

Cheat Sheet for comprehensive CIW Site Development Associate

HTML Basics

HTML Document Structure

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Document</title>
</head>
<body>
    <!-- Content goes here -->
</body>
</html>
```

Common HTML Tags

- **Headings:** ``<h1>`` to ``<h6>``
- **Paragraphs:** ``<p>``
- **Links:** ``<a href="url">Link Text</a>``
- **Images:** ````
- **Lists:**
 - Unordered: ``<ul><li>Item</li></ul>``
 - Ordered: ``<ol><li>Item</li></ol>``

- **Tables:**

```
<table>
    <tr><th>Header 1</th><th>Header 2</th></tr>
    <tr><td>Row 1, Col 1</td><td>Row 1, Col 2</td></tr>
</table>
```

CSS Basics

CSS Selectors

- **Element Selector:** ``p { color: red; }``

- **Class Selector:** ``.classname { font-size: 14px; }``
- **ID Selector:** ``.idname { background-color: yellow; }``
- **Grouping Selectors:** ``.h1, h2 { color: blue; }``

Common CSS Properties

- **Text Properties:**

- ``color: red;``
- ``font-family: Arial, sans-serif;``
- ``font-size: 16px;``
- ``text-align: center;``

- **Box Model:**

- ``margin: 10px;``
- ``padding: 5px;``
- ``border: 1px solid black;``
- ``width: 200px;``
- ``height: 100px;``

- **Background:**

- ``background-color: #f0f0f0;``
- ``background-image: url('image.jpg');``

JavaScript Basics

Variables and Data Types

- **Variables:** ``let x = 10;``

- **Data Types:**

- Number: ``let num = 5;``
- String: ``let str = "Hello";``
- Boolean: ``let bool = true;``
- Array: ``let arr = [1, 2, 3];``
- Object: ``let obj = { key: "value" };``

Common JavaScript Functions

- **Alert:** ``alert("Hello, World!");``
- **Prompt:** ``let name = prompt("Enter your name:");``
- **Console Log:** ``console.log("Debug message");``

Conditional Statements

```
if (condition) {  
    // code to execute if condition is true  
} else {  
    // code to execute if condition is false  
}
```

Loops

- For Loop:

```
for (let i = 0; i < 5; i++) {  
    console.log(i);  
}
```

- While Loop:

```
let i = 0;  
while (i < 5) {  
    console.log(i);  
    i++;  
}
```

Forms and Validation

HTML Form Elements

- **Text Input:** `<input type="text" name="username">`

- **Password Input:** `<input type="password" name="password">`

- Radio Buttons:

```
<input type="radio" name="gender" value="male"> Male  
<input type="radio" name="gender" value="female"> Female
```

- Checkboxes:

```
<input type="checkbox" name="vehicle" value="Bike"> I have a bike
```

- **Submit Button:** `<input type="submit" value="Submit">`

JavaScript Form Validation

```
function validateForm() {  
    let x = document.forms["myForm"]["username"].value;  
    if (x == "") {  
        alert("Name must be filled out");  
        return false;  
    }  
}
```

Accessibility and Best Practices

Semantic HTML

- **Header:** ``<header>``
- **Navigation:** ``<nav>``
- **Main Content:** ``<main>``
- **Footer:** ``<footer>``
- **Article:** ``<article>``
- **Section:** ``<section>``

Accessibility Tips

- **Alt Text for Images:** ````
- **Label for Inputs:** ``<label for="username">Username:</label><input id="username">``
- **Keyboard Accessibility:** Ensure all interactive elements are keyboard navigable.

Version Control with Git

Basic Git Commands

- **Initialize Repository:** ``git init``
- **Clone Repository:** ``git clone https://github.com/user/repo.git``
- **Add Files:** ``git add .``
- **Commit Changes:** ``git commit -m "Commit message"``
- **Push to Remote:** ``git push origin main``
- **Pull from Remote:** ``git pull origin main``

Branching and Merging

- **Create Branch:** `git branch new-feature`
- **Switch Branch:** `git checkout new-feature`
- **Merge Branch:** `git merge new-feature`

Responsive Design

Media Queries

```
@media (max-width: 600px) {  
    body {  
        background-color: lightblue;  
    }  
}
```

Flexbox

```
.container {  
    display: flex;  
    justify-content: center;  
    align-items: center;  
}
```

Grid Layout

```
.grid-container {  
    display: grid;  
    grid-template-columns: auto auto auto;  
    gap: 10px;  
}
```

Performance Optimization

Minify CSS and JavaScript

- **CSS Minification:** Use tools like CSSNano.
- **JavaScript Minification:** Use tools like UglifyJS.

Image Optimization

- **Compress Images:** Use tools like TinyPNG.
- **Use Appropriate Formats:** Use WebP for modern browsers.

Security Best Practices

Input Validation

- **Server-Side Validation:** Always validate input on the server.
- **Client-Side Validation:** Use JavaScript for immediate feedback.

Secure Forms

- **Use HTTPS:** Ensure forms are submitted over HTTPS.
- **CSRF Protection:** Implement CSRF tokens.

Debugging and Testing

Browser Developer Tools

- **Console:** Use `console.log()` for debugging.
- **Elements Panel:** Inspect and modify HTML and CSS.
- **Network Panel:** Monitor network requests.

Cross-Browser Testing

- **Use Multiple Browsers:** Test in Chrome, Firefox, Safari, and Edge.
- **Use BrowserStack:** For testing on different devices and browsers.

Deployment

FTP Basics

- **Upload Files:** Use an FTP client like FileZilla.
- **Secure FTP:** Use SFTP for secure file transfers.

Domain and Hosting

- **Register Domain:** Use services like GoDaddy or Namecheap.
- **Choose Hosting:** Shared, VPS, or Dedicated hosting.

Additional Resources

Learning Resources

- **MDN Web Docs:** <https://developer.mozilla.org/>
- **W3Schools:** <https://www.w3schools.com/>
- **Stack Overflow:** <https://stackoverflow.com/>

Tools and Libraries

- **Bootstrap:** <https://getbootstrap.com/>
- **jQuery:** <https://jquery.com/>
- **React:** <https://reactjs.org/>

This cheat sheet provides a comprehensive overview of essential concepts and tools for the CIW Site Development Associate certification. Use it as a quick reference guide to reinforce your knowledge and skills.

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