



Product Requirements & Specification Document

Project Name

Emmet Explorer - HTML Snippet Generator

1. Overview

Item	Description
Purpose	Generate and preview HTML snippets from Emmet abbreviations in real-time.
Audience	Students, educators, web developers, open-source contributors.
Scope	Web-based tool for learning and rapid HTML prototyping.
Tech Stack	React, JavaScript, Tailwind CSS.
License	Open-source (MIT).

2. Objectives

- Enable users to input Emmet abbreviations and view generated HTML.
 - Provide live preview of rendered HTML.
 - Offer a simple, educational, and responsive UI.
 - Ensure open-source accessibility and easy contribution.
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3. Core Features

Feature	Description
Emmet Input	Text input for Emmet abbreviations.
HTML Output	Display generated HTML code (read-only, syntax highlighted).
Live Preview	Render and display the HTML output in real-time.
Copy to Clipboard	Button to copy generated HTML.
Responsive Design	Mobile and desktop friendly layout using Tailwind CSS.
Error Handling	Show user-friendly errors for invalid Emmet input.
Open Source	Public repository, contribution guidelines, MIT license.

4. User Flow

1. User enters Emmet abbreviation in input field.
2. HTML is generated and displayed in code block.



- 3. Live preview updates instantly.
- 4. User can copy HTML to clipboard.
- 5. Errors are shown for invalid input.

5. Functional Requirements

ID	Requirement
FR1	Accept Emmet abbreviation input and parse to HTML.
FR2	Display generated HTML in a syntax-highlighted code block.
FR3	Render HTML output in a live preview pane.
FR4	Provide a button to copy HTML to clipboard.
FR5	Validate input and display error messages for invalid abbreviations.
FR6	Ensure responsive design for all device sizes.
FR7	Host code in a public GitHub repository with clear README and contribution guidelines.

6. Non-Functional Requirements

ID	Requirement
NFR1	Fast, real-time updates (<200ms latency).
NFR2	Accessible UI (WCAG 2.1 AA compliance).
NFR3	Minimal dependencies; lightweight bundle.
NFR4	Cross-browser compatibility (latest Chrome, Firefox, Edge, Safari).
NFR5	Codebase follows standard React and Tailwind best practices.

7. UI/UX Specifications

Component	Description
Header	Project name, brief description, GitHub link.
Emmet Input	Large, focused input area with placeholder and label.
HTML Output	Read-only, syntax-highlighted code block.
Live Preview	Rendered HTML area, visually separated.
Copy Button	Prominent, with success/failure feedback.
Error Message	Clear, concise, and visually distinct.
Layout	Responsive, single-column on mobile, two-column on desktop.



8. Technical Specifications

Area	Specification
Framework	React (functional components, hooks).
Styling	Tailwind CSS for all UI elements.
Emmet Parsing	Use emmet or a lightweight alternative.
Syntax Highlight	Use Prism.js or similar for HTML code.
State Management	React useState/useEffect; no external state libraries.
Clipboard	Use <code>navigator.clipboard</code> API.
Error Handling	Try-catch around Emmet parsing; display errors in UI.

9. Acceptance Criteria

ID	Criteria
AC1	User can input Emmet abbreviation and see correct HTML output.
AC2	Live preview updates instantly with valid HTML.
AC3	Copy to clipboard works and provides feedback.
AC4	Invalid input shows clear error message.
AC5	UI is responsive and accessible.
AC6	Code is open-source and well-documented.

10. Out of Scope

- User authentication or accounts.
- Saving or sharing snippets.
- Support for non-HTML Emmet output (e.g., CSS, JSX).
- Advanced Emmet configuration.

11. Milestones

Milestone	Description	Target Date
Project Setup	Repo, tooling, base UI	Week 1
Emmet Parsing & Output	Input, parsing, HTML display	Week 2
Live Preview & Copy	Preview pane, clipboard feature	Week 3
Error Handling & Polish	Validation, accessibility, docs	Week 4
Public Release	Open-source launch, documentation	Week 5



12. Example UI Structure

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| Emmet Explorer - HTML Snippet Generator |
| [GitHub]                               |
+-----+-----+-----+
| Emmet Input      | HTML Output      | Live Preview      |
| [input box]      | [code block]      | [rendered HTML]    |
| [error message]  | [copy button]     |                     |
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```

13. References

- [Emmet Documentation](#)
- [React](#)
- [Tailwind CSS](#)
- [Prism.js](#)

End of Document