Assessment

Assessment for API and Socket Development for Cab Application

We have a cab application divided into two parts: one for users and another for drivers. For this assessment, you are required to create the necessary APIs and sockets to handle specific tasks for both the customer and driver applications. Below are the details of the tasks you need to complete:

Customer App

1. **Request a Cab API:**
    - Develop an API that will be triggered when the user hits the "done" button to request a cab.
    - Ensure that the API captures the necessary details such as user ID, location, and any other relevant information required to process the request.
2. **Request Status Socket:**
    - Create an IO socket that will communicate the result of the cab request to the user.
    - The socket should inform the user whether the ride has been accepted or declined by a driver.

Driver App

1. **Receive Request Socket:**
    - Develop a socket that will receive the cab request from the customer API.
    - Ensure that the request is passed to drivers based on their proximity to the customer's location, starting with the nearest driver within a 15 km radius.
2. **Accept/Decline Request API:**
    - Create an API that allows drivers to either accept or decline the request.
    - The API should update the status of the request based on the driver's response.
    - If a driver declines the request, the system should automatically pass the request to the next nearest driver until it is accepted by any driver.

Additional Requirements

- The system should efficiently handle the driver's range, ensuring that only drivers within a 15 km radius from the customer's location receive the request.
- Ensure robust error handling and validation throughout the APIs and sockets.
- Document the APIs and sockets with clear instructions on how to use them, including endpoint URLs, request parameters, response formats, and any necessary configuration details.
- Request should be automatically transfer to next driver after 15 sec if driver didn't react anything

Submission Guidelines

1. **Code:** Submit the complete code for the APIs and sockets. Ensure that the code is well-commented and follows best practices for readability and maintainability.
2. **Documentation:** Provide a detailed document explaining the architecture, how to set up and run the code, and how to test the APIs and sockets.

This assessment will help us evaluate your proficiency in API and socket development, as well as your ability to handle real-time communication and location-based services. Please submit your completed assessment asap.

Good luck!