

Internship Assignment: Interactive Indian Map Web Application

Problem Statement

Create a web-based interactive map of India, where clicking on a specific state or Union Territory (UT) opens a modal containing detailed information about it. Additionally, the border of the selected state should be highlighted, its capital displayed, and an option to copy the state's details should be available.

Assignment Details

1. Interactive Map

- Display a map of India with all states and Union Territories (UTs) outlined.
- Each state/UT should be clickable.
- Use a minimal and responsive design so that the map adjusts well across various devices (desktop, tablet, mobile).

2. State/UT Modal

- When a user clicks on a state/UT, a modal should appear with the following information:
 - Name of the state/UT.
 - Capital city.
 - Basic details like area, primary languages, traditional dance forms, and literacy rate.
 - Flag image (if any).
 - A brief description of the state/UT.
- Include a **“Copy” button** that allows users to copy the displayed information into their clipboard.
- The modal should be visually appealing and closeable (with a “Close” button or clicking outside the modal).

3. State/UT Highlighting

- Highlight the border of the selected state/UT upon click to make it visually distinct.
- The highlight should disappear when the modal is closed.

4. Capital Display

- Display the capital city of each state/UT on the map.
 - The capital should be indicated with a small dot or marker along with a label.
 - Upon state selection, the label for the capital city should become more prominent.
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Technical Guidelines

1. Tech Stack

- Use HTML, CSS, and JavaScript for this project.
- Consider using libraries like SVG for the map or any JS library like Leaflet.js/D3.js for a more interactive experience.
- No frameworks (e.g., React, Angular, Vue) should be used, as this is intended to be a minimal project.

2. Data Source

- Use a JSON file containing details of each state/UT, including name, capital, population, area, languages, traditional dance, literacy rate, and flag image.
- Data should be sourced from official state/UT websites or their overview pages to ensure authenticity.
- Include all states and Union Territories in India.

3. Design Considerations

- The map should be easy to navigate and intuitive for users.
- Ensure the modal and map are accessible (e.g., keyboard navigable).
- Use CSS transitions and animations for smooth modal appearance and state/UT highlighting.

4. Performance

- Ensure the map is responsive and does not lag during interactions.
- Optimize the loading time of the map and data.

5. Code Quality

- Write clean, modular code using ES6+ standards.
 - Use meaningful variable and function names.
 - Comment your code where necessary to explain logic.
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Deliverables

1. Code Submission:

- Push the entire project code to a GitHub repository.
- Ensure that the repository has regular commits showcasing your development process.
- Create a README.md file with:
 - Detailed instructions on how to run the project locally.
 - Screenshots of the web application.
 - A brief explanation of your approach and any key design decisions.
 - Any known issues or areas for improvement.

2. Data Collection:

- Ensure that all data used in the project is sourced from official state/UT websites.
- Document the sources in the README.md under a “Data Sources” section.

3. Short Presentation:

- Prepare a short presentation (3-5 slides) covering:
 - Your approach to solving the problem.
 - Key challenges faced and how you overcame them.
 - Possible improvements for future iterations.
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Bonus (Optional)

- Make the map visually appealing using gradient colors for different regions.
 - Add a search bar to quickly find a state or UT.
 - Provide a toggle to switch between different views, like “State Information” and “Geographical Features.”
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Timeline

- **Duration:** 1 week.
 - **Submission Deadline:** Push the final code to the GitHub repository within a week from the assignment date.
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Additional Notes

- Authentic data collection is critical, so ensure that state information is up-to-date and sourced properly.
 - Focus on creating a smooth user experience with intuitive interactions.
 - Regular commits to the GitHub repository are highly recommended to track progress.
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This assignment will assess your ability to handle interactive UI, data management, user experience design, and documentation, all using fundamental web technologies. Happy coding!
