

HTML & CSS QUICK REFERENCE

Elements, selectors, flexbox, grid, responsive

HTML Structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport"
      content="width=device-width, initial-scale=1.0">
    <title>Page Title</title>
    <link rel="stylesheet" href="style.css">
  </head>
  <body>
    <h1>Hello World</h1>
    <script src="app.js"></script>
  </body>
</html>
```

Common Elements

Text & Headings

```
<h1>Heading 1</h1> ... <h6>Heading 6</h6>
<p>Paragraph text</p>
<strong>Bold</strong> <em>Italic</em>
<br> <!-- line break -->
<hr> <!-- horizontal rule -->
```

Links & Images

```
<a href="https://example.com">Link text</a>
<a href="#section">Anchor link</a>

```

Lists

```
<ul> <!-- unordered -->
  <li>Item</li>
</ul>
<ol> <!-- ordered -->
  <li>First</li>
</ol>
```

Forms

Input Types

```
<form action="/submit" method="POST">
  <input type="text" name="user"
    placeholder="Name" required>
  <input type="email" name="email">
  <input type="password" name="pw">
  <input type="number" min="0" max="100">
  <input type="checkbox" name="agree">
  <input type="radio" name="size" value="M">
  <button type="submit">Send</button>
</form>
```

Select & Textarea

```
<select name="color">
  <option value="r">Red</option>
  <option value="g" selected>Green</option>
</select>
<textarea name="msg" rows="4"
  cols="30"></textarea>
```

Semantic HTML

<header> Intro content or nav container
<nav> Navigation links
<main> Primary page content (one per page)
<section> Thematic grouping of content
<article> Self-contained content
<aside> Sidebar or tangential content
<footer> Footer for section or page
<figure> Image/diagram with caption
<figcaption> Caption for <figure>

CSS Selectors

Basic Selectors

element `p {}` — all <p> elements
.class `.card {}` — class selector
#id `#main {}` — id selector
***** Universal selector (all elements)

Combinators

A B Descendant (B inside A)
A > B Direct child only
A + B Adjacent sibling (B right after A)
A ~ B General sibling (B after A)

Pseudo-classes

:hover Mouse over element
:focus Element has focus
:first-child First child of parent
:nth-child(n) nth child (2n = even, odd)

Box Model

```
.box {
  margin: 10px; /* outside */
  border: 1px solid #333; /* edge */
  padding: 15px; /* inside */
  width: 200px;
  box-sizing: border-box; /* include pad+border */
}
```

Shorthand

margin: 10px All sides
margin: 10px 20px Top/bottom | left/right
margin: 10px 20px 15px Top | left/right | bottom
margin: 10px 20px 15px 5px Top | right | bottom | left

Flexbox

Container

```
.flex-container {
  display: flex;
  flex-direction: row; /* row | column */
  justify-content: center; /* main axis */
  align-items: center; /* cross axis */
  gap: 10px;
  flex-wrap: wrap;
}
```

Item Properties

flex: 1 Grow to fill available space
flex-grow: 2 Grow ratio relative to siblings
flex-shrink: 0 Don't shrink below basis
flex-basis: 200px Initial size before grow/shrink
align-self: flex-end Override container alignment
order: -1 Visual order (default 0)

Grid

Container

```
.grid {
  display: grid;
  grid-template-columns: 1fr 2fr 1fr;
  grid-template-rows: auto;
  gap: 10px;
}
```

Item Placement

```
.item {
  grid-column: 1 / 3; /* span col 1-2 */
  grid-row: 1 / 2;
}
/* shorthand: repeat, minmax */
grid-template-columns: repeat(3, 1fr);
grid-template-rows:
  repeat(auto-fit, minmax(200px, 1fr));
```

Positioning

static Default flow (no offset properties)
relative Offset from normal position
absolute Offset from nearest positioned ancestor
fixed Offset from viewport (stays on scroll)
sticky Relative until scroll threshold, then fixed

Example

```
.parent { position: relative; }
.child {
  position: absolute;
  top: 0; right: 0; /* top-right corner */
}
```

Media Queries

```
/* Mobile-first: base styles for small screens */
.container { padding: 10px; }

@media (min-width: 768px) {
  .container { max-width: 720px; }
}

@media (min-width: 1024px) {
  .container { max-width: 960px; }
}
```

Common Breakpoints

480px Small phones
768px Tablets
1024px Small desktops / landscape tablets
1280px Desktops