

Title: React Application with Free API Integration

Description:

Create a React application that utilizes a free API sourced from the internet. Your task is to design and implement a functional user interface that interacts with the API to retrieve and display relevant data to the user.

Assignment Question:

1. Choose a free API from a reputable source on the internet. This API should provide data that can be utilized to create an engaging user experience within your React application. Examples of APIs include weather forecasts, cryptocurrency data, movie databases, or any other publicly accessible data source.

2. Design and develop a React application that integrates with the selected API. The application should have at least two distinct components:

- A component responsible for fetching data from the API and managing state.
- A component(s) to present the retrieved data to the user in an intuitive and visually appealing manner.

3. Implement functionality within your React application to handle user interactions, such as:

- Providing input fields for users to customize API requests (if applicable).
- Implementing pagination or infinite scrolling for large datasets.
- Allowing users to filter or sort the retrieved data based on specific criteria.
- Providing visual feedback to users during data loading or error states.

4. Ensure that your React application follows best practices for state management, component structure, and code organization.

5. Document the process of integrating the chosen API into your React application. Describe any challenges encountered during development and how you addressed them.

6. Provide instructions on how to run your React application locally, including any dependencies required for setup.

Note: The focus of this assignment is not only on integrating an API into a React application but also on designing a user-friendly interface and implementing interactive features that enhance the overall user experience.