**MODULE (HTML5) – 3**

Q1.) What are the new tags added in HTML5?

A1.) The new tags added in HTML5 are:

* <article> tag: The <article> tag is one of the new sectioning elements in HTML5. This HTML tag is used to represent an article specifically, the content within the <article> tag is independent of the other content of the site.
* <aside> tag: The <aside> tag is used to describe the main object of the web page in a shorter way like a highlighter. It basically identifies the content that is related to the primary content of the web page but does not constitute the main intent of the primary tag.
* <audio> tag: The <audio> tag is used to insert an audio into an HTML webpage.
* <canvas> tag: The <canvas> tag in HTML is used to draw graphics on a web page using Javascript. It can be used to draw paths, boxes, texts, gradients and add images. By default, it does not contain borders and text.
* <command> tag: The command tag defines a command button, invoke as per user action. The <command> tag button is used in a special type of operation.
* <datalist> tag: This tag is used to provide autocomplete feature in the HTML files. It can be used with an input tag so that users can easily fill the data in the forms using select the data.
* <details> tag: This tag is used for the content/information which is initially hidden but could be displayed if the user wishes to see it. This tag is used to create an interactive widget that the user can open or close. The content of the details tag is visible when opening the set attributes.
* <embed> tag: This tag is used for embedding external applications which are generally multimedia content like audio or video into an HTML document. It is used as a container for embedding plug-ins such as flash animations. This is a new tag in HTML5 and only requires a starting tag.
* <figure> tag: This tag is used to add self-contained content like illustrations, diagrams, photos, or codes listing in a document. It is related to main flow, but it can be used in any position of a document and the figure goes with the flow of the document and if remove it then it should not affect the flow of the document.
* <footer> tag: The <footer> tag in HTML is used to define a footer of HTML document. This section contains the footer information (author information, copyright information, carriers etc.). The footer tag is used within the body tag. The <footer> tag is new in the HTML5. The footer elements require a start tag as well as an end tag.
* <header> tag: The <header> tag contains information related to the title and heading of the related content. The <header> element can also be used to wrap a section’s table of contents, a search form, or any relevant logos. The <header> tag is a new tag in HTML5 and it requires a starting tag as well as an end tag. There can be several <header> elements in one document.
* <hgroup> tag: he <hgroup> tag in HTML stands for heading group and is used to group the heading elements. The <hgroup> tag in HTML is used to wrap one or more heading elements from <h1> to <h6>, such as the headings and sub-headings. The <hgroup> tag requires the starting tag as well as ending tag.
* <mark> tag: The <mark> tag in HTML is used to define the marked text. It is used to highlight the part of the text in a paragraph. The <mark> tag is new in HTML5.
* <video> tag: The <video> tag is used to embed video content in a document, such as a movie clip or other video streams.

Q2.) How to embed audio and video in a webpage?

A2.) To embed audio in HTML, we use the <audio> tag. Before HTML5, audio cannot be added to web pages. To play audio, we used web plugins like Flash. After the release of HTML5, it is possible. This tag supports Chrome, Firefox, Safari, Opera, and Edge in three audio formats – MP3, WAV, OGG. Syntax is:

<audio>

<source src="file\_name" type="audio\_file\_type">

</audio>

For example,

<!DOCTYPE html>

<html>

<head>

<title>Page Title</title>

</head>

<body>

<h2>Click play button to play audio</h2>

<audio src="./test.mp3" controls></audio>

</body>

</html>

To embed video in HTML, we use the <video> tag. It contains one or more video sources at a time using <source> tag. It supports MP4, WebM, and Ogg in all modern browsers. Syntax is:

<video>

<source src="file\_name" type="video\_file\_type">

</video>

For example,

<!DOCTYPE html>

<html>

<head>

<title>Page Title</title>

</head>

<body>

<h2>Click play button to play video</h2>

<video src="./test.mp4" controls></video>

</body>

</html>

Q3.) Semantic element in HTML5?

A3.) Semantic elements have meaningful names which tell about the type of content. For example header, footer, table, … etc. HTML5 introduces many semantic elements as mentioned below which make the code easier to write and understand for the developer as well as instruct the browser on how to treat them.

* article
* aside
* details
* figcaption
* figure
* footer
* header
* main
* mark
* nav
* section

**Article**: It contains independent content which doesn’t require any other context.

Example: Blog Post, Newspaper Article, etc.

<!DOCTYPE html>

<html>

<head>

<title>Article Tag</title>

<style>

h1 {

Color:#006400;

font-size:50px;

Text-align:left;

}

p {

font-size:25px;

text-align:left;

margin-top:-40px;

}

</style>

</head>

<body>

<article>

<h1>UEFA Champions League</h1>

<p>Home of European Football</p>

</article>

</body>

</html>

Q4.) Canvas and SVG tags

A4.) **SVG:** The Scalable Vector Graphics (SVG) is an XML-based image format that is used to define two-dimensional vector-based graphics for the web. Unlike raster image (Ex .jpg, .gif, .png, etc.), a vector image can be scaled up or down to any extent without losing the image quality.

An SVG image is drawn out using a series of statements that follow the XML schema — that means SVG images can be created and edited with any text editor, such as Notepad. There are several other advantages of using SVG over other image formats like JPEG, GIF, PNG, etc.

For example:

<!DOCTYPE html>

<html>

<head>

<style>

#svgelem {

position: relative;

left: 50%;

-webkit-transform: translateX(-20%);

-ms-transform: translateX(-20%);

transform: translateX(-20%);

}

</style>

<title>HTML5 SVG</title>

</head>

<body>

<h2 align="center">

SVG Circle(Football)

</h2>

<svg id="svgelem" height="200">

<circle id="greencircle" cx="60"

cy="60" r="50" fill="green" />

</svg>

</body>

</html>

**Canvas:** The HTML element is used to draw graphics on the fly, via scripting (usually JavaScript). The element is only a container for graphics. You must use a script to actually draw the graphics. Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

For example:

<!DOCTYPE html>

<html>

<head>

<title>HTML5 Canvas Tag</title>

</head>

<body>

<h2>Canvas Square(Basketball)</h2>

<canvas id="newCanvas" width="100" height="100"

style="border:1px solid #000000;">

</canvas>

<script>

var c = document.getElementById('newCanvas');

var ctx = c.getContext('2d');

ctx.fillStyle = '#7cce2b';

ctx.fillRect(0, 0, 100, 100);

</script>

</body>

</html>