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HTML Basics - FORM Elements

INTRODUCTION

Hypertext Markup Language (HTML) enables you to add a form in a Web page by using the FORM element. After adding the form on the Web page, you can add various controls, such as buttons and text fields, on the form by using a variety of elements. These elements are following.

- INPUT
- LABEL
- TEXTAREA
- FIELDSET
- LEGEND
- BUTTON
- DATALIST
- OUTPUT
- PROGRESS

The INPUT element allows you to enter different types of values, such as date, time, and e-mail address. The BUTTON element enables you to add buttons, such as submit and cancel buttons on the form to submit or cancel the form's details. The TEXTAREA element enables you to enter text in the provided area. The DATALIST element allows you to enter text in a text field by providing a set of predefined values.

Exploring the FORM Element

A form will take input from the viewer and depending on your needs. A form is an area on a Web page that consists of plain text, HTML elements, and controls. Plain text and HTML elements are used to structure the form; whereas, controls, which are also known as, form fields, are used to make the form interactive by allowing a user to enter information. A form is created by using the opening and closing tags of the FORM element. These tags instruct the browser about the starting and ending points of a form.

Attributes of the FORM Element

Attribute	Description
action	Refers to the Uniform.Resource Locator (URL) of the program in the server that processes the form
autocomplete	Enables the autocomplete feature in a form
accept-character	Refers to the character set in the form that can be accepted by the server
enctype	Specifies how the information in the form should be encoded before sending it to the server

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method	Specifies how the information is sent from browser to server
name	Refers to the name of the form
novalidate	Specifies that the form should not validate while submitting
target	Opens the action URL in the specified target, such as in the same window, in a new window, or in a new tab

The <FORM> tag has two main attributes: ACTION and METHOD.

- The ACTION is accessing a script.
- The METHOD used is SEND.

Syntax:

```
<FORM METHOD= "how_to_send" ACTION = "URL of script" >
```

The METHOD attribute accepts either **POST** or **GET** as its value. POST is by far the more popular, as it allows for a greater amount of data to be sent. GET is a little easier for Web programmers to deal with and is best used with single responses, like a single textbox.

The ACTION simply accepts the URL for the script that will process the data from your form. Most often the script is stored in a directory located on your Web server.

An example of the <FORM> tag then, would be the following:

```
<FORM METHOD = "GET" ACTION = "/source/validate.php">
```

...

```
</FORM>
```

Note: You cannot nest forms within one another. You need to add the end tag </FORM> for the first form before creating another one in the same document. Generally, browsers will ignore any new occurrences of the <FORM> tag, since the purpose of the tag is to tell the browser how to submit data to the server and different parts of the form cannot be submitted in different ways.

Exploring the INPUT Element

A form is composed of controls, such as text box, drop-down list, check box, and radio button that enable the user to enter the information. You can create these controls by using the INPUT element. To do this, you need to set the type attribute of the INPUT element to the name of the control. For example, <INPUT type="text"> creates a control of text box type.

Following are the types of the INPUT element that are newly introduced in HTML5:

- text and search
- tel
- url
- email
- password
- datetime-local
- datetime, date, month, week, and time
- number and range

- file
- hidden
- checkbox
- radio
- submit
- reset

1. Describing the text and search Type

A text box (or text field) is a rectangular-shaped box that facilitates a user to enter information. It is used to collect single line information, such as name, date of birth, telephone number, or e-mail, from the user. You can create a text box inside a form by setting the type attribute of the INPUT element to text; for instance, `<INPUT type="text">`. In addition, the attributes of the INPUT element that specifies the features of the text box are as follows;

- **Name**—Provides a name to the text box, so that the program that handles the information provided in the form can identify the text box.
For example, `<INPUT type="text" name="username" >`.
- **Size**—Defines the size of the text box. It defines the number of visible characters that can be seen in the text box.
For example, `<INPUT type="text" name="username" size="30">`.
- **Maxlength**—Specifies the maximum number of characters the user can enter in the text box.
- **Value**—Specifies the default text that you want to display in the text box when the form is first loaded.

2. Describing the tel Type

The tel type of the input control is used to enter the telephone numbers. In this type, you can only enter numbers, as it does not accept alphabets. There is no specific syntax to specify the telephone number in the input control, as there is a wide variety of valid telephone numbers. You can also specify a particular pattern to enter the telephone number by using the pattern attribute of the INPUT element.

3. Describing the url Type

The url type of the input control is used to enter a valid path of a Web page. A valid url of a website consists of a protocol, a domain name, and a pathname. The most widely used protocols are Hypertext Transfer Protocol (HTTP) and File Transfer Protocol (FTP). The value of the url field is automatically validated when you submit the form.

4. Describing the email Type

The email type of the input control is used to enter a valid e-mail address, which should contain a @ symbol and a dot (.). The value of the e-mail field is automatically validated when you submit the form. You can also enter more than one e-mail address in the e-mail field by using the multiple attribute, which specifies that the multiple e-mail addresses can be entered in the input control.

5. Describing the password Type

A password is used to protect the secret information that a user does not want to share with others. You can create a password field by using the INPUT element and setting its type attribute to password. The password field is similar to the text box but the text entered in the password field is not in a readable format as the asterisk symbol or dot is displayed in place of the characters. Therefore, it is also referred as a masked text box, The attributes of the INPUT element that specifies the features of the password field are as follows:

- **Name**—Provides an internal name to the password field so that the program that handles the form identifies the field. The name attribute is set through the INPUT element.
- **Size** — Defines the length of the password field. If the size is not specified, the browser takes the default size, which is 20.
- **Maxlength**—Specifies the maximum number of character that the user can enter in the password field.
- **Value**—Specifies the value that is to be displayed by default in the password held. The value that is to be displayed in the password field is in the masked form, which means that the value is reflected as dots or asterisks.

6. Describing the datetime-local Type

The datetime-local type of the input control is used to enter the date and time in the input control. When the date and time is defined as the type of the input control, a date time picker is provided on a form to select the date, month, year, and time. You can select the date and time according to your appropriate time zone. In addition, you can set the minimum and maximum date and time values by using the min and max attributes. If you want to convert the seconds into milliseconds, you can use the step attribute.

7. Describing the datetime, date, month, week, and time Types

You can also set the type of the input control to datetime, date, month, week, and time separately. The datetime type allows you to enter year, month, day, hour, minute, second, and fraction of a second in the Coordinated Universal Time (UTC). The date type allows you to enter the day, month, and year by using date time picker. The month type allows you to enter the month in the input control. You can also set the minimum and maximum month by specifying the min and max attributes of the month type, respectively. The week type is used to enter a week of a month. The time type is used to enter only time in the input control.

8. Describing the number and range Types

The number type is used to enter only numbers in the input control. You cannot enter any alphabet as the number type does not accept it and prompts you to enter only numbers at the time of submitting the form. The min and max attributes can be used to specify the minimum and maximum number to be entered in the input control. The range type of the input control allows you to enter a value within a specific range.

9. Describing the file Type

The file type allows a user to select a file stored in the local computer and send it to the server on submission of the form. You need to set the type attribute to the file to create a file selection field. A user can either type the pathname of the file directly into the file selection field or use the browse option to select the pathname of the file from a system-specific dialog box. In case of

using the browse option, even if the pathname exceeds the maxlength specified, the browser accepts the complete pathname. The attributes of the file selection field are as follows:

- **Size**—Defines the width of visible text on the file selection field
- **Maxlength**—Specifies the maximum number of character that can be entered in the file selection field
- **Accept**—Specifies the type of files that can be submitted through a file upload

NOTE:If the form contains one or more file selection field, set the **enctype** attribute of the FORM element to multipart/form- data and the method attribute to post Otherwise, the file selection field would work as a text box and send the server only the value (file name) entered in the field in place of the content of the file.

10. Describing the hidden Type

A hidden field is used to pass along variables and values from one form to another, without forcing the user to re-enter the information. In addition, it is not displayed by the browser. You can create a hidden field by using the INPUT element and setting its type attribute to hidden. The attributes of the INPUT element that specifies the features of the hidden field are as follows:

- **Name**—Specifies a name of the hidden field
- **Value**—Specifies the value that is to be displayed by default in the hidden field Now, let's learn about the checkbox type.

11. Describing the checkbox Type

A checkbox is used to select or deselect one or more items from a given set of items that are displayed on the form. It helps a user to select items quickly and easily by providing options. You can create a checkbox by setting the type attribute of the INPUT element to checkbox. The attributes of the INPUT element that specifies the features of the checkbox field are as follows:

- **Name**—Provides a name to the checkbox field. The following example shows the use of the name attribute:
<input type= “checkbox” name= “fruit”> Fruit Name
- **Value**—Determines the value that should be transmitted to the server after selecting the corresponding option on the checkbox. The following example shows the use of the value attribute:
<input type= “checkbox” name= “fruit” value= “mango”> Mango
- **Checked**—Provides the default item, which has to be sent to the server along with the items that are selected by the user. In addition, a user can clear the checked item as per the requirement. The following example shows the use of the checked attribute:
<input type= “checkbox” name= “fruit” values= “mango” checked= “yes”>.

12. Describing the radio Type

The usage of a radio button is almost similar to a checkbox except that in a check box more than one item can be selected; however, in a radio button, only one item can be selected. Therefore, a radio button can be described as a field having a list of items from which a user has to select a single item. The radio button field can be created by setting the type attribute of the INPUT element to radio. The attributes of the INPUT element that specifies the features of the radio button field are as follows:

- Name—Provides a name to the radio button field. Unlike the check box where different items can be named differently, each radio button in a group has the same name. The following example shows the use of the name attribute:
<input type= “radio” name= “fruit”>
- Value—Refers to the value that should be transmitted to the server when the corresponding option for the radio button is selected. The following example shows the use of the value attribute “
<input type= “radio” name= “fruit” value= “mango”>.
- Checked—Provides the default item, which is selected and sent to the server if the user does not select any item. If the user selects any other item from the list, the default item is automatically deselected. The following example shows the use of the checked attribute:
<input type= “radio” name= “fruit” value= “mango” checked= “yes”>.

13. Describing the submit Type

When a user clicks the submit button, the form is sent to the address specified by URL. You can create a submit button by setting the value of the type attribute of the INPUT element to submit. The attributes of the INPUT element that specifies the features of the submit button are as follows:

- Name—Specifies the name of the submit button
- Value—Specifies the label that is displayed on the submit button Now, let's learn about the reset type.

14. Describing the reset Type

When a user clicks the reset button, information of all the fields in the form are erased and set to the default values. The reset button is created by setting the type attribute of the INPUT element to reset. The attributes of the INPUT element that specifies the features of the reset button are as follows:

- Name — Specifies the name of the reset button
- Value—Specifies the label that is displayed on the reset button

Exercise:

- 1: What is FORM in web page?**
- 2: List the attribute of <FORM > tag.**
- 1: What is <INPUT> tag ?**
- 2: List the attribute of <INPUT > tag.**