## HTML Tables

HTML tables allow you to arrange data like text, images, and links in rows and columns. You use the `<table>` tag to start and end a table.

### Syntax of HTML Table

```
<table>  // table content</table>
```

### Key Elements of HTML Table

- `<table>`: Defines the table itself.
- `<tr>`: Used for table rows.
- `<th>`: Used for table headings.
- `<td>`: Used for table cells (data).

### Basic Table Structure

```
<table>  <tr>    <th>Name</th>    <th>Age</th>  </tr>  <tr>
<td>Harry</td>    <td>100</td>  </tr></table>
```

### rowspan and colspan Attributes

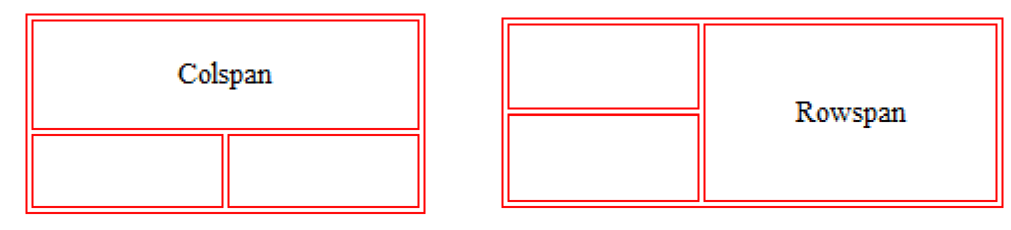
**Rowspan:** If you want a table cell to span multiple rows, you can use the `rowspan` attribute.

```
<td rowspan="value">
```

**Colspan:** If you want a table cell to span multiple columns, you can use the `colspan` attribute.

```
<td colspan="value">
```

### Visual Representation of Rowspan and Colspan



### Examples

Here are simple examples to demonstrate the use of `rowspan` and `colspan` in HTML tables.

### Example for Colspan:

```
<table border="1">  <tr>    <td colspan="2">Merged Columns</td>  </tr>
<tr>    <td>Column 1</td>    <td>Column 2</td>  </tr></table>
```

### Example for Rowspan:

```
<table border="1">  <tr>    <td>Row 1, Column 1</td>    <td
rowspan="2">Merged Rows</td>  </tr>  <tr>    <td>Row 2, Column 1</td>
</tr></table>
```

### Adding a Caption

To add a title to your table, you can use the `<caption>` element. This element helps both in terms of SEO and accessibility.

```
<table>  <caption>Student Details</caption>  <!-- Rest of the
table here --></table>
```

## Table Headers and Footers

Besides `<th>` for individual header cells, HTML tables allow you to group header or footer content using `<thead>` and `<tfoot>`.

```
<table>  <thead>    <!-- header content -->  </thead>  <tfoot>
<!-- footer content -->  </tfoot>  <tbody>    <!-- body content
-->  </tbody></table>
```

## Column Groups

You can use the `<colgroup>` and `<col>` elements to apply styles to an entire column in an HTML table.

```
<table>  <colgroup>    <col style="background-color:yellow">
</colgroup>  <!-- rest of the table --></table>
```

## Accessibility in Tables

To make your tables more accessible, you can use the `scope` attribute in `<th>` elements to specify if they are headers for columns, rows, or groups of columns or rows.

```
<th scope="col">Name</th><th scope="col">Age</th>
```

## Sample HTML Table

Here is an example HTML table with all the important elements:

```
<table border="1">  <!-- Caption -->  <caption>Employee
Information</caption>  <!-- Table Header -->  <thead>    <tr>
<th>ID</th>      <th>Name</th>      <th>Position</th>
```

```
<th>Salary</th>    </tr>  </thead>  <!-- Table Body -->
<tbody>    <tr>      <td>1</td>      <td>Alice</td>
<td>Developer</td>      <td>$80,000</td>    </tr>    <tr>
<td>2</td>      <td>Bob</td>      <td>Designer</td>
<td>$70,000</td>    </tr>    <tr>      <td>3</td>
<td>Carol</td>      <td>Manager</td>      <td>$90,000</td>
</tr>  </tbody>  <!-- Table Footer -->  <tfoot>    <tr>
<td colspan="3">Total Employees</td>      <td>3</td>    </tr>
</tfoot></table>
```

### Introduction to HTML Forms

HTML forms are essential for collecting user input on web pages. Whether it's a search bar, a login screen, or a multi-field registration form, HTML forms play a key role in web interactions. They enable users to submit data, which can be processed, stored, or returned by a server.

### Why Do We Use Forms?

Forms serve as the gateway between the user and the server, allowing for dynamic, interactive web experiences. They are crucial for tasks such as user authentication, data submission, feedback collection, and more. Simply put, forms make websites more engaging and functional.

### HTML Forms Structure:

The fundamental structure of an HTML form is encapsulated within the `<form>` tags. Inside these tags, you'll place various form controls like text fields, checkboxes, radio buttons, and buttons for submitting the form.

```
<form action="/submit" method="post">    <!-- Text input for
username -->    <label for="username">Username:</label>
<input type="text" id="username" name="username" required>
<br><br>    <!-- Password input -->    <label
for="password">Password:</label>    <input type="password"
id="password" name="password" required>    <br><br>    <!--
Radio buttons for gender -->    <label>Gender:</label>
<input type="radio" id="male" name="gender" value="male">
<label for="male">Male</label>    <input type="radio"
id="female" name="gender" value="female">    <label
for="female">Female</label>    <br><br>    <!-- Submit button -
->    <input type="submit" value="Submit"></form>
```

### How to Use Form Controls?

The `<input>` tag is commonly used to create form controls. The attributes of this tag define the control's behavior.

```
<input type="" name="" value="">
```

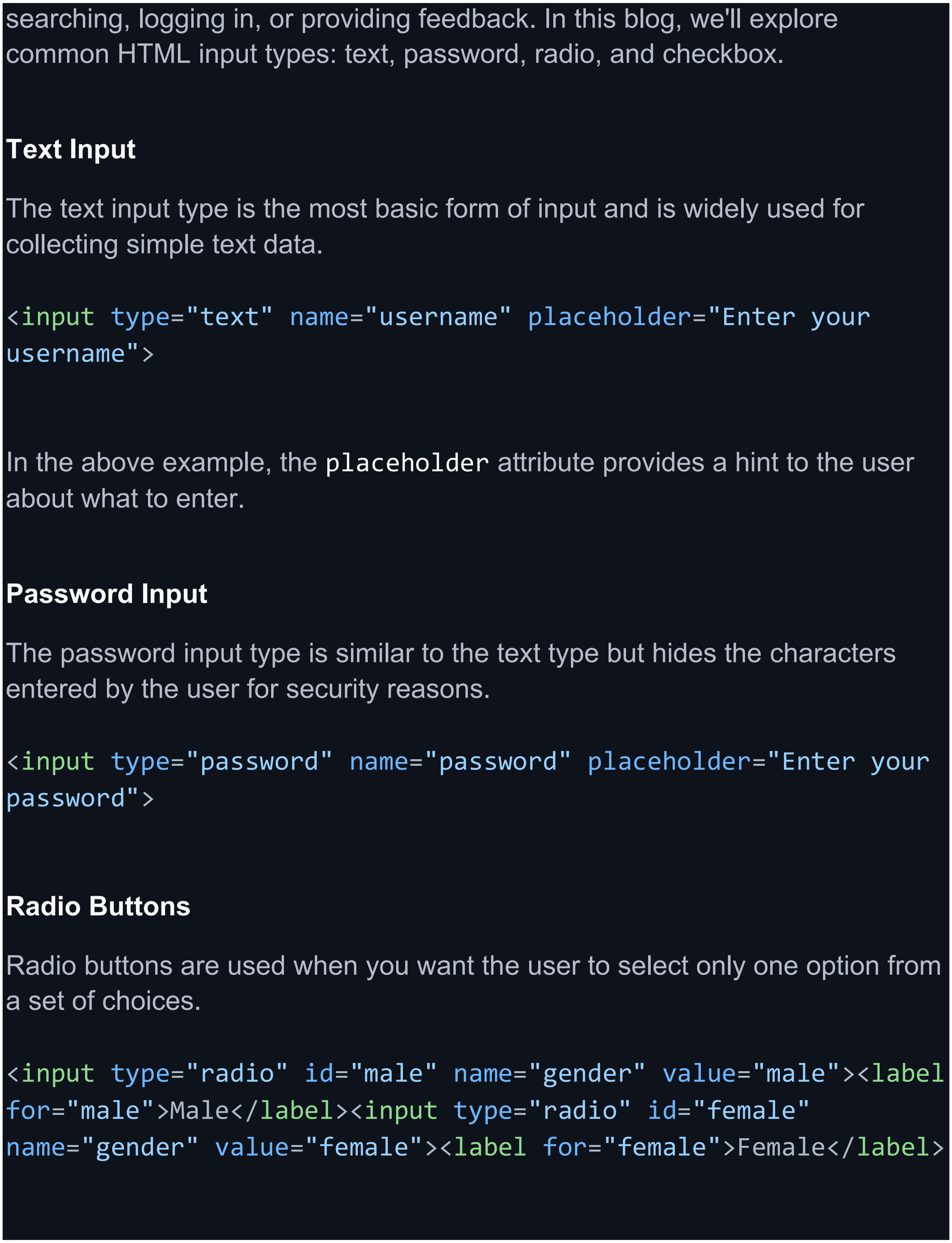
The **"type"** attribute specifies the type of input control (e.g., text, password, checkbox).

The **"name"** attribute is used for identifying the control, especially when the data is sent to the server.

The **"value"** attribute sets a default value for the control, which the user can overwrite.

### HTML Input Types

Input types in HTML forms are the backbone of interactive web applications. They allow users to send information to web servers for various purposes like



searching, logging in, or providing feedback. In this blog, we'll explore common HTML input types: text, password, radio, and checkbox.

### Text Input

The text input type is the most basic form of input and is widely used for collecting simple text data.

```
<input type="text" name="username" placeholder="Enter your
username">
```

In the above example, the `placeholder` attribute provides a hint to the user about what to enter.

### Password Input

The password input type is similar to the text type but hides the characters entered by the user for security reasons.

```
<input type="password" name="password" placeholder="Enter your
password">
```

### Radio Buttons

Radio buttons are used when you want the user to select only one option from a set of choices.

```
<input type="radio" id="male" name="gender" value="male"><label
for="male">Male</label><input type="radio" id="female"
name="gender" value="female"><label for="female">Female</label>
```

### Checkbox

Checkboxes allow the user to select multiple options from a set.

```
<input type="checkbox" id="subscribe" name="subscribe"
value="yes"><label for="subscribe">Subscribe to
newsletter</label>
```

### More Input Types

Here is a comprehensive list of input types you can use in HTML:

| Input Type | Description |
|---|---|
| text | Allows the user to type a single line of text. |
| password | Allows the user to type a password. |
| submit | Represents a button that, when pressed, submits the form. |
| reset | Represents a button that, when pressed, resets all the form controls to their initial values. |
| radio | Represents an option in a set of options that are mutually exclusive with each other. |
| checkbox | Represents an option in a set that may be selected independently of other options. |
| button | Represents a clickable button. |
| color | Allows the user to select a color. |
| date | Allows the user to select a date. |
| datetime-local | Allows the user to select a date and time with no time zone. |
| email | Allows the user to enter an email address. |
| file | Allows the user to select one or more files from their device storage. |
| hidden | Represents a value that is not displayed but is submitted to the server. |
| image | Defines an image that acts as a submit button. |
| month | Allows the user to select a month and year. |
| number | Allows the user to enter a number. |
| range | Allows the user to select a number from a range. |
| search | Allows the user to enter a search query string. |
| tel | Allows the user to enter a telephone number. |
| time | Allows the user to select a time. |
| url | Allows the user to enter a URL. |
| week | Allows the user to select a week. |

## Conclusion

Understanding the different types of HTML input is crucial for creating interactive and user-friendly forms. Each input type serves a specific purpose, making it easier to collect, validate, and process user data.

## Textarea & Select

In addition to the basic input types, HTML forms offer other controls like `textarea` and `select` for richer user interaction. These elements allow for more complex data collection and provide a better user experience. In this blog, we will dive into these form controls and provide examples.

### The Textarea Element

The `textarea` element is used when you need multiline text input from the user. This is particularly useful for comments, reviews, or any other type of input where the length is unpredictable.

```
<textarea name="comment" rows="4" cols="50">      Enter your
comment here...</textarea>
```

The `rows` and `cols` attributes define the visible dimensions of the textarea.

### The Select Element

The `select` element creates a dropdown menu for the user. It is useful when you have a predefined list of options for the user to choose from.

```
<select name="fruits">      <option
value="apple">Apple</option>      <option
value="banana">Banana</option>      <option
value="cherry">Cherry</option></select>
```

Each option inside the select tag represents an item in the dropdown list.

### Combining Textarea and Select

You can combine textarea and select in the same form to capture varied types of user input.

```
<form action="/submit">      <textarea name="comment" rows="4"
cols="50">Enter your comment here...</textarea>      <select
name="fruits">        <option value="apple">Apple</option>
<option value="banana">Banana</option>        <option
value="cherry">Cherry</option>      </select>      <input
type="submit" value="Submit"></form>
```

### Conclusion

The textarea and select elements add another layer of interactivity to HTML forms, allowing for more complex and useful data collection. Understanding how to use these elements effectively can greatly enhance your web application's user interface.