HTML5 navigation:

<nav> : The <nav> tag defines a set of navigation links.

Notice that NOT all links of a document should be inside a <nav> element. The <nav> element is intended only for major block of navigation links.

Example:

```html
<nav>
  <a href="/html/" >HTML</a> | 
  <a href="/css/" >CSS</a> | 
  <a href="/js/" >JavaScript</a> | 
  <a href="/jquery/" >jQuery</a>
</nav>
```

CSS Navigation Bar

A navigation bar needs standard HTML as a base.

In our examples we will build the navigation bar from a standard HTML list.

A navigation bar is basically a list of links, so using the <ul> and <li> elements makes perfect sense:

Example

```html
<ul>
  <li><a href="default.asp">Home</a></li>
  <li><a href="news.asp">News</a></li>
  <li><a href="contact.asp">Contact</a></li>
  <li><a href="about.asp">About</a></li>
</ul>
```

Image Map:

The <map> tag defines an image-map. An image-map is an image with clickable areas.

```html
<img src="workplace.jpg" alt="Workplace" usemap="#workmap">

<map name="workmap">
  <area shape="rect" coords="34,44,270,350" alt="Computer" href="computer.htm">
  <area shape="rect" coords="290,172,333,250" alt="Phone" href="phone.htm">
```

<area shape="circle" coords="337,300,44" alt="Coffee" href="coffee.htm">
</map>

**HTML Semantic Elements**

A semantic element clearly describes its meaning to both the browser and the developer.

Examples of **non-semantic** elements: `<div>` and `<span>` - Tells nothing about its content.

Examples of **semantic** elements: `<form>`, `<table>`, and `<article>` - Clearly defines its content.

![HTML Semantic Elements Diagram]

**Defining an HTML Table**

An HTML table is defined with the `<table>` tag.

Each table row is defined with the `<tr>` tag. A table header is defined with the `<th>` tag. By default, table headings are bold and centered. A table data/cell is defined with the `<td>` tag.

- Use the HTML `<table>` element to define a table
- Use the HTML `<tr>` element to define a table row
- Use the HTML `<td>` element to define a table data
- Use the HTML `<th>` element to define a table heading
- Use the HTML `<caption>` element to define a table caption
- Use the CSS `border` property to define a border
- Use the CSS `border-collapse` property to collapse cell borders
- Use the CSS `padding` property to add padding to cells
Use the CSS text-align property to align cell text

Use the CSS border-spacing property to set the spacing between cells

Use the colspan attribute to make a cell span many columns

Use the rowspan attribute to make a cell span many rows

Use the id attribute to uniquely define one table

**Form:**

<table>
<thead>
<tr>
<th>Tag</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;form&gt;</code>…<code>&lt;form&gt;</code></td>
<td>defines a form that is used to collect user input</td>
</tr>
<tr>
<td><code>&lt;input type=&quot;text&quot;&gt;</code></td>
<td>Defines a single-line text input field</td>
</tr>
<tr>
<td><code>&lt;input type=&quot;radio&quot;&gt;</code></td>
<td>Defines a radio button (for selecting one of many choices)</td>
</tr>
<tr>
<td><code>&lt;input type=&quot;submit&quot;&gt;</code></td>
<td>Defines a submit button (for submitting the form)</td>
</tr>
<tr>
<td><code>&lt;form action=&quot;/action_page.php&quot;&gt;</code></td>
<td>The action is set to the current page.</td>
</tr>
</tbody>
</table>

**Media:**

**What is Multimedia?**

Multimedia comes in many different formats. It can be almost anything you can hear or see.

Examples: Images, music, sound, videos, records, films, animations, and more.

Web pages often contain multimedia elements of different types and formats.

In this chapter you will learn about the different multimedia formats.

**The HTML `<video>` Element**

To show a video in HTML, use the `<video>` element:

**Example**

<video width="320" height="240" controls>
  <source src="movie.mp4" type="video/mp4"/>
The HTML <audio> Element

To play an audio file in HTML, use the <audio> element:

Example

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

NOTE: THESE POINTS ARE INDICATIVE AND NOT EXHAUSTIVE. PLEASE ELLABORATE THE ANSWERS WITH PROPER EXAMPLES WHEREVER APPLICABLE.

Write answers for following

1. What is the use of redirection to another URL? Design a HTML page to demonstrate.
2. Explain any 3 semantic tags.
3. Differentiate between cell padding and cell spacing.
4. Explain <video> tag in HTML 5.
5. Explain with example how text based navigation bar is created?
6. How to format and position a division on a web page? Explain with example.
7. Explain tag with the help of suitable example.
8. Explain following attributes of td tag:
   i. rowspan
   ii. colspan
   iii. th
   iv. font-color
   v. bgcolor
9. How is the clickable area created in imagemap? Explain with the help of an example.
10. List various tags used to embed audio in a page. Explain with example any two of them.