

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

A practical one-day bootcamp companion for fast web development basics.

Table of Contents

- HTML Basics
- CSS Basics
- JavaScript Basics
- Responsive Design
- Useful Resources
- Quick Tips and Notes

1. HTML BASICS

Document Structure

HTML

```
<!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>
</head>
<body>
  <!-- Content goes here -->
</body>
</html>
```

Common HTML Tags

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

Tag	Purpose	Example
<h1> to <h6>	Headings	Main Heading
<p>	Paragraph	Text here
<a>	Hyperlink	Link
	Image	
<div>	Block container	Content
	Inline container	Text
/ /	Lists	Item
<table>	Table	<table><tr><td>Data</td></tr></table>
<form>/<input>	Forms and fields	<input type="text">
<header>/<footer>	Page sections	<header>...</header>
<section>/<nav>/<main>	Semantic layout	<main>...</main>

HTML Attributes

Attribute	Purpose	Example
id	Unique identifier	<div id="header">
class	CSS class	<div class="container">
src	Source URL	
href	Hyperlink URL	
alt	Alternative text	
title	Tooltip text	
style	Inline CSS	<p style="color:red;">

2. CSS BASICS

CSS Syntax

CSS

```
selector {  
  property: value;  
  property: value;  
}
```

CSS Selectors

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Essential HTML, CSS & JavaScript Reference

Selector	Example	Purpose
Element	p { }	All <p> elements
Class	.classname { }	Elements with class="classname"
ID	#idname { }	Element with id="idname"
Universal	* { }	All elements
Descendant	div p { }	<p> inside <div>
Child	div > p { }	Direct child <p> of <div>
Adjacent	h1 + p { }	<p> immediately after <h1>
Attribute	[type="text"] { }	Elements with specific attribute

Common CSS Properties

Colors & Backgrounds

CSS

```
color: #FFFFFF;  
background: #000000;  
background-color: red;  
opacity: 0.5;
```

Typography

CSS

```
font-size: 16px;  
font-family: 'Arial';  
font-weight: 700;  
font-style: italic;  
text-align: center;  
text-decoration: none;  
line-height: 1.5;  
letter-spacing: 2px;  
text-transform: uppercase;
```

Box Model

CSS

```
margin: 10px;  
padding: 10px;  
border: 1px solid #000;  
border-radius: 8px;  
width: 100%;  
height: auto;  
max-width: 800px;  
min-height: 400px;  
box-shadow: 2px 2px 10px rgba(0,0,0,0.1);
```

Layout: Flexbox

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

CSS

```
display: flex;
flex-direction: row;
justify-content: center;
align-items: center;
flex-wrap: wrap;
gap: 20px;
flex: 1;
```

Layout: Grid

CSS

```
display: grid;
grid-template-columns: repeat(3, 1fr);
gap: 20px;
grid-column: span 2;
```

Positioning

CSS

```
position: static;
position: relative;
position: absolute;
position: fixed;
position: sticky;
top: 0;
left: 0;
z-index: 10;
```

Transitions & Animations

CSS

```
transition: all 0.3s ease;
transform: rotate(45deg);
transform: scale(1.1);
transform: translateX(20px);
animation: slideIn 1s;

@keyframes slideIn {
  from { opacity: 0; transform: translateX(-50px); }
  to { opacity: 1; transform: translateX(0); }
}
```

Pseudo-classes

CSS

```
:hover { }
:active { }
:focus { }
:first-child { }
:last-child { }
:nth-child(2) { }
:before { }
:after { }
```

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

3. JAVASCRIPT BASICS

Data Types

Type	Example
String	'Hello'
Number	42, 3.14
Boolean	true, false
Array	[1, 2, 3]
Object	{name: 'John'}
Null	null
Undefined	undefined

Variables

JAVASCRIPT

```
let variable = 'value';    // Can be changed
const constant = 'value'; // Cannot be changed
var old = 'value';        // Old way (avoid)
```

Functions

JAVASCRIPT

```
function myFunction(param) {
  return param * 2;
}

const myFunction = (param) => {
  return param * 2;
};

const myFunction = param => param * 2;
```

DOM Manipulation

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

JAVASCRIPT

```
document.querySelector('#id');
document.querySelectorAll('.class');
document.getElementById('id');
document.getElementsByClassName('class');

element.textContent = 'New text';
element.innerHTML = '<b>Bold</b>';
element.style.color = 'red';
element.classList.add('active');
element.classList.remove('active');
element.classList.toggle('active');

const newDiv = document.createElement('div');
newDiv.textContent = 'Hello';
document.body.appendChild(newDiv);
```

Events

JAVASCRIPT

```
element.addEventListener('click', function() {
  // Code here
});

form.addEventListener('submit', function(event) {
  event.preventDefault();
});

window.addEventListener('load', function() {
  // Code here
});
```

Conditionals

JAVASCRIPT

```
if (condition) {
  // Code if true
} else if (anotherCondition) {
  // Code if another condition true
} else {
  // Code if all false
}

const result = condition ? 'true' : 'false';

switch (value) {
  case 1:
    break;
  default:
    // Code
}
```

Loops

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

JAVASCRIPT

```
for (let i = 0; i < 10; i++) {  
  console.log(i);  
}  
  
let i = 0;  
while (i < 10) {  
  console.log(i);  
  i++;  
}  
  
array.forEach(function(item, index) {  
  console.log(item);  
});
```

String & Array Methods

JAVASCRIPT

```
text.length;  
text.toUpperCase();  
text.toLowerCase();  
text.includes('word');  
text.replace('old', 'new');  
text.split(' ');  
  
array.length;  
array.push('item');  
array.pop();  
array.unshift('item');  
array.shift();  
array.indexOf('item');  
array.includes('item');  
array.filter(item => item > 5);  
array.map(item => item * 2);  
array.reduce((a, b) => a + b);
```

Objects & JSON

JAVASCRIPT

```
const person = {  
  name: 'John',  
  age: 30,  
  greet: function() {  
    return 'Hello';  
  }  
};  
  
person.name;  
person['age'];  
person.greet();  
  
const json = JSON.stringify(person);  
const obj = JSON.parse(json);
```

Timing

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Essential HTML, CSS & JavaScript Reference

JAVASCRIPT

```
setTimeout(function() {  
  // Code after 1000ms  
}, 1000);  
  
setInterval(function() {  
  // Code every 1000ms  
}, 1000);
```

Fetch API

JAVASCRIPT

```
fetch('https://api.example.com/data')  
  .then(response => response.json())  
  .then(data => {  
    console.log(data);  
  })  
  .catch(error => {  
    console.error(error);  
  });  
  
fetch('https://api.example.com/data', {  
  method: 'POST',  
  headers: {  
    'Content-Type': 'application/json'  
  },  
  body: JSON.stringify({ key: 'value' })  
});
```

4. RESPONSIVE DESIGN

Viewport Meta Tag

HTML

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Media Queries

CSS

```
@media (min-width: 768px) {  
  /* Styles for tablets */  
}  
  
@media (min-width: 1024px) {  
  /* Styles for desktop */  
}  
  
@media (max-width: 767px) {  
  /* Styles for mobile only */  
}  
  
@media (min-width: 768px) and (max-width: 1023px) {  
  /* Styles for tablets only */  
}
```

Common Responsive Patterns

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Essential HTML, CSS & JavaScript Reference

CSS

```
.container {
  width: 100%;
  max-width: 1168px;
  padding: 0 20px;
  margin: 0 auto;
}

img {
  max-width: 100%;
  height: auto;
}

h1 {
  font-size: clamp(2rem, 5vw, 4rem);
}

.grid {
  display: grid;
  grid-template-columns: 1fr;
  gap: 20px;
}

@media (min-width: 768px) {
  .grid { grid-template-columns: 1fr 1fr; }
}

@media (min-width: 1024px) {
  .grid { grid-template-columns: 1fr 1fr 1fr; }
}
```

Mobile Menu Example

HTML

```
<nav>
  <div class="logo">My Site</div>
  <div class="hamburger">Menu</div>
  <ul class="nav-links">
    <li>Home</li>
    <li>About</li>
    <li>Contact</li>
  </ul>
</nav>
```

CSS

```
.hamburger {
  display: block;
  font-size: 30px;
  cursor: pointer;
}

.nav-links { display: none; }
.nav-links.open { display: block; }

@media (min-width: 768px) {
  .hamburger { display: none; }
  .nav-links { display: flex !important; }
}
```

WEB DESIGN CHEAT SHEET

Essential HTML, CSS & JavaScript Reference

JAVASCRIPT

```
const hamburger = document.querySelector('.hamburger');
const navLinks = document.querySelector('.nav-links');

hamburger.addEventListener('click', function() {
  navLinks.classList.toggle('open');
});
```

5. USEFUL RESOURCES

Tools & Websites

Resource	URL	Purpose
Font Awesome	https://fontawesome.com	Free icons
Google Fonts	https://fonts.google.com	Free fonts
Unsplash	https://unsplash.com	Free images
Pexels	https://pexels.com	Free images
Coolors	https://coolors.co	Color palette generator
Canva	https://canva.com	Design tool
CodePen	https://codepen.io	Code playground
MDN Web Docs	https://developer.mozilla.org	Documentation
W3Schools	https://w3schools.com	Tutorials

Color Reference

CSS

#FFFFFF	White	#000000	Black
#FF0000	Red	#00FF00	Green
#0000FF	Blue	#FFFF00	Yellow
#FF00FF	Magenta	#00FFFF	Cyan
#FFA500	Orange	#800080	Purple
#008000	Dark Green	#A52A2A	Brown
#FFC0CB	Pink	#808080	Gray

QUICK TIPS

- Always use descriptive class names, such as .header, .nav, and .footer.
- Keep your code organized with comments.
- Test on multiple devices. Chrome DevTools is your friend.
- Use semantic HTML: <header>, <nav>, <main>, and <footer>.
- Minimize inline styles. Use external or embedded CSS.
- Optimize images for web by compressing them.
- Validate your HTML at <https://validator.w3.org>.
- Use browser DevTools to inspect and debug.
- Learn to use Git for version control.

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Essential HTML, CSS & JavaScript Reference

- Never stop learning. Web development is always evolving.

Notes

Happy Coding

Created by Samuel Katumba, Digital Entrepreneurship Trainer

Email: officialkatumba@gmail.com | Phone: 0966 658181 / 0977 658181

Website: <https://samuel-katumba.netlify.app>

This cheat sheet is part of the FREE One-Day Web Development Bootcamp. Join our community to learn more!