Web Designing Assignment

MODULE: 3

HTML5

1.What are the new tags added in HTML5?

HTML5 introduced several new elements to improve web development. Some of them include:

- **Structural Elements:**
  - <header>, <footer>, <article>, <section>, <aside>, <nav>, <main>, <figure>, <figcaption>
- **Multimedia Elements:**
  - <audio>, <video>, <source>, <track>
- **Form Elements:**
  - <datalist>, <output>, <progress>, <meter>
- **Graphics and Interactive Elements:**
  - <canvas>, <svg>
- **Other Elements:**
  - <mark>, <time>, <wbr>, <details>, <summary>

2.How to embed audio and video in a webpage?

HTML5 makes embedding audio and video easy with the <audio> and <video> tags.

Embedding Audio:

html

```
<audio controls>
  <source src="audio.mp3" type="audio/mpeg">
  <source src="audio.ogg" type="audio/ogg">
  Your browser does not support the audio element.
</audio>
```

- The controls attribute adds play, pause, and volume controls.
- Multiple <source> elements allow browser compatibility.

Embedding Video:

html

```
<video controls width="600">
  <source src="video.mp4" type="video/mp4">
  <source src="video.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

- controls adds playback options.
- width and height define the video dimensions.
- Alternative formats ensure better support across browsers.

3.Semantic element in HTML5?

Semantic elements help improve the readability of the HTML structure. Some important semantic elements include:

- <header> – Defines a page or section header.
- <nav> – Represents navigation links.
- <section> – Groups related content together.
- <article> – Defines an independent, self-contained content block.
- <aside> – Represents side content, like sidebars.
- <footer> – Defines the footer of a webpage.
- <figure> and <figcaption> – Used for images, charts, or diagrams with captions.

4.Canvas and SVG tags

Canvas (<canvas>)

- Used for drawing graphics using JavaScript.
- Does not have built-in shapes; everything must be drawn with scripts.
- Example:

```
html
<canvas id="myCanvas" width="400" height="200"></canvas>
<script>
  var canvas = document.getElementById("myCanvas");
  var ctx = canvas.getContext("2d");
  ctx.fillStyle = "blue";
  ctx.fillRect(50, 50, 100, 100);
</script>
```

- Best for dynamic and high-performance graphics.

SVG (<svg>)

- A markup-based vector graphics format.
- Uses XML to define shapes.
- Example:

```
html
<svg width="200" height="200">
  <circle cx="100" cy="100" r="50" stroke="black" stroke-
width="3" fill="red" />
</svg>
```

- Best for static images and scalable graphics.