
HTML - Adding multimedia elements and Forms

Learning Objectives:

The students will learn the following:

- How to insert images with HTML document.
- How to insert music and movies in web pages.
- What is Forms and how to create forms and controls within an HTML document

**12.1 Inserting Images**

Images are essential element to make an HTML presentation as more attractive manner. Moreover images are used to depict many complex concepts in simple way. To make more attractive and communicative web pages, images should be added in the appropriate places.

Images displayed on the web page should be converted to universally supported format. Most of the browsers supports, GIF, JPEG and PNG images formats. HTML-5 introduces SVG images. One format of image can be converted to another format by using Image editing applications such as Photoshop, Picasa, GIMP etc.,

12.1.1 Familiar Image Formats**GIF (Graphical Interchange Format)**

This format is one of the popular format for animated images. It was developed by CompuServe. Usually this image format is suitable for presenting tiny animated images, logos, icons, line art etc., It is not suitable for photographic work, because it uses maximum of 256 colours. Animated GIF do not support sound or playback control.

JPEG (Joint Photographic Experts Group)

JPEG is the most popular image format supported by all web browsers. This format is suitable for photographic images. Unlike GIF, JPEG can include any number of colours.

PNG (Portable Network Graphics)

PNG is designed as a replacement for GIF. It is also supported by all browsers.

SVG (Scalable Vector Graphics)

SVG is a graphics format that was developed for web. It was standardized by World Wide Web Consortium (W3C) in 2001. All current web browsers supports basic features of SVG.

12.1.2 Inserting Images with HTML document

The **** tag along with the attribute `src` (Source) is used to add images in HTML document.

General format:

```
<img src = image_name_with_extension>
```

(OR)

```
<img src = URL>
```

Example:

```
<img src = image1.gif>
```

`Src` attribute is the main attribute used to specify the file name of the image to be inserted. If the image is not in the current working folder, the image file name should clearly specify with the path of the file or URL, where the file is available.

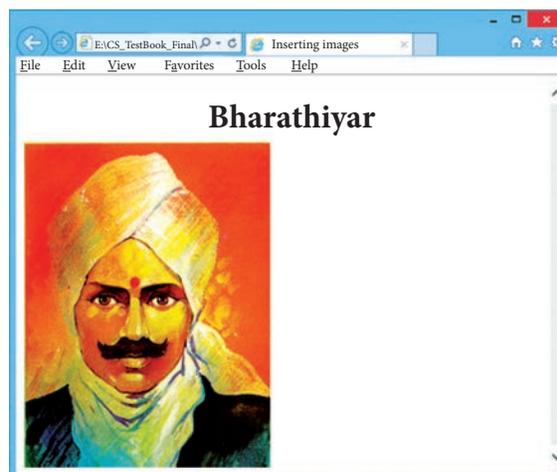
Example:

```
<img src = "D:\images\animals\cat.jpeg">
```

Illustration 12.1: An HTML code to insert an inline image

```
<html>
<head>
<title> Inserting Images </title>
</head>
<body>
  <h1 align = center> Bharathiyar </h1>
  <img src = bharathiyar.gif>
</body>
</html>
```

The output will be:



12.1.3 Other Attributes of tag:

Other than src, the tag has many attributes the enable to control how the image is presented on the page.

Alt (Alternative Text)

The alt attribute within tag is used to describe the image, so that some text is conveyed even when the image cannot be displayed.

Example:

```
<img src = bharathiyar.gif alt = "National Poet of India">
```

Width and Height:

Width and **Height** attributes are used to set the width and height of an image. The values of these attributes should be either pixels or percentage of its actual size. If these attributes are not specified, the browser displays the image in its original size.

Vspace (Vertical Space) and Hspace (Horizontal Space):

Vspace and Hspace attributes are used to set Vertical and Horizontal space between the images.

Illustration 12.2: An HTML code to demonstrate attributes

```
<html>
<head>
<title> Inserting Images </title>
</head>
<body>
<h1 align = center> Mahakavi Bharathi </h1>
<img src = bharathiyar.gif alt = "National Poet of India" Width = 20% Height = 25%
vspace = 20 Hspace = 20>
<img src = bharathiyar.gif alt = "National Poet of India" Width = 20% Height = 25%
vspace = 20 Hspace = 20>
<img src = bharathiyar.gif alt = "National Poet of India" Width = 20% Height = 25%
vspace = 20 Hspace = 20> <br>
<img src = bharathiyar.gif alt = "National Poet of India" Width = 20% Height = 25%
vspace = 20 Hspace = 20>
<img src = bharathiyar.gif alt = "National Poet of India" Width = 20% Height = 25%
vspace = 20 Hspace = 20> <br>
</body>
</html>
```

The output will be:



Align:

The align attribute used to aligns the image with respect to the base line of the text. This attribute has the following values.

- Bottom – Aligns the bottom of the image with the baseline of the text. This is the default setting.
- Middle – Aligns the middle of the image with the baseline of the text.
- Top – Aligns the top of the image with the baseline of the text.

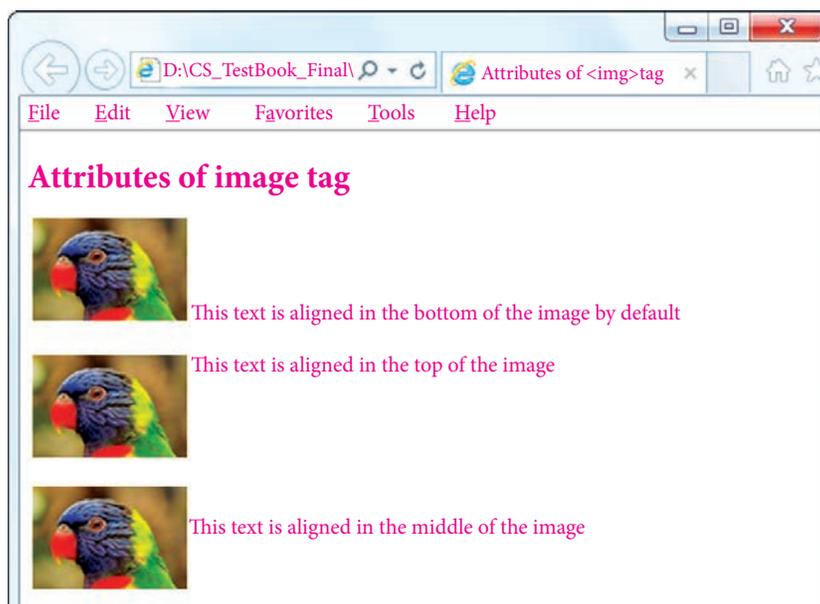
Left and Right values of Align attribute:

Using left and right values with align attribute, displayed the image on the left and right side of the text.

Illustration 12.3: An HTML code to demonstrate baseline of text

```
<html>
<head>
  <title> Attributes of <img> tag </title>
</head>
<body>
<h2> Attributes of image tag </h2>
  
  This text is aligned in the bottom of the image by default <br> <br> <br>
  
  This text is aligned in the top of the image <br><br>
  
  This text is aligned on the middle of the image
</body>
</html>
```

The output will be:



12.2 Scrolling text using <Marquee>

In HTML, a piece of text or image can be moved horizontally or vertically by using <marquee> tag. This feature makes a web page as more attractive.

General format:

<marquee> Text or image to be scroll </marquee>

Attributes of <marquee>

Height and Width

These attributes are used to set height and width of the marquee. The values should be either in pixels or in percentage of browser window.

Direction

This is used to specify the direction of the movement of text or image. The text or image will move towards right to left by default. So, the default direction is left. The Possible values are 'up', 'down', 'left' or 'right'.

Behaviour:

This attribute is used to specify the type of scrolling. The values are 'scroll', 'slide' and 'alternate'.

Scrolldelay:

This attribute is used to define the time delay between each jump. The time unit should be in seconds.

Scrollamount:

This is used to define the speed of the scroll.

Loop:

This is for defining how many times the marquee element should repeat on the screen. The default value is 'infinite', which means the marquee element scrolls endlessly.

Bgcolor:

This is used to specify the background color to the marquee elements.

Hspace and Vspace:

This is for defining the horizontal and vertical space around the marquee. The value can be in pixels or percentage.

Illustration 12.4: An HTML code to demonstrate marquee

```
<html>
<head>
<title> Marquee </title>
</head>
<body>
  <marquee> <b> The Government of Tamilnadu </b>, Directorate of School
  Education </marquee>
  <marquee direction=right> Welcome to <b> The State Council of Educational
  Research and Training </b>, Tamilnadu </marquee>
</body>
</html>
```

12.3 Adding Video and Sound

Video and Sound are the core part of the modern web pages. In HTML, a video or audio content may be included as Inline or external data. The inline refers to audio or video files are handled as part of the page. These media files play the audio or video when the page is visible in the browser window. The external refers, linking external audio or video files as url.

The **<embed>** tag is used to attach an audio or video file easily within webpage. This tag includes the controls of the multimedia automatically in the browser. The **<noembed>** tag may be used as an alternate to display some other media file, in the case of the browser does not support **<embed>** tag.

Src is the primary attribute used with **<embed>** tag. The src attribute used to specify the name of the media file with its source location. Other attributes such as alt, height, width and align are used as it is used with ****.

General Format:

<embed src = audio / video file name with location> </embed>



Illustration 12.5: An HTML code to demonstrate adding audio and video files (internal source)

```
<html>
<head>
<title> Adding Multimedii Files </title>
</head>
<body>

<marquee> Welcome to <b> The State Council of Educational Research and Traning
</b>, Tamilnadu </marquee>
<embed src="D:\CS_Videos\CS_Video.mp4" width=50% height=50%> </embed>
</body>
</html>
```

12.3.1 Background music:

Music can be played in the background to a webpage, while the page is viewed. This is known as 'inline' sound or movie. The <bgsound> tag is used to attach an inline sound file in HTML. The src attribute is used to define the location of the media file. Volume attribute used to adjust volume control. The loop attribute defines the duration of play. The 'infinite' value causes the audio play as long as the page is in view.

General Format:

<bgsound src=music file name with location>

Illustration 12.6: An HTML code to demonstrate inline sound

```
<html>
<head>
<title> Inline Sound </title>
</head>
<body>
  
  <marquee> Welcome to <b> The State Council of Educational Research and
  Training </b>, Tamilnadu </marquee>
  <bgsound src="D:\CS_Videos\Tamil Thai Vazhthu.mp3" loop=infinite>
</body>
</html>
```



12.4 Working with Forms

Forms are used to receive information from the user. Forms are commonly used to allow users to register on a Web site, to log in to a Web site, to order a product, and to send feedback. In search engines, forms are used to accept the keywords for search.

The `<form>` tag is used to create a form. An HTML form starts with `<form>` and ends with `</form>` tag. Forms contain many types of form elements, such as text boxes, radio buttons, check boxes, buttons and drop-down lists.

The form has a special element, which is **submit** button, which will submit the entries of a form to a server application to process the entries. Each element in the form is assigned a name using the **name** attribute. Users enter values into the text boxes, or make selections from the radio buttons, check boxes, and drop down lists. The values they enter or select are passed with the name of the corresponding form element to the Web server.

12.4.1 Attributes frequently used with `<form>` tag

The important attributes used with the `<form>` tag are method and action attributes.

Method

The method attribute of the **form** tag is used to identify how the form element names and values will be sent to the server. The **get** method will append the names of the form elements and their values to the URL. The **post** method will send the names and values of the form elements as packets.

Action

The **action** attribute identifies the server side program or script that will process the form. The action will be the name of a Common Gateway Interface (CGI) program written in programming languages like Perl, JavaScript, PHP or Active Server Pages (ASP). (This will be discussed with JavaScript in this book).

Figure 12.1 HTML Form Controls

General Format of `<form>` tag

`<Form method=get/post action= "back_end_server_script">`

Form elements

`</Form>`

12.4.2 Form Controls:

In HTML, there are different types of form controls are used to collect data. They are Text box, Password, Checkbox, Radio buttons, Text area, Select box, Submit and Reset Button.

12.4.2.1 `<Input>` Tag

Most of the form controls are created by using `<input>` tag. The `<input>` is an empty tag used to create different form elements or controls such as text box, radio buttons so on.

Attributes of `<input>` tag:

Type:

This attribute is used define the type of control to be created by `<input>` tag. The values of type attribute is listed below:

Table: 12.1

Value of type attribute	Description
Text	Create a Text Box. The element used to get all kind of text input such as name, address etc.,
Password	Similar as Text box. But, while entering data, the characters are appearing as coded symbols such as asterisk.
Checkbox	Check box is an element appearing like a small square box. When the user click on the square a tiny tick mark will appear inside the square. This element is used to select multiple options.
Radio Button	Radio button is used to select any one of the multiple options from the list. This element looks like a small circle, when the user select an item, a tiny dot will appear within the circle. If the user selects another option, previously selected option will be deselected. This means, user can select any one of the given option form a group.
Reset	It is a special command button used to clear all the entries made in the form.
Submit	It is also a special command button used to submit all the entries made in the form to the backend server.
Button	This is a standard graphical button on the form used to call functions on click.

Name:

This attribute of <input> tag is used to assign a name to the input controls. When the form is submitted, the data values are passed to the server along with the names of the controls.

Value:

This attribute is used to define default value to some controls.

Size:

This is used to set the width of the input text in terms of characters. It is applicable only for textbox and password boxes.

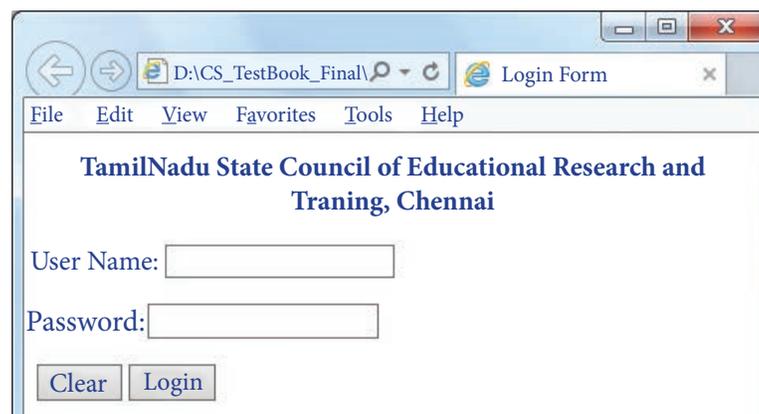
Maxlength:

This attribute of <input> tag is used to set the length of the input character (number of characters to be inputted) to the textbox and password boxes.

Illustration 12.7: An HTML code to demonstrate Form and Form controls (Login form)

```
<html>
<head>
  <title> Login Form </title>
</head>
<body>
<h3 align=center> TamilNadu State Council of Educational Research and Training,
Chennai </h3>
<Form Action = "mailto:abcd.xyz@com" method=post>
  <p> User Name:
  <Input type = text name="user_name" size = 20 maxlength = 15> </p>
  <p> Password:
  <Input type = password name="pass" size = 20 maxlength = 15> </p>
  <Input type = reset value = "Clear">
  <Input type = submit value = "Login">
</Form>
</body>
</html>
```

The output will be:



Note: Data received from the user can send to receiver through mail using “mailto” action.

Illustration 12.8: An HTML code to demonstrate Form and Form controls (Text box, checkbox and radio buttons)

```
<html>
<head>
  <title> HTML - Form and Controls </title>
</head>
<body>
<h3 align=center> Forms and Controls </h3>
<Form action="mailto:abcd.xyz@com" method=post>
  <p> Student Name:
  <input type=text name=name size=30 maxlength=25></p>
  <p> Gender:
  <input type=radio name=gender value=boy> Boy
  <input type=radio name=gender value=girl> Girl
  </p>
  <p> Subjects:
  <input type=checkbox name=sub value=Tam> Tamil
  <input type=checkbox name=sub value=Tel> Telugu
  <input type=checkbox name=sub value=Eng> English
  <input type=checkbox name=sub value=Phy> Physics
  <input type=checkbox name=sub value=Eco> Economics
  </p>
  <input type=reset name=reset value="Clear">
  <input type=submit name=submit value="Submit">
</Form>
</body>
</html>
```

The output will be:

The screenshot shows a web browser window with the following content:

Forms and Controls

Student Name :

Gender: Boy Girl

Subjects: Tamil Telugu English Physics Economics

12.4.2.2 <Select> Tag

The <select> tag is used to create dropdown list box in HTML. It provides a list of various options as a dropdown list. This element is more helpful when a number of options are to be displayed in a limited space. The <option> tag is used to specify list items.

Attributes of <Select> tag:

Name – Provide the name to the control, which is sent to the server.

Size – Determine the style of dropdown list box.

Size = 1 dropdown list box

Size = 2 List box

Multiple – Allows user to select multiple values.

Attributes of <Option> tag:

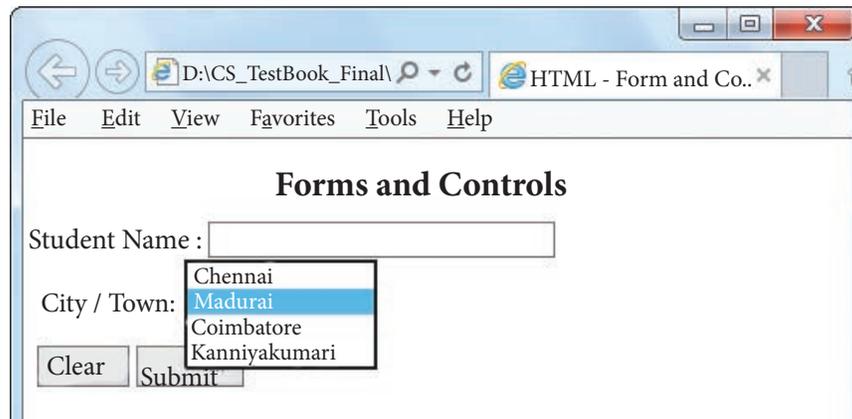
Selected – Indicate default selection

Value – Value to be submitted to server

Illustration 12.9: An HTML code to demonstrate Form and Form controls (Dropdown List box)

```
<html>
<head>
  <title> HTML - Form and Controls </title>
</head>
<body>
<h3 align=center> Forms and Controls </h3>
<Form action="mailto:abcd.xyz@com" method=post>
<p> Student Name:
<Input type=text name=name size=30 maxlength=25></p>
<p> City / Town:
<Select name = area size= 1>
  <option value = CHN> Chennai </option>
  <option value = MDR selected> Madurai </option>
  <option value = CBO> Coimbatore </option>
  <option value = KKM> Kanyakumari </option>
</Select> </p>
<input type=reset name=reset value="Clear">
<input type=submit name=submit value="Submit">
</Form>
</body>
</html>
```

The output will be



12.4.2.3 <Textarea> tag

The <Textarea> tag is used to receive multi line text data as input. It is a container tag. The main attributes of <Textarea> are

Name – Used to define name to the control

Rows – Specifies the number of rows in the text area control

Cols – Specifies the number of columns in the text area. (number of characters in a line)

Illustration 12.10: An HTML code to demonstrate Form and Form controls (Text Area – Multiline input)

```
<html>
<head>
  <title> HTML - Form and Controls </title>
</head>
<body>
<h3 align=center> Forms and Controls </h3>
<Form action="mailto:abcd.xyz@com" method=post>
  <p> Student Name:
  <Input type=text name=name size=30 maxlength=25></p>
  <p> Email:
  <input type=text name=mail size=30 maxlength=25> </p>
  <p> Comments: <br>
  <Textarea rows=5 cols=50 name=comments> </Textarea>
  </p>
  <input type=reset name=reset value="Clear">
  <input type=submit name=submit value="Submit">
</Form>
</body>
</html>
```

The output will be:



The screenshot shows a web browser window with the title 'HTML - Form and Co.'. The address bar shows the file path 'D:\CS_TestBook_Final\'. The browser's menu bar includes 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. The main content area displays a form titled 'Forms and Controls'. The form contains the following elements: a label 'Student Name:' followed by a text input field; a label 'Email:' followed by a text input field; a label 'Comments:' followed by a text area with vertical scrollbars; and two buttons at the bottom, 'Clear' and 'Submit'.

Illustration 12.11: An HTML code to demonstrate All Form controls discussed in this chapter

```
<html>
<head>
  <title> HTML - Form and Controls </title>
</head>
<body>
<h3 align=center> Students Data Entry Form </h3>
<Form action="mailto:abcd.xyz@com" method=post>
<p> Student Name:
<input type=text name=name size=30 maxlength=25></p>
<p> Email:
<input type=text name=mail size=30 maxlength=25> </p>
<p> Gender:
<input type=radio name=gender value=boy> Boy
<input type=radio name=gender value=girl> Girl
</p>
<p> Subjects:
<input type=checkbox name=sub value=Tam> Tamil
<input type=checkbox name=sub value=Tel> Telugu
<input type=checkbox name=sub value=Eng> English
<input type=checkbox name=sub value=Phy> Physics
<input type=checkbox name=sub value=Eco> Economics
</p>
<p> City / Town:
<Select name = area>
  <option value = CHN> Chennai </option>
  <option value = MDR selected> Madurai </option>
  <option value = CBO> Coimbatore </option>
  <option value = KKM> Kanyakumari </option>
```

```

</Select> </p>
<p> Comments: <br>
<Textarea rows=5 cols=50 name=comments> </Textarea>
</p>
<input type=reset name=reset value="Clear">
<input type=submit name=submit value="Submit">
</Form>
</body>
</html>

```

The output will be:

The screenshot shows a web browser window with the title 'HTML - Form and Co.'. The browser address bar shows 'D:\CS_TestBook_Final\'. The page content is a form titled 'Students Data Entry Form'. The form contains the following elements:

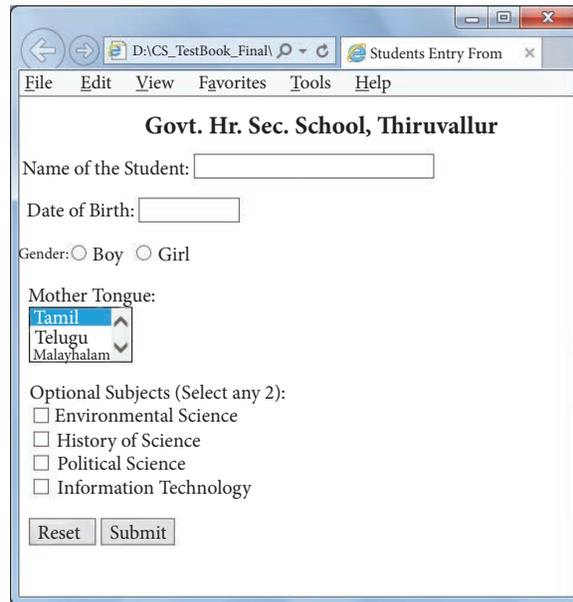
- Student Name:
- Email:
- Gender: Boy Girl
- Subjects: Tamil Telugu English Physics Economics
- City / Town:
- Comments:
- Buttons: Clear, Submit

Points to Remember:

- Images are essential element to make an HTML presentation as more attractive manner.
- Most of the browsers supports, GIF, JPEG and PNG images formats.
- The tag along with the attribute src (Source) is used to add images in HTML document.
- In HTML, a piece of text or image can be move horizontally or vertically by using <marquee> tag.
- In HTML, a video or audio content may be included as Inline or external data.
- The <embed> tag is used to attach an audio or video file easily within webpage.
- Music can be played in the background to a webpage, while the page is viewed.
- The <bgsound> tag is used to attach an inline sound file in HTML.
- Forms are used to receive information from the user.
- An HTML form starts with <form> and ends with </form> tag.
- Most of the form controls are created by using <input> tag.
- The <select> tag is used to create dropdown list box in HTML.
- The <Textarea> tag used to receive multi line text data as input.

Workshop:

1. Write an HTML code insert Image, Music and Video elements
2. Write an HTML code to display an application for as shown below:



Evaluation



Part - I

Choose the correct answer

1. Which image format was standardized by W3C?
(A) JPEG (B) SVG (C) GIF (D)
PNG
2. The tag used to insert an image in HTML:
(A) Image (B) Picture (C) Img (D) Pic
3. In HTML, a piece of text or image can be moved horizontally or vertically by using:
(A) <marquee> (B) (C) <embed> (D) <text>
4. Inline sound can be inserted using which of the following tag?
(A) <inline> (B) <backgroundsound> (C) <bgsound> (D) <sound>
5. Which value causes the audio play as long as the page is in view?
(A) Stop (B) Never Stop (C) Continue (D) Infinite
6. The important attributes used with the <form> tag are
(A) method and action (B) name and size
(C) post and get (D) type and name





7. The tag is used to create dropdown list box in HTML is:
 (A) <dropdown> (B) <select> (C) <listbox> (D) <input>

8. Match the following:

- (a) <textarea> - (1) inline
- (b) <input> - (2) Video
- (c) <bgsound> - (3) Multiline input
- (d) <embed> - (4) Password

	(a)	(b)	(c)	(d)
(A)	3	1	4	2
(B)	3	4	1	2
(C)	2	3	4	1
(D)	2	1	3	4

Part - II

Very Short Answers

1. List out the popular image formats.
2. Write down the general format of marquee
3. What is inline sound or movie?
4. What is the purpose of <input> tag?
5. Which tag is used to specify the list of items in dropdown list box?
6. What are the major attributes are available in <textarea> tag?

Part-III

Short Answers

1. Write a short note on familiar images format.
2. How will you scroll the text in HTML?
3. Explain the main attributes used with <form> tag.
4. Explain the values of <input> tag's type attribute.
5. Explain the attributes of <select> and <option> tags.

Case study:

Create a website of your own interest which includes all the features learned from these chapters for your school





GLOSSARY

<i>GIF</i>	<i>Graphical Interchange Format.</i>
<i>JPEG</i>	<i>Joint Photographic Experts Group.</i>
<i>PNG</i>	<i>Portable Network Graphics.</i>
<i>SVG</i>	<i>Scalable Vector Graphics.</i>
<i>Photoshop</i>	<i>Familiar Photo editing tool developed by adobe.</i>
<i>Picasa</i>	<i>Free image organizer and editing tool developed by Lifescape.</i>
<i>GIMP</i>	<i>Open source image editing tool.</i>
<i>HTML 5</i>	<i>Latest version of HTML authorized by w3c</i>
<i>W3C</i>	<i>The World Wide Web Consortium; an International standards organization for the www.</i>

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3. Computer Application (Commerce) – Text book of XII – Department of Education – SCERT, Kerala.
4. <https://www.w3schools.com/html/default.asp>