



APIWIZ - Frontend SDE - I / SDE - II / SDE - III Role Assignment

Title: JSON Tree Visualizer

Objective: Build an interactive JSON Tree Visualizer web application that allows users to visualize JSON data as a hierarchical tree structure with search and highlighting functionality.

Functional Requirements:

1. **JSON Input & Parsing (Mandatory):**
 - Create a text area where users can paste or type JSON data
 - Validate JSON input and show error messages for invalid JSON
 - Provide a "Visualize" or "Generate Tree" button.
 - Include a sample JSON as placeholder.(optional)
2. **Tree Visualization using React Flow (Mandatory):**
 - Use React Flow library to create the tree visualization, **don't use any other library**
 - Display JSON structure as a hierarchical node tree with:
 - i. **Object nodes:** Show object keys
 - ii. **Array nodes:** Show array indices
 - iii. **Primitive nodes:** Show key and value (string, number, boolean, null)
 - Connect parent-child nodes with lines.
 - Use different colors for different node types:
 - i. Objects (blue/purple/ any color as per your choice)
 - ii. Arrays (green any color as per your choice)
 - iii. Primitives (orange/yellow/ any color as per your choice)
3. **Search Functionality (Mandatory):**
 - Implement a search bar that allows users to search by **JSON path** (e.g., \$.user.address.city, items[0].name)
 - When a search is performed:
 - i. Highlight the matching node with a distinct color.
 - ii. Pan the view to center the matched node
 - If no matches found, Show "Match found" or "No match found" message
4. **Basic Interactive Features: (Optional)**
 - **Zoom controls:** Zoom In/Out/Fit View buttons
 - **Pan:** Allow dragging the canvas to navigate
 - Display node information on hover (path and value)

Technical Expectations:

- HTML, CSS (you can use Tailwind or SCSS), and JavaScript or any modern frontend framework like React, Angular, Vue, Next.
- Clean and modular code structure.
- React Flow for tree visualization.
- **Do not use any AI tools ****.**

Deliverables:

1. Fully functional web application (hosted on GitHub Pages, Netlify, Vercel or similar)
2. GitHub repository link with clean commits and README.

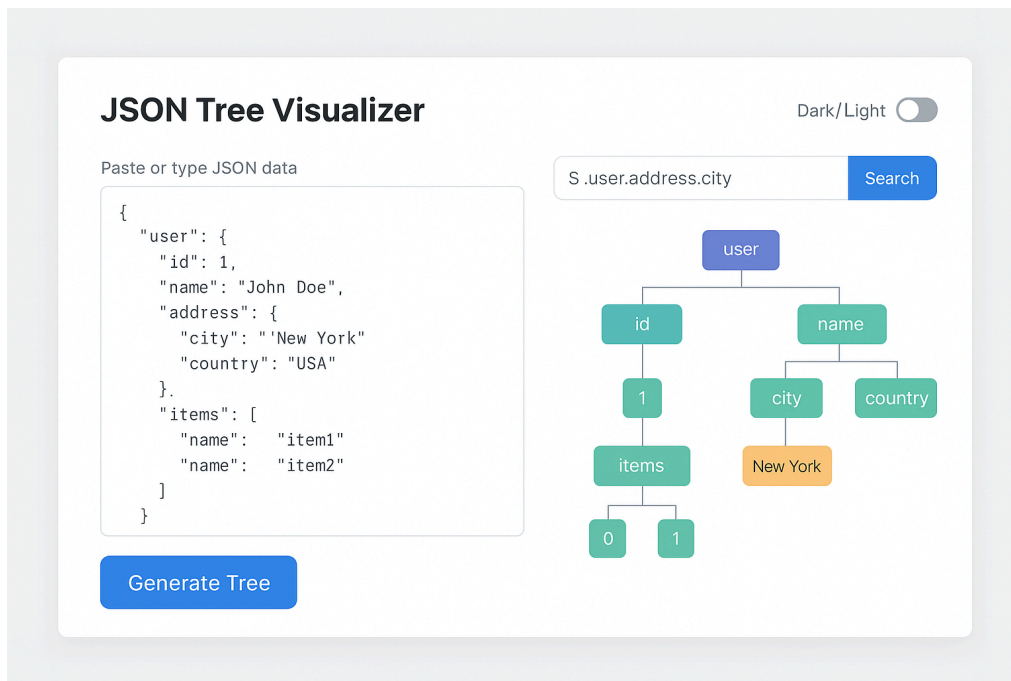
Bonus (Optional but Impressive):

- Dark/Light mode toggle.
- Clear/Reset button to clear input and tree.
- Copy JSON path: Click a node to copy its path
- Download tree as image

Evaluation Criteria:

- UI/UX design and responsiveness
 - Code quality, readability, and maintainability
 - Creativity in JSON visualization
 - Implementation of optional features will earn bonus points
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Design reference:



NOTE: The provided UI is for reference only. There's no Figma or fixed design — you're free to interpret and improve the UI/UX based on your understanding of the project's goals. We're open to your creative direction.

Submission Deadline: 30th Oct, 2025 - 10:00 PM

Submission Link: [Google Form](#)

Good luck!