Task Description:

As a full-stack developer, your task is to build a configuration menu with a frontend developed in React integrated with a backend. The website will have different dashboards accessibility based on user types: Admin, Power User, and Normal User.

Website Structure and Functionality:

1. **Login Page:**
- Users select their user type: Admin, Power User, or Normal User.
- Upon successful login, users are redirected to their respective dashboards.

2. **Admin:**
- User Management: Create, edit, and delete users.
- User Logs: Display logs of user activities.

3. **Power User:**
- Signal Weightage Configuration: Form for configuring signal weightage.
- Signal List Region-wise: Displaying a list of signals region-wise.
- Database Querying: Ability to query the database.
- Grafana Modification: Modify Grafana configurations.

4. **Normal User:**
- Dashboard Viewing: View signal lists and configurations.

5. **Data Storage:**
- MongoDB database to store:
  - User credentials
  - Signal weightage configurations
  - User logs

****Deliverables:****

1. **Frontend (React):**
- Develop the frontend components for the login page and different dashboards using React.
- Create the Signal Weightage Configuration Form.

2. **Backend:**
- Develop backend APIs using Node.js and Express.js to handle user authentication, user management, logging, and database querying.
- Integrate with MongoDB for data storage.

3. **Integration:**
- Integrate the frontend with the backend to enable communication between the UI and server.

4. **Documentation:**
- Detailed explanation of the code implementation.
- Instructions for running the application.
- Description of APIs and data models.
- Explanation of the integration between frontend and backend.

5. **Sensor Weights JSON File:**
- Develop functionality to reflect changes in sensor weights made through the Signal Weightage Configuration Form in a sensor weights JSON file.

For the signals name information of each region, use the regionwise_columns.pickle file from the given link:
https://drive.google.com/file/d/1sDuXPxB_zHLl9wM1AjS2fCglBhtxZmCE/view?usp=drive_link

****Submission Guidelines:****

- Submit the frontend and backend code, documentation (with images of UI), and sensor weights JSON file in a format suitable for review (e.g., as a zip file or via a version control system).
- Create a small demo video of the functionalities of the UI
- Ensure that the code is well-structured, commented, and easy to understand.
- Include any necessary dependencies and installation instructions.

****Evaluation Criteria:****

- Functionality and usability of the website.
- Correctness and efficiency of the code implementation.
- Clarity and effectiveness of documentation.
- Integration between frontend and backend.
- Handling of user authentication, authorization, and data storage.

Good luck with your submission! If you have any questions, feel free to ask for clarification.

Submit the solution to: dipsresearch@gmail.com and Naman Agarwal