mp3" type="audio/mpeg">

Your browser does not support the html audio tag

</audio><br/>

<a href="sample.mp3">Download audio</a>

</div>

<div style="border-style:double;border-color:green;">

<video width="400" height="350" controls>

<source src="count.mp4" type="video/mp4">

</video>

</div>

</body>

</html>

**4.Write a program to apply different types of selector forms**

**i. Simple selector (element, id, class, group, universal)**

<!DOCTYPE html>

<html>

<head>

<style>

p {

text-align: center;

color: green;

}

#para1 {

text-align: center;

color: red;

}

.center {

text-align: center;

color: yellow;

}

h2, h3{

text-align: right;

color: pink;

}

\*{

text-decoration:overline;

background-color:blue;

}

</style>

</head>

<body>

<p>Every paragraph will be affected by the style.</p>

<p>Me too!</p>

<p id="para1">And me!</p>

<h1 class="center">Yellow and center-aligned heading</h1>

<p class="center">yellow and center-aligned paragraph.</p>

<h2>Hello World!</h2>

<h3>Smaller heading!</h3>

</body>

</html>

**ii. Combinator selector (descendant, child, adjacentsibling, general sibling)**

<!DOCTYPE html>

<html>

<head>

<style>

/\*Descendant combinator\*/

div p {

background-color: yellow;

}

/\*child combinator\*/

div > p {

background-color: green;

}

/\* adjacent sibbling combinator\*/

div + p {

background-color: red;

}

</style>

</head>

<body>

<h2>Descendant Selector</h2>

<p>The descendant selector matches all elements that are descendants of a specified element.</p>

<div>

<p>Paragraph 1 in the div.</p>

<p>Paragraph 2 in the div.</p>

<section><p>Paragraph 3 in the div.</p></section>

</div>

<p>Paragraph 4. Not in a div.</p>

<p>Paragraph 5. Not in a div.</p>

</body>

</html>

**iii. Pseudo class selector**

<!DOCTYPE html>

<html>

<head>

<style>

/\* unvisited link \*/

a:link {

color: red;

}

/\* visited link \*/

a:visited {

color: green;

}

/\* mouse over link \*/

a:hover {

color: hotpink;

}

/\* selected link \*/

a:active {

color: blue;

}

</style>

</head>

<body>

<h2>Styling a link depending on state</h2>

<p><b><a href="https://www.google.com" target="\_blank">This is a link</a></b></p>

<p><b>Note:</b> a:hover MUST come after a:link and a:visited in the CSS definition in order to be effective.</p>

<p><b>Note:</b> a:active MUST come after a:hover in the CSS definition in order to be effective.</p>

</body>

</html>

**iv. Pseudo-element selector**

<!DOCTYPE html>

<html lang="en">

<head>

<style>

p::first-line {

color: red;

}

p::first-letter {

color: orange;

font-size: 32px;

font-weight: bold;

}

</style>

</head>

<body>

<p>

We can use ::first-line pseudo-element to select and style

the first line of the text within the HTML element. Here, the color

of the first line is different from others.We can use ::first-line pseudo-element to select and style

the first line of the text within the HTML element. Here, the color

of the first line is different from others.

</p>

<p>

Let's add one more paragraph to visualize the changes in text color

and understand the pseudo-element more clearly. Here, also only the first

line will change its color to red.We can use ::first-line pseudo-element to select and style

the first line of the text within the HTML element. Here, the color

of the first line is different from others.

</p>

</body>

</html>

v. Attribute selector