



APIWIZ - Senior Frontend Engineer

Title: Multi-modal Content Writing Tool

Objective: Your task is to build a specialised content writing tool that combines text editing with interactive elements. This assignment evaluates your ability to manage complex UI state, handle diverse user interactions, and implement a polished user experience without relying on existing component libraries.

Functional Requirements:

1. Core Functionality:

- Create a custom rich text editor with support for:
 - Text formatting (bold, italic, underline, headings)
 - Nested lists with custom indentation behaviour
 - Custom block elements (quotes, code blocks, callouts)
- Implement an inline component system that allows users to: (Highlight text and a dropdown to update the content)
 - Insert interactive elements within text content
 - Edit properties of these elements without disrupting the surrounding text
 - Drag and reposition elements while maintaining text flow
- Implement advanced keyboard shortcuts with:
 - Combination key support (e.g., Cmd+Shift+8)
 - Custom key sequences (e.g., "/" followed by command text)
 - Keyboard navigation between interactive elements
- Create a robust clipboard system supporting:
 - Preservation of formatting when pasting from external sources
 - Format conversion between different content types
 - Custom paste behaviours for different content zones

2. Advanced Features:

- Implement a custom undo/redo system that:
 - Groups related operations into a single undoable action
 - Preserves selection state across undo/redo operations
 - Handles complex content transformations
- Build an innovative @mention system with:
 - Fuzzy search across multiple data sources
 - Preview cards for the mentioned entities

Technical Constraints:

- Don't use any existing WYSIWYG or rich text editor libraries
- Maximum bundle size of 150KB (gzipped) for the entire component
- Support for the latest two versions of major browsers
- Must work offline with proper state persistence
- Must score 95 %+ on Lighthouse accessibility audit

Technical Expectations:

- HTML, CSS (you can use Tailwind or SCSS), and JavaScript or any modern frontend framework like React, Angular, Vue, or Next.
 - Clean and modular code structure
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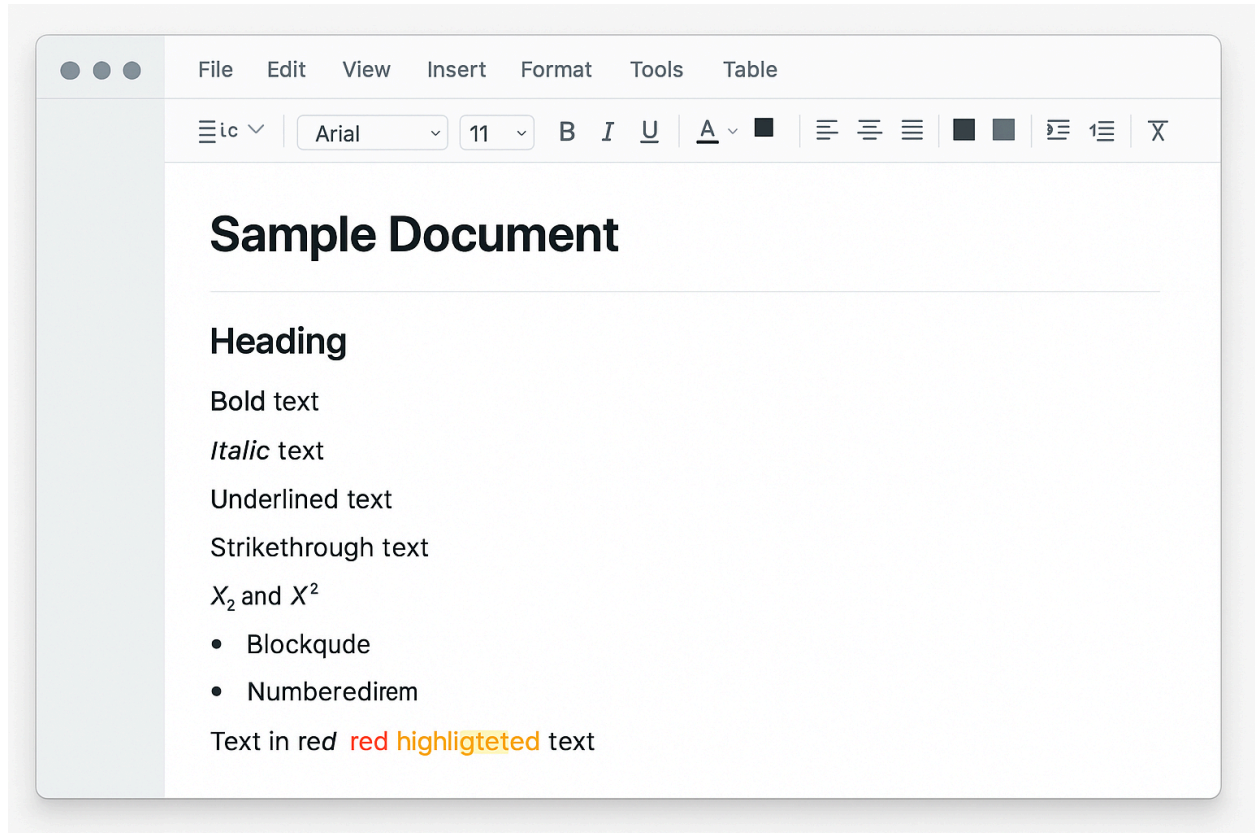
Deliverables:

- Provide a GitHub repository with your implementation along with documentation explaining your architecture decisions, state management approach, and accessibility considerations.
 - Fully functional web application (hosted on GitHub Pages, Netlify, Vercel or similar)
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Evaluation Criteria:

- State management approach and content model design
 - Input handling and focus management
 - Performance with large documents (10,000+ characters)
 - Accessibility implementation for complex interactive elements
 - Edge case handling (bidirectional text, IME input, touch/mobile support)
 - Code organisation and maintainability
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Reference Image:



Time Limit:

- Complete this assignment within 36 hours of receipt.

Submission Deadline: 27th April, 2025 - 10:30 PM

Submission Link: [Click here](#)

Good luck!