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GeoQuest is an Express.js application that offers an engaging geography-based quiz game along with educational and informative content. It features a responsive design that ensures compatibility, usability, and functionality across various devices. The application is built using Express.js for handling HTTP requests and integrating APIs, MongoDB for storing and managing data, and CSS for styling the user interface. Additionally, it utilizes the Open Trivia DB API to generate quiz questions.

GeoQuest is an example of system integration as it combines frontend and backend technologies, API and Database to deliver a cohesive and functional application that can be used by the end-users. The API integrates through the Open Trivia DB, which provides quiz questions. The Express JS is the one responsible for sending request to the API and fetching it to be used by the end-users. While, The Database integrates is done through MongoDB, which stores and manage user’s data such as username and quiz score. Where in Express JS is responsible for interacting with MongoDB to perform operations such as Create and Read operations.

GeoQuest’s quiz game is exclusive to its members. Users who are not members or are guests cannot access the quiz game. To play, a user must log in, but everyone is welcome to register and join GeoQuest. The quiz consists of 20 questions with a time limit of 2 minutes. The final score depends on how accurately and quickly the user answers the questions. Additionally, the top 10 members with the highest personal best scores are displayed on the leaderboard. Apart from the quiz, other content such as the home and resources pages is accessible to all users, whether they are members or not.

For example, if you are a guest or not a member, you can only access the home, about, and resources pages. To access the quiz game, you must log in or create an account. The quiz game is available on the GeoChallenge page, which also displays the leaderboard. The quiz game generates 20 random questions from the Open Trivia DB. After completing the quiz, the results are displayed, showing the correct answers for any incorrect responses. A summary of the user’s performance is also provided, including a chart that shows the number of correct and incorrect answers. Moreover, for computation of final score will varies on how fast the user answer the quiz and total correct answer of the user (the formula for final score is, (total of correct answer \* remaining miliseconds left) /100). If the user achieves a new personal best, the Express.js application updates their highest score, which is used to determine their position on the leaderboard.