



ACADEMY
OF DIGITAL ARTS
EGYPT



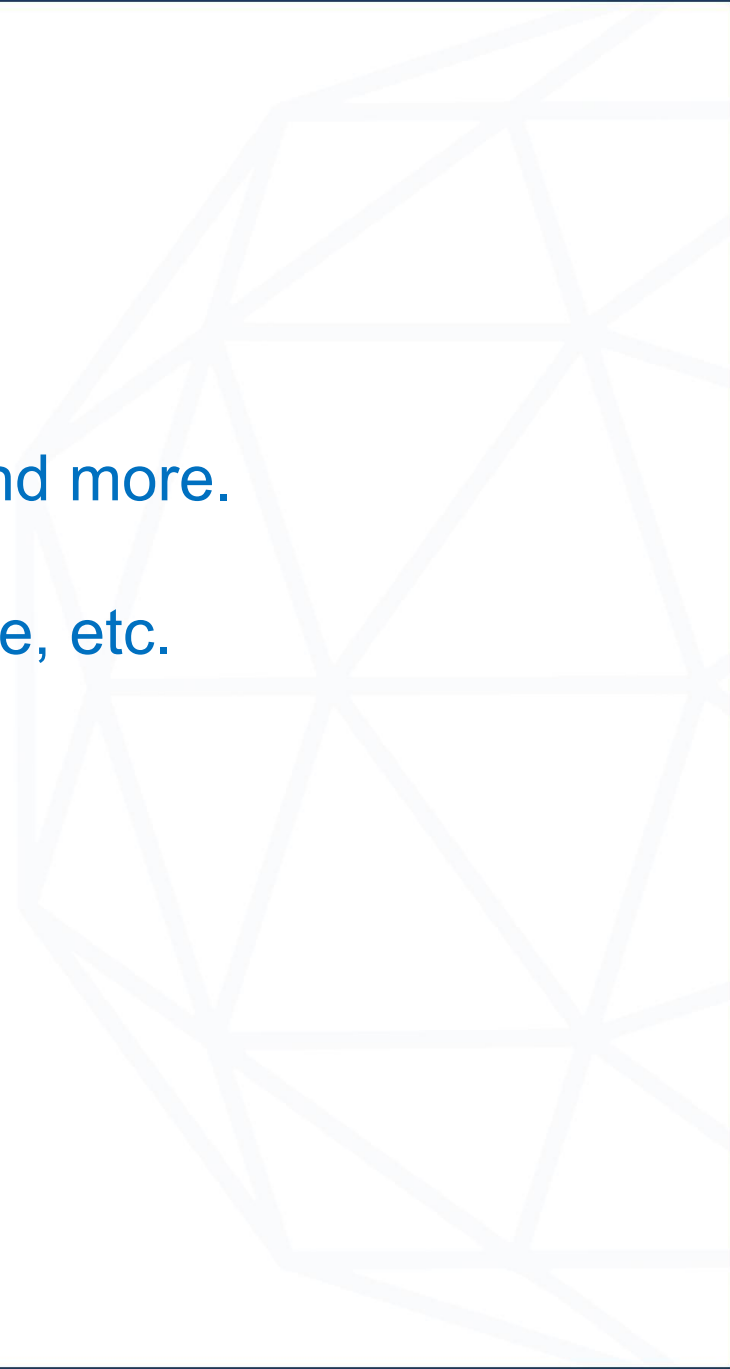


START
YOUR TECH JOURNEY
WITH ADA





Agenda

- Forms: Structure and elements
 - Input types: Text, email, password, number, date, file, and more.
 - Validation attributes: Required, minlength, maxlength.
 - `<form>` and `<input>` attributes: placeholder, autocomplete, etc.
- 



Introduction to HTML Forms

HTML forms are the primary way users interact with web applications, allowing them to input data, make selections, and submit information to servers.



Introduction to HTML Tables

What Are Forms Used For?

```
<!-- User Registration Form -->  
<form action="/register" method="POST">  
  <h2>Create Account</h2>  
  <!-- Form fields for user data collection -->  
</form>
```

```
<!-- Contact Form -->  
<form action="/contact" method="POST">  
  <h2>Contact Us</h2>  
  <!-- Contact information fields -->  
</form>
```

```
<!-- Search Form -->  
<form action="/search" method="GET">  
  <input type="search" name="query" placeholder="Search...">  
  <button type="submit">Search</button>  
</form>
```

```
<!-- Survey/Feedback Form -->  
<form action="/feedback" method="POST">  
  <h2>Customer Feedback</h2>  
  <!-- Rating and comment fields -->  
</form>
```

Introduction to HTML Tables

Form vs. Non-Form Interactive Elements

```
<!-- ✅ Use forms for data submission -->
<form action="/login" method="POST">
  <input type="email" name="email" required>
  <input type="password" name="password" required>
  <button type="submit">Login</button>
</form>

<!-- ✅ Use buttons for UI interactions (no data submission) -->
<button onclick="toggleMenu()">Menu</button>
<button onclick="showModal()">Show Details</button>

<!-- ❌ Don't use forms for non-submission interactions -->
<!-- This is incorrect for simple UI actions -->
<form>
  <button type="button" onclick="toggleTheme()">Toggle Theme</button>
</form>
```

Form Element Structure

Basic Form Element

```
<!-- Complete form element with all attributes -->
<form
  action="/submit-form"           <!-- URL where form data is sent -->
  method="POST"                  <!-- HTTP method (GET, POST) -->
  enctype="multipart/form-data"  <!-- Encoding type for file uploads -->
  name="contact-form"           <!-- Form name for JavaScript access -->
  id="contact-form"             <!-- Unique identifier -->
  autocomplete="on"             <!-- Enable browser autocomplete -->
  novalidate                     <!-- Disable browser validation (optional) -->
  target="_blank"               <!-- Where to display response -->
  accept-charset="UTF-8">       <!-- Character encoding -->

  <!-- Form content goes here -->

</form>
```

Basic Table Structure

Form Methods Explained

```
<!-- GET Method - Data sent in URL parameters -->
<form action="/search" method="GET">
  <!-- Good for: searches, filters, bookmarkable pages -->
  <input type="text" name="q" placeholder="Search term">
  <button type="submit">Search</button>
  <!-- Results in URL: /search?q=user-input -->
</form>

<!-- POST Method - Data sent in request body -->
<form action="/submit" method="POST">
  <!-- Good for: user registration, sensitive data, file uploads -->
  <input type="email" name="email">
  <input type="password" name="password">
  <button type="submit">Submit</button>
  <!-- Data sent securely in request body -->
</form>

<!-- File Upload - Requires POST and special encoding -->
<form action="/upload" method="POST" enctype="multipart/form-data">
  <input type="file" name="document">
  <button type="submit">Upload</button>
</form>
```


Basic Table Structure

Form Encoding Types

```
<!-- Default encoding - for most forms -->
<form action="/submit" method="POST" enctype="application/x-www-form-urlencoded">
  <input type="text" name="username">
  <input type="email" name="email">
  <!-- Data: username=value&email=value -->
</form>

<!-- Multipart encoding - required for file uploads -->
<form action="/upload" method="POST" enctype="multipart/form-data">
  <input type="text" name="title">
  <input type="file" name="photo">
  <!-- Allows mixing text data and binary files -->
</form>

<!-- Plain text encoding - rarely used -->
<form action="/submit" method="POST" enctype="text/plain">
  <input type="text" name="message">
  <!-- Data sent as plain text, not URL-encoded -->
</form>
```

Input Elements Deep Dive

Basic Input Structure

```
<!-- Complete input element with all common attributes -->
<!-- Input type -->
  name="username"                           <!-- Name for form submission -->
  id="username"                             <!-- Unique identifier -->
  value="default-value"                     <!-- Initial/default value -->
  placeholder="Enter username"              <!-- Hint text -->
  required                                 <!-- Field is mandatory -->
  disabled                                <!-- Field is disabled -->
  readonly                                <!-- Field is read-only -->
  maxlength="50"                           <!-- Maximum character length -->
  minlength="3"                             <!-- Minimum character length -->
  size="30"                                <!-- Visual width -->
  autocomplete="username"                  <!-- Autocomplete hint -->
  autofocus                                <!-- Focus on page load -->
  class="form-input"                        <!-- CSS class -->
  style="border: 1px solid #ccc"            <!-- Inline styles -->
  title="Username for login"                <!-- Tooltip text -->
  pattern="[a-zA-Z0-9]+"                    <!-- Regular expression validation -->
  aria-describedby="username-help"> <!-- Accessibility description -->
```

Input Elements Deep Dive

Input Types Overview

```
<!-- Text-based inputs -->
<input type="text" name="firstName" placeholder="First Name">
<input type="password" name="password" placeholder="Password">
<input type="email" name="email" placeholder="email@example.com">
<input type="url" name="website" placeholder="https://example.com">
<input type="tel" name="phone" placeholder="+1-555-123-4567">
<input type="search" name="query" placeholder="Search...">

<!-- Numeric inputs -->
<input type="number" name="age" min="18" max="100" step="1">
<input type="range" name="volume" min="0" max="100" value="50">

<!-- Date and time inputs -->
<input type="date" name="birthday">
<input type="time" name="appointment">
<input type="datetime-local" name="event">
<input type="month" name="start-month">
<input type="week" name="vacation-week">
```

```
<!-- Selection inputs -->
<input type="checkbox" name="newsletter" id="newsletter">
<input type="radio" name="gender" value="male" id="male">
<input type="radio" name="gender" value="female" id="female">

<!-- File and special inputs -->
<input type="file" name="resume" accept=".pdf,.doc,.docx">
<input type="color" name="theme-color" value="#ff0000">
<input type="hidden" name="form-id" value="contact-form">

<!-- Button inputs -->
<input type="submit" value="Submit Form">
<input type="reset" value="Reset Form">
<input type="button" value="Custom Action" onclick="doSomething()">
```

Text Input Controls

Text Input Types

```
<!-- Basic text input -->
<div class="form-group">
  <label for="first-name">First Name</label>
  <input
    type="text"
    id="first-name"
    name="firstName"
    placeholder="Enter your first name"
    maxlength="50"
    required>
  <small class="form-help">Maximum 50 characters</small>
</div>
```

Text Input Controls

Text Input Types

```
<!-- Password input with requirements -->
<div class="form-group">
  <label for="password">Password</label>
  <input
    type="password"
    id="password"
    name="password"
    minlength="8"
    pattern="^(?=.*[a-z])(?=.*[A-Z])(?=.*\d)(?=.*[@$!%*?&])[A-Za-z\d@$!%*?&]{8,}$"
    title="Password must contain at least 8 characters, including uppercase, lower
    required>
  <div class="password-requirements">
    <small>Password must contain:</small>
    <ul>
      <li>At least 8 characters</li>
      <li>One uppercase letter</li>
      <li>One lowercase letter</li>
      <li>One number</li>
      <li>One special character</li>
    </ul>
  </div>
</div>
```


Text Input Controls

Text Input Types

```
<!-- Email input with validation -->  
<div class="form-group">  
  <label for="email">Email Address</label>  
  <input  
    type="email"  
    id="email"  
    name="email"  
    placeholder="name@example.com"  
    autocomplete="email"  
    required>  
  <small class="form-help">We'll never share your email</small>  
</div>
```

Text Input Controls

Text Input Types

```
<!-- URL input -->
<div class="form-group">
  <label for="website">Website URL</label>
  <input
    type="url"
    id="website"
    name="website"
    placeholder="https://www.example.com"
    pattern="https://.*">
  <small class="form-help">Must start with https://</small>
</div>
```

Text Input Controls

Text Input Types

```
<!-- Phone input with pattern -->
<div class="form-group">
  <label for="phone">Phone Number</label>
  <input
    type="tel"
    id="phone"
    name="phone"
    placeholder="+1 (555) 123-4567"
    pattern="\+?1?\s?(?[\0-9]{3}\)?\s?[\0-9]{3}-?[\0-9]{4}"
    autocomplete="tel">
  <small class="form-help">Format: +1 (555) 123-4567</small>
</div>
```

Text Input Controls

Text Input Types

```
<!-- Search input -->
<div class="search-form">
  <label for="search" class="visually-hidden">Search</label>
  <input
    type="search"
    id="search"
    name="q"
    placeholder="Search products..."
    autocomplete="off"
    list="search-suggestions">
  <datalist id="search-suggestions">
    <option value="Laptops">
    <option value="Smartphones">
    <option value="Tablets">
    <option value="Headphones">
  </datalist>
  <button type="submit">🔍</button>
</div>
```

Text Input Controls

Textarea Element

```
<!-- Basic textarea -->
<div class="form-group">
  <label for="message">Message</label>
  <textarea
    id="message"
    name="message"
    rows="5"
    cols="50"
    placeholder="Enter your message here..."
    maxlength="500"
    required></textarea>
  <div class="character-count">
    <span id="char-count">0</span>/500 characters
  </div>
</div>
```


Text Input Controls

Textarea Element

```
<!-- Textarea with auto-resize -->  
<div class="form-group">  
  <label for="description">Product Description</label>  
  <textarea  
    id="description"  
    name="description"  
    rows="3"  
    placeholder="Describe your product..."  
    style="resize: vertical; min-height: 80px;">  
  </textarea>  
</div>
```

Text Input Controls

Textarea Element

```
<!-- Textarea with default content -->  
<div class="form-group">  
  <label for="template">Email Template</label>  
  <textarea id="template" name="template" rows="10" cols="60">  
Dear [Customer Name],  
  
Thank you for your interest in our product.  
  
Best regards,  
[Your Name]  
  </textarea>  
</div>
```

Selection Controls

Radio Buttons

```
<div class="radio-group">  
  <input type="radio" id="contact-phone" name="contact-method" value="phone">  
  <label for="contact-phone">Phone</label>  
</div>
```

Selection Controls

Checkboxes

```
<!-- Multiple checkboxes for interests -->
<fieldset class="form-group">
  <legend>What are you interested in? (Select all that apply)</legend>

  <div class="checkbox-group">
    <input type="checkbox" id="web-dev" name="interests[]" value="web-development" />
    <label for="web-dev">Web Development</label>
  </div>

  <div class="checkbox-group">
    <input type="checkbox" id="mobile-dev" name="interests[]" value="mobile-development" />
    <label for="mobile-dev">Mobile Development</label>
  </div>

  <div class="checkbox-group">
    <input type="checkbox" id="data-science" name="interests[]" value="data-science" />
    <label for="data-science">Data Science</label>
  </div>

  <div class="checkbox-group">
    <input type="checkbox" id="ui-design" name="interests[]" value="ui-design" />
    <label for="ui-design">UI/UX Design</label>
  </div>
</fieldset>
```

Selection Controls

Select Dropdowns

```
<!-- Basic select dropdown -->
<div class="form-group">
  <label for="country">Country</label>
  <select id="country" name="country" required>
    <option value="">Choose a country</option>
    <option value="us">United States</option>
    <option value="ca">Canada</option>
    <option value="uk">United Kingdom</option>
    <option value="de">Germany</option>
    <option value="fr">France</option>
    <option value="jp">Japan</option>
    <option value="au">Australia</option>
  </select>
</div>
```


Selection Controls

Select Dropdowns

```
<!-- Select with option groups -->
<div class="form-group">
  <label for="job-category">Job Category</label>
  <select id="job-category" name="jobCategory" required>
    <option value="">Select a category</option>

    <optgroup label="Technology">
      <option value="web-dev">Web Developer</option>
      <option value="mobile-dev">Mobile Developer</option>
      <option value="data-scientist">Data Scientist</option>
      <option value="devops">DevOps Engineer</option>
    </optgroup>

    <optgroup label="Design">
      <option value="ui-designer">UI Designer</option>
      <option value="ux-designer">UX Designer</option>
      <option value="graphic-designer">Graphic Designer</option>
    </optgroup>

    <optgroup label="Marketing">
      <option value="digital-marketing">Digital Marketing</option>
      <option value="content-marketing">Content Marketing</option>
      <option value="social-media">Social Media Manager</option>
    </optgroup>

    <optgroup label="Business">
      <option value="project-manager">Project Manager</option>
      <option value="business-analyst">Business Analyst</option>
      <option value="sales">Sales Representative</option>
    </optgroup>
  </select>
</div>
```

Selection Controls

Select Dropdowns

```
<!-- Multiple selection dropdown -->
<div class="form-group">
  <label for="skills">Technical Skills (Hold Ctrl/Cmd to select multiple)</label>
  <select id="skills" name="skills[]" multiple size="6">
    <option value="html">HTML</option>
    <option value="css">CSS</option>
    <option value="javascript">JavaScript</option>
    <option value="react">React</option>
    <option value="angular">Angular</option>
    <option value="vue">Vue.js</option>
    <option value="nodejs">Node.js</option>
    <option value="python">Python</option>
    <option value="java">Java</option>
    <option value="csharp">C#</option>
    <option value="php">PHP</option>
    <option value="sql">SQL</option>
  </select>
  <small class="form-help">Hold Ctrl (Windows) or Cmd (Mac) while clicking to sele
</div>
```

Selection Controls

Select Dropdowns

```
<!-- Select with data attributes for additional functionality -->
<div class="form-group">
  <label for="product">Product</label>
  <select id="product" name="product" onchange="updatePrice(this)">
    <option value="">Select a product</option>
    <option value="laptop" data-price="999.99" data-category="electronics">Laptop<
    <option value="phone" data-price="599.99" data-category="electronics">Smartphc
    <option value="tablet" data-price="399.99" data-category="electronics">Tablet<
    <option value="headphones" data-price="199.99" data-category="audio">Headphone
  </select>
  <div id="price-display" class="price-info"></div>
</div>
```

Button Elements

Button Types and Usage

```
<!-- Submit button - submits the form -->  
<button type="submit">Submit Form</button>  
<input type="submit" value="Submit Form">  
  
<!-- Reset button - clears all form fields -->  
<button type="reset">Reset Form</button>  
<input type="reset" value="Clear All Fields">  
  
<!-- Regular button - for JavaScript actions -->  
<button type="button" onclick="validateForm()">Validate</button>  
<input type="button" value="Calculate" onclick="calculate()">  
  
<!-- Button with default type (submit in forms, button outside forms) -->  
<button>Default Button</button>
```

Button Elements

Advanced Button Examples

```
<!-- Button with icon and text -->  
<button type="submit" class="btn btn-primary">  
  <svg class="icon" width="16" height="16">  
    <use href="#save-icon"></use>  
  </svg>  
  Save Changes  
</button>
```


Form Labels

Label Element Best Practices

```
<!-- Explicit label with for attribute -->
<label for="user-email">Email Address</label>
<input type="email" id="user-email" name="email" required>

<!-- Implicit label (wrapping) -->
<label>
  Full Name
  <input type="text" name="fullName" required>
</label>

<!-- Multiple labels for one input (using aria-labelledby) -->
<div class="form-row">
  <span id="salary-label">Annual Salary</span>
  <span id="currency-label">USD</span>
  <input
    type="number"
    name="salary"
    aria-labelledby="salary-label currency-label"
    min="0"
    step="1000">
</div>

<!-- Label with required indicator -->
<label for="phone-number">
  Phone Number
  <abbr title="required" aria-label="required">*</abbr>
</label>
<input type="tel" id="phone-number" name="phone" required>
```

THANK YOU

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