

# HTML Complete Cheat Sheet

## 1. بنیادی ڈھانچہ (Basic Document Structure)

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Page Title</title>
  </head>
  <body>
    <!-- content here -->
  </body>
</html>
```

- <!DOCTYPE html> — HTML5 document declaration.
- <html lang="..."> — دستاویز کی زبان مقرر کریں (SEO + accessibility).
- <meta charset="utf-8"> — حرفی انکوڈنگ، ہمیشہ شامل کریں.
- <meta name="viewport"> — responsive behavior کے لیے ضروری ہے.

## 2. عام ہیلپر ٹیگز

- <!-- comment --> — تبصرہ
- <!DOCTYPE html> — doc type
- <!-- meta tags --> — SEO اور sharing کے لیے

## 3. سرخی اور متن (Headings & Text)

- <h1> ... <h6> — headings (h1 سے important)
- <p> — paragraph
- <br> — line break (self-closing)
- <strong> — bold (semantic emphasis)
- <b> — presentational bold
- <em> — italic emphasis
- <i> — presentational italic
- <small> — smaller text
- <mark> — highlighted text

مثال:

```
<h1>Welcome</h1>
<p>This is a <strong>strong</strong> word and this is <em>emphasized</em>.</p>
```

## 4. لنکس (Links)

- `<a href="URL">link text</a>`
- Attributes: `target="_blank"` (new tab), `rel="noopener noreferrer"` (security for external links), `download` (download file)

مثال:

```
<a href="https://www.youtube.com/@CodeWithNisar" target="_blank" rel="noopener noreferrer">Visit</a>
```

## 5. تصاویر (Images)

- `` — alt لازمی ہے (accessibility & SEO).
- `loading="lazy"` — lazy loading
- Responsive: `srcset` اور `<picture>`

مثال:

```

```

```
<picture>  
  <source media="(min-width:800px)" srcset="image-large.jpg">  
  <source media="(min-width:400px)" srcset="image-med.jpg">  
    
</picture>
```

## 6. لسٹس (Lists)

- Ordered list: `<ol><li>Item</li></ol>`
- Unordered list: `<ul><li>Item</li></ul>`
- Definition list: `<dl><dt>Term</dt><dd>Definition</dd></dl>`

مثال:

```
<ul>  
  <li>HTML</li>  
  <li>CSS</li>  
</ul>
```

## 7. ٹیبلز (Tables)

- Structure: <table><thead><tbody><tfoot><tr><th><td>
- Accessibility: use <caption> اور proper <th scope>

مثال:

```
<table>
<caption>Students Scores</caption>
<thead>
  <tr><th scope="col">Name</th><th scope="col">Score</th></tr>
</thead>
<tbody>
  <tr><td>Alee</td><td>95</td></tr>
</tbody>
</table>
```

## 8. فارم اور انپٹس (Forms & Input Types)

- Basic: <form action="/submit" method="post">
- Common inputs:
  - text, password, email, tel, url
  - number, range
  - date, datetime-local, time, month, week
  - checkbox, radio
  - file — file upload
  - hidden
  - search
  - color
- Attributes: required, placeholder, min, max, step, pattern, readonly, disabled, multiple
- label — always pair inputs with <label for="id"> for accessibility
- autocomplete — help browser autofill

مثال:

```
<form action="/signup" method="post">
  <label for="email">Email</label>
  <input type="email" id="email" name="email" required>

  <label for="age">Age</label>
  <input type="number" id="age" name="age" min="0" max="120">

  <button type="submit">Sign up</button>
</form>
```

## 9. فائل اپلوڈ اور فرم ڈیٹا

- `enctype="multipart/form-data"` required for file uploads

```
<form action="/upload" method="post" enctype="multipart/form-data">
  <input type="file" name="avatar">
</form>
```

## 10. میڈیا: آڈیو اور ویڈیو

- `<audio controls src="audio.mp3">Your browser doesn't support audio.</audio>`
- `<video controls width="600" src="video.mp4">Fallback text</video>`
- Attributes: controls, autoplay, muted, loop, playsinline, poster

مثال:

```
<video controls width="480">
  <source src="video.mp4" type="video/mp4">
  <source src="video.webm" type="video/webm">
  Your browser does not support the video tag.
</video>
```

## 11. Semantic HTML5 عناصر

- `<header>`, `<nav>`, `<main>`, `<section>`, `<article>`, `<aside>`, `<footer>`, `<figure>`, `<figcaption>`, `<details>`, `<summary>`, `<mark>`, `<time>`
- Use semantic tags for accessibility and SEO.

مثال:

```
<header>
  <nav><!-- links --></nav>
</header>
<main>
  <article>
    <h2>Blog post</h2>
  </article>
</main>
<footer>© 2025</footer>
```

## 12. Global Attributes (عام attributes)

- id, class, style, title, data-\* (custom data attributes), hidden, tabindex, contenteditable

مثال:

```
<div id="hero" class="container" data-theme="dark" hidden>Hidden content</div>
```

## 13. ARIA اور Accessibility (a11y)

- Use semantic elements first. استعمال کریں ARIA جب نا ممکن ہو تو۔
  - role="button", aria-label="Close", aria-hidden="true", aria-live وغیرہ۔
- Ensure labels for form controls, keyboard navigability, contrast, alt attributes

مثال:

```
<button aria-label="Close dialog">×</button>
```

## 14. Meta Tags (SEO & Social)

- Charset, viewport already ذکر ہو چکا
- SEO: <meta name="description" content="short description">
- Open Graph (Facebook, LinkedIn)
  - <meta property="og:title" content="...">
  - <meta property="og:description" content="...">
  - <meta property="og:image" content="...">
- Twitter Card
  - <meta name="twitter:card" content="summary\_large\_image">

## 15. Scripts اور CSS شامل کرنا

- External CSS: <link rel="stylesheet" href="style.css"> (in <head>)
- Inline CSS: <style> ... </style>
- External JS: <script src="app.js" defer></script> یا async
  - defer — file loads and executes after parsing
  - async — executes as soon as loaded (order not guaranteed)
- Inline JS: <script> ... </script>

مثال:

```
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <script src="main.js" defer></script>
</body>
```

## 16. Forms Client-side Validation (HTML5) کے لیے

- required, type="email", pattern="regex", minlength, maxlength

مثال:

```
<input type="email" required>
<input type="text" pattern="[A-Za-z ]+" title="Only letters allowed">
```

## 17. Templates, Slot اور Web Components (بنیادی)

- <template> — HTML template not rendered until used by JS
- <slot> — used inside web components

مثال:

```
<template id="card">
  <div class="card">
    <h3></h3>
    <p></p>
  </div>
</template>
```

## 18. Canvas اور SVG

- <canvas id="c"></canvas> — pixel drawing via JS
- Inline SVG: scalable vector graphics directly in HTML

مثال (SVG):

```
<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" />
</svg>
```

## 19. Microdata / JSON-LD (structured data)

- JSON-LD is recommended for search engines

مثال (JSON-LD):

```
<script type="application/ld+json">
{
  "@context": "https://schema.org",
  "@type": "Person",
  "name": "Alee"
}
```

```
}  
</script>
```

## 20. Common Useful Patterns

- Responsive meta + mobile-first CSS
- Skip link for accessibility: `<a href="#main" class="skip">Skip to content</a>`
- Favicon: `<link rel="icon" href="favicon.ico">`
- Preload critical assets: `<link rel="preload" href="font.woff2" as="font" type="font/woff2" crossorigin>`

## 21. Shortcuts & Entities

- `&nbsp;`; non-breaking space
- `&lt;`, `&gt;`, `&amp;`, `&quot;`;
- `©`, `®`, `—` (em dash)

## 22. Events (HTML attributes)

- `onclick`, `onchange`, `onsubmit` — but prefer adding listeners in JS: `element.addEventListener(...)`

**Example (best practice):**

```
<button id="btn">Click</button>  
<script>  
  document.getElementById('btn').addEventListener('click', () => alert('Clicked'));  
</script>
```

## 23. Security Tips

- Sanitize user input server-side (never trust client).
- Use `rel="noopener noreferrer"` on `target="_blank"` links.
- Content Security Policy (CSP) headers to reduce XSS risk (set on server).

## 24. Performance Tips

- Minimize HTTP requests, use bundling where appropriate.
- Use `defer/async` for scripts.
- Use responsive images (`srcset`) and `loading="lazy"`.
- Compress images, enable `gzip/brotli` on server.

## 25. Cheatsheet — Quick Reference Table

Tag	Purpose
<!DOCTYPE html>	Document type
<html>	Root element
<head>	Metadata, links, scripts
<meta>	Charset, viewport, description
<title>	Page title
<link>	External resources (CSS, preconnect)
<script>	JavaScript
<body>	Visible content
<header> <nav> <main> <footer>	Semantic layout
<section> <article> <aside>	Content grouping
<h1>–<h6>	Headings
<p>	Paragraph
<a>	Link
<img>	Image
<form>	Form
<input> <select> <textarea>	Form controls
<table> <thead> <tbody> <tr> <td> <th>	Tables
<ul> <ol> <li>	Lists
<canvas> <svg>	Graphics

## 26. Examples — Small Page Template

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>Simple Site</title>
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <a class="skip" href="#main">Skip to content</a>
  <header>
    <h1>Simple Site</h1>
    <nav>
      <a href="#home">Home</a>

```



```
<a href="#about">About</a>
</nav>
</header>
<main id="main">
  <section id="home">
    <h2>Welcome</h2>
    <p>Hello world!</p>
  </section>
</main>
<footer>© 2025 Alee</footer>
<script src="main.js" defer></script>
</body>
</html>
```

## 27. Learning Resources (suggested next steps)

- Practice small projects: landing page, blog post, contact form
- Learn CSS (Flexbox & Grid) اور JavaScript DOM
- Accessibility (WCAG basics)