

Day 4: HTML5 Semantic Elements and Pull Requests

Learn about semantic HTML elements and how to contribute to projects using pull requests

Part 1: HTML5 Semantic Elements

What are Semantic Elements?

Semantic elements are HTML elements that carry meaning about their content, making the document structure clearer for both developers and machines.

Key Semantic Elements

- `<header>` - Container for introductory content or navigation links
- `<nav>` - Section for navigation links
- `<main>` - Main content of the document
- `<article>` - Self-contained content that can be distributed independently
- `<section>` - Thematic grouping of content
- `<aside>` - Content indirectly related to the main content
- `<footer>` - Footer for a document or section
- `<figure>` and `<figcaption>` - Self-contained content with caption

Example Structure

```
<body>
  <header>
    <nav>
      <!-- Navigation links -->
    </nav>
  </header>

  <main>
    <article>
      <header>
        <h1>Article Title</h1>
      </header>
      <section>
        <h2>Section Heading</h2>
        <p>Content...</p>
      </section>
    </article>

    <aside>
      <!-- Related content -->
    </aside>
  </main>

  <footer>
    <!-- Footer content -->
  </footer>
</body>
```

Benefits of Semantic HTML

- Better accessibility for screen readers
- Easier to read and maintain code
- Better SEO optimization
- Clearer document structure
- More consistent codebase

Note: Always choose the most appropriate semantic element for your content. Don't use semantic elements just for styling purposes.

Part 2: Pull Requests in GitHub

What is a Pull Request?

A pull request (PR) is a method of submitting contributions to a project. It lets you tell others about changes you've pushed to a branch in a repository on GitHub.

Pull Request Workflow

1. Fork the repository
2. Clone your fork locally
3. Create a new branch
4. Make your changes
5. Commit and push changes
6. Create pull request
7. Respond to review comments
8. Merge pull request

Common Git Commands for PRs

```
# Clone repository
git clone https://github.com/username/repo.git

# Create and switch to new branch
git checkout -b feature-branch

# Add and commit changes
git add .
git commit -m "Add semantic elements to homepage"

# Push changes
git push origin feature-branch
```

Pull Request Best Practices

- Keep PRs focused and small
- Write clear PR descriptions
- Include screenshots if UI changes
- Reference related issues
- Respond promptly to reviews
- Keep commit history clean

Practice Exercises

Exercise 1: Semantic Refactoring

Refactor this non-semantic HTML to use appropriate semantic elements:

```
<div class="header">
  <div class="nav"></div>
</div>
<div class="main">
  <div class="content">
    <div class="post"></div>
  </div>
  <div class="sidebar"></div>
</div>
<div class="footer"></div>
```

Exercise 2: Create a Pull Request

1. Fork the class repository
2. Create a branch named "semantic-refactor"
3. Implement your refactored code

4. Create a pull request with your changes

Assignment

Blog Post Layout

Create a blog post layout using semantic HTML elements. Your layout should include:

- Header with navigation
- Main content area with article
- Article header with metadata
- Multiple content sections
- Aside with related content
- Footer with author info

Submission: Create a pull request to the class repository with your solution.

Additional Resources

- MDN Web Docs: [HTML Elements Reference](#)
- GitHub Docs: [Working with Pull Requests](#)
- HTML5 Doctor: [Semantic HTML Guide](#)

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