Full Stack Developer Assignment

General Guidelines

1. Deadline:
   - 5TH June 2024
2. Submission:
   - Submit your GitHub repository link with the subject 'Full Stack Developer - A' to mitsi@catalystgroup.solutions.

3. Documentation:
   - Ensure that your code is well-documented. Include setup instructions, a brief explanation of your approach, and any assumptions made.

4. Evaluation:
   - Your submission will be evaluated based on creativity, implementation skills, adherence to requirements, and documentation quality.

Task 1: Online Practice Test Platform

Objective:
Implement a login system (including Google OAuth) and a signup system that directs users to a personalized dashboard. This dashboard will start an online quiz with a personalized experience based on Computerized Adaptive Testing (CAT). You are free to use any 20 MCQ questions (preferably in mathematics) for students in classes 7th to 10th for demonstration purposes.

Requirements:
1. User Authentication:
   - Implement a login system with email and password.
   - Include Google OAuth for login.
   - Provide a signup option.

2. Dashboard:
   - Upon successful login, direct users to a personalized dashboard.
   - The dashboard should allow users to start an online quiz.

3. Quiz System:
   - The quiz should have 20 MCQ questions with varying initial weightages based on difficulty.
   - Each question should have different tags (e.g., algebra, geometry) to classify the type of

question.
- Implement Computerized Adaptive Testing (CAT) to adapt the difficulty of the quiz based on the user's performance.

4. Result Evaluation and Reporting:
- Upon submission of the quiz, generate a report evaluating the user's performance.
- Provide suggestions for further improvements.

5. Technologies:
- Use MERN stack (mandatory)

6. Documentation:
- Provide detailed documentation of your code and implementation process.

Submission:
- Host your project on GitHub and provide the repository link.

Task 2: Web Scraping Script

Objective:
Create a Python script to scrape data from the website (https://www.realestate.com.au/).

Requirements:
1. Search Functionality:
- When 'Epping' is typed in the search URL, the script should fetch the details of properties listed.

2. Property Details:
- The script should scrape information about each property, such as price, address, number of bedrooms, bathrooms, agent details and other relevant details.

3. Output:
- The scraped data should be saved in a structured format (e.g., CSV, JSON).

4. Technologies:
- Use Python for the script.
- You can use libraries such as BeautifulSoup, Scrapy, or Selenium.

5. Documentation:
- Provide detailed documentation of your code and implementation process.