HTML - Form Controls

HTML form controls (elements) are the elements used within the `<form>` element to collect the user information.

Form Controls (Elements)

The **form elements** create controls for the user interaction within the webpage; these elements are also termed as **form controls**. The **form elements** enable users to enter information for the server-side processing. The nature of interaction with the server can vary depending on the type of control used while creating the form. For example, radio buttons are typically used to accept gender information.

We have used several common form controls in previous discussions; we will now dive into a more detailed exploration of these elements.

There are different types of form controls that we can use to collect data using HTML form:

- Text Input Controls
- Checkboxes Control
- Radio Buttons Control
- Select Box Control
- File Select Box
- Button Control
- Hidden Form Control
- Datetime Controls
- Date Control
- Month Control
- Week Control
- Time Control
- Number Control
- Range Control
- Email Control
- URL Control

Let us look at these controls one by one –

Text Input Controls

The text input controls are further divided into three main categories –

- Single-line Text Input Control

- Password Input Control
- Multi-line Text Input Control

Single-line Text Input Control

The **single-line text input control** is used for items that require only one line of user input, such as search boxes or names. They are created using the **<input>** tag.

Example

The following example illustrates how to take a single-line text input:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>Text Input Control</title>
</head>
<body>
   <form >
      First name: <input type = "text" name = "first_name" />
      <br><br>
      Last name: <input type = "text" name = "last_name" />
   </form>
</body>
</html>
```

On running the above code, two single-line text input fields will be displayed.

Password Input Control

The **password input control** is also a single-line text input, but it masks the character as soon as a user enters it. They are also created using the HTML **<input>** tag, but the **type** attribute is set to **password**:

Example

In the following example, we will demonstrate how to take password input from users.

</> Open Compiler

```
<!DOCTYPE html>
<html>
```

```
<head>
   <title>Password Input Control</title>
</head>
<body>
   <form >
      User ID : <input type = "text" name = "user_id" />
      <br><br>
      Password: <input type = "password" name = "password" />
   </form>
</body>
</html>
```

The above HTML code will display one text input field and one password input field.

Multiple-line Text Input Control

The **multiple-line text input control** is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using the HTML **<textarea>** tag.

Example

The following example demonstrates how to use multi-line text input to take item descriptions:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>Multiple-Line Input Control</title>
</head>
<body>
   <form>
      Description : <br />
      <textarea rows = "5" cols = "50" name = "description">
         Enter description here...
      </textarea>
   </form>
</body>
</html>
```

The above code will produce a text area where users can provide multiple lines of text.

Checkboxes Control

Checkboxes are used when more than one option is required to be selected. They are also created using the **<input>** tag, but the **type** attribute is set to **checkbox**.

Example

In this HTML code, we are creating a form with two checkboxes:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>Checkbox Control</title>
</head>
<body>
   <form>
      <input type = "checkbox" name = "maths" value = "on"> Maths
      <input type = "checkbox" name = "physics" value = "on"> Physics
   </form>
</body>
</html>
```

On executing the above code, it will create two checkboxes.

Radio Buttons Control

Radio buttons are used when out of many options, just one option is required to be selected. They are also created using the **<input>** tag, but the **type** attribute is set to **radio**.

Example

In this example code, we are creating a form with two radio buttons:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>Radio Box Control</title>
</head>
<body>
   <form>
      <input type = "radio" name = "subject" value = "maths"> Maths
```

```
      <input type = "radio" name = "subject" value = "physics"> Physics
   </form>
</body>
</html>
```

On running the above HTML code, it will produce two radio buttons.

Select Box Control

A **select box** provides features to list down various options in the form of drop-down list, from where a user can select one or more options.

Example

The following HTML code illustrates how to create a form with a drop down box:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>Select Box Control</title>
</head>
<body>
   <form>
      <select name = "dropdown">
         <option value = "Maths" selected>Maths</option>
         <option value = "Physics">Physics</option>
         <option value = "Chemistry">Chemistry</option>
      </select>
   </form>
</body>
</html>
```

The above HTML code will create a dropdown menu with three values.

File Select Box

If we want to allow a user to upload a file to our website, we will need to use a **file upload box**, also known as a file select box. This is also created using the **<input>** element, but the **type** attribute is set to **file**.

Example

In the following example, we will create a form with one file upload box that accepts only images:

</>

Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>File Upload Box</title>
</head>
<body>
   <form>
      <input type = "file" name = "fileupload" accept = "image/*" />
   </form>
</body>
</html>
```

Button Control

There are various ways in HTML to create **clickable buttons**. We can create a clickable button using the **<input>** tag by setting its **type** attribute to **button**.

Example

In this HTML code, we are creating a form with three different types of buttons:

</>

Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>File Upload Box</title>
</head>
<body>
   <form>
      <input type = "submit" name = "submit" value = "Submit" />
      <input type = "reset" name = "reset" value = "Reset" />
      <input type = "button" name = "ok" value = "OK" />
      <input type = "image" name = "imagebutton" src = "/html/images/logo.png" />
   </form>
</body>
</html>
```

Hidden Form Control

The **hidden form controls** are used to hide data inside the page, which later on can be pushed to the server. This control hides inside the code and does not appear on the actual page. For example, the following hidden form is being used to keep the current page number. When a user clicks next page, then the value of the hidden control will be sent to the web server, and there it will decide which page will be displayed next based on the passed current page.

Example

The following example shows the usage of hidden control:

</> Open Compiler

```
<!DOCTYPE html>
<html>
<head>
   <title>File Upload Box</title>
</head>
<body>
   <form>
      <p>This is page 10</p>
      <input type = "hidden" name = "pagename" value = "10" />
      <input type = "submit" name = "submit" value = "Submit" />
      <input type = "reset" name = "reset" value = "Reset" />
   </form>
</body>
</html>
```

Datetime Controls

In HTML, the **datetime control** represents date and time (year, month, day, hour, minute, second, and fractions of a second) together, encoded according to ISO 8601 with the time zone set to UTC. If we use the **datetime-local**, it will display date and time with no time zone information.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Date and Time : <input type = "datetime" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
```

```
</body>
</html>
```

Date Control

The HTML **date control** is used to specify a date (year, month, day) encoded according to ISO 8601.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Date : <input type = "date" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Month Control

In HTML, the **month control** is used to display a date consisting of only a year and a month encoded according to ISO 8601.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Month : <input type = "month" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Week Control

As the name suggests, the **week control** displays a date consisting of only a year and a week number encoded according to ISO 8601.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Week : <input type = "week" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Time Control

The HTML **time control** specifies the hours, minutes, seconds, and fractional seconds encoded according to ISO 8601.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Time : <input type = "time" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Number Control

The **number control** accepts only numerical values. The step attribute specifies the precision, and its default value is 1.

Example

</>

Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Select Number : <input type = "number" min = "0" max = "10" step "1"
         value = "5" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Range Control

The **range** type is used for input fields that should contain a value from a range of numbers.

Example

</>

Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Select Range : <input type = "range" min = "0" max = "10" step "1"
         value = "5" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

Email Control

The **email** control accepts only email value. This type is used for input fields that should contain an e-mail address. If you try to submit a simple text, it forces you to enter only an email address in email@example.com format.

Example

</>

Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Enter email : <input type = "email" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```

URL Control

The HTML **URL control** accepts only URL values. This type is used for input fields that should contain a URL address. If you try to submit a simple text, it forces you to enter only a URL address, either in the **http://www.example.com** format or in the **http://example.com** format.

Example

</> Open Compiler

```
<!DOCTYPE html>
<html>
<body>
   <form action = "/cgi-bin/html5.cgi" method = "get">
      Enter URL : <input type = "url" name = "newinput" />
      <input type = "submit" value = "submit" />
   </form>
</body>
</html>
```