

# HTML Form Basics

The `<form>` element in HTML is used to collect user input. Form data can be sent to a server for processing, typically involving fields for different types of inputs like text, password, etc..

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## 1. method (in `<form>`)

- The `method` attribute specifies how the form data is sent to the server.
  - Common values:
    - `"get"`: Appends form data to the URL.
    - `"post"`: Sends form data inside the HTTP request body.
  - Example:

```
<form method="get">...</form>
<form method="post">...</form>
```
  - Use `"get"` for non-sensitive data, `"post"` for sensitive or larger data.
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## 2. action (in `<form>`)

- The `action` attribute defines the URL where the form's data is sent when submitted.
  - If omitted, the data is sent to the same page.
  - Example:

```
<form action="/submit_results">...</form>
```
  - The URL in `action` can be a script or other server resource that processes data.
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## 3. target (in `<form>`)

- The `target` attribute determines where the response will appear after submitting the form.
- Common values:

- `_self` (default): Same frame/tab.
  - `_blank`: New tab or window.
  - `_parent`: Parent frame.
  - `_top`: Full body of the window.
  - `frameName`: Named iframe.
- Example:  
`<form target="_blank">...</form>`
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## 4. fieldset

- `<fieldset>` is used to group related elements in a form, improving organization and accessibility.
  - It usually wraps around sets of input fields (e.g., contact details).
- Example:  
`<fieldset>`  
    ...  
`</fieldset>`
- 

## 5. legend

- `<legend>` defines a caption or title for a `<fieldset>`.
  - It should be the first element inside the `<fieldset>`, and describes what the grouped fields have in common.
- Example:  
`<fieldset>`  
    `<legend>Personal Info</legend>`  
    ...  
`</fieldset>`
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## 6. label tag and its attributes

- `<label>` is used to define labels for form elements, improving screen reader accessibility and form usability.
  - Attributes:
    - `for`: Links the label to a specific form element by its `id`.
  - Example:

```
<label for="username">Username:</label>
<input type="text" id="username" name="username">
```
  - Associating labels helps users and improves form accessibility, particularly for screen readers.
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## 7. input tag and its attributes

- `<input>` is a self-closing tag used for user data input.
  - Important attributes:
    - `type`: Specifies the type of input (e.g., text, password).
    - `id` and `name`: Used to identify the input and send data.
    - `value`: Initial value.
    - `placeholder`: Shows hint text when empty.
    - `required`: Makes input mandatory.
    - `disabled`, `readonly`: Restrict user actions.
    - `min`, `max`: Numeric limits.
  - Example:

```
<input type="text" id="email" name="email" required>
```
  - Many attributes customize input behavior and validation.
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## 8. input types

Here's a summary of key input types and what they do:

Type	Example	Description

text	<code>&lt;input type="text"&gt;</code>	Single-line plain text
number	<code>&lt;input type="number"&gt;</code>	Numeric value, up/down spinner
tel	<code>&lt;input type="tel"&gt;</code>	Telephone number
radio	<code>&lt;input type="radio"&gt;</code>	Single choice (one of many)
email	<code>&lt;input type="email"&gt;</code>	Email address, pattern checked
password	<code>&lt;input type="password"&gt;</code>	Hidden/masked text
file	<code>&lt;input type="file"&gt;</code>	File upload
url	<code>&lt;input type="url"&gt;</code>	URL validated
date	<code>&lt;input type="date"&gt;</code>	Date picker
time	<code>&lt;input type="time"&gt;</code>	Time picker
checkbox	<code>&lt;input type="checkbox"&gt;</code>	On/off toggle, multi-choice

Each type has attributes and behaviors suited to the intended data.

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## 9. drop down list

- Use the `<select>` element to create a dropdown list with `<option>` entries.

- Example:

```
<label for="cars">Choose a car:</label>
<select name="cars" id="cars">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
</select>
```

- Provides a choice list for the user, multiple choices possible with `multiple` attribute.
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## 10. textarea

- `<textarea>` lets users enter multi-line text input.
- Has attributes `rows`, `cols`, and `placeholder`.

- Example:

```
<label for="comments">Comments:</label>
<textarea id="comments" name="comments" rows="4"
cols="40"></textarea>
```

- Used for messages, descriptions, longer inputs.