Internship Assignment: Build a Society Tree Visualization Tool

Objective

Design and develop an interactive family tree visualization tool. The tool should represent a caste family tree with 72 nodes, where each node represents a primary family branch. Upon clicking on a node, it should expand to show the surnames associated with that branch, along with their respective deity and gotra information.

Requirements

1. Data Structure

- **Primary Nodes:** There are 72 primary family branches (nodes).
- **Sub-nodes:** Each primary node has between 10 to 20 sub-nodes, representing surnames.
- **Sub-node Details:** Each surname should be associated with specific details including the deity and gotra information.

2. User Interface (UI)

- **Main View:**
  - Display 72 interactive bubbles, each representing a primary family branch.
  - Bubbles should be clearly labeled and visually distinct.
- **Interaction:**
  - Clicking on a bubble should expand it to reveal the associated surnames.
  - The surnames should appear as smaller bubbles or nodes connected to the primary node.
  - Each surname bubble should display the deity and gotra information when hovered over or clicked.
- **Design Considerations:**
  - Ensure the UI is responsive and visually appealing.
  - Maintain a user-friendly experience with smooth animations for transitions and expansions.
  - Consider accessibility features like keyboard navigation and screen reader support.

3. Technology Stack

- **Frontend:** Use HTML, CSS, and JavaScript for building the UI.
- **Libraries:** Consider using a visualization library like D3.js or a framework like React.js to manage the nodes and interactions.

- **Optional:** Implement a basic backend using Node.js to serve data dynamically, or use JSON files to store the family tree data.

4. Deliverables

- A fully functional web application that meets the requirements outlined above.
- A brief document explaining the data structure, design choices, and any challenges faced during development.
- A video walkthrough or presentation demonstrating the working application.

5. Evaluation Criteria

- **Functionality:** Does the application work as expected? Are all nodes and interactions implemented correctly?
- **Design and Usability:** Is the interface intuitive, visually appealing, and easy to navigate?
- **Code Quality:** Is the code well-organized, commented, and following best practices?
- **Creativity:** Are there any additional features or enhancements that improve the overall experience?

Deadline

- **Final Submission Date:** 7 Days since first commit

Submission Process

1. **GitHub Repository:**
    - Create a private GitHub repository for your project.
    - Commit and push your code regularly, documenting significant changes with clear commit messages.
    - Ensure the repository contains all project files, including the source code, documentation, and any necessary resources.
2. **Submission:**
    - Invite `@recursivezero` to your private repository as a collaborator.
    - Submit a link to your GitHub repository via Email on RecursiveZero@outlook.com by the deadline.
    - Prepare for a brief presentation or demo to showcase your work.

Good Luck!

Note: This assignment aims to evaluate your skills in web development, design aesthetics, and attention to detail. Good luck!