Full Stack Development – Lab 3

- Component State & Events
- Using Axios with React

Developer Note:

- Work can be done in the same create-react-act application. Remember to not include node_modules in the GitHub submission.

References:

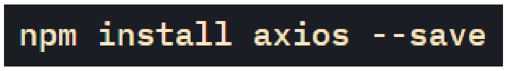
http://jsonplaceholder.typicode.com/

https://github.com/axios/axios

Exercise 1 – Working with Component Data & Axios (Fetch API)

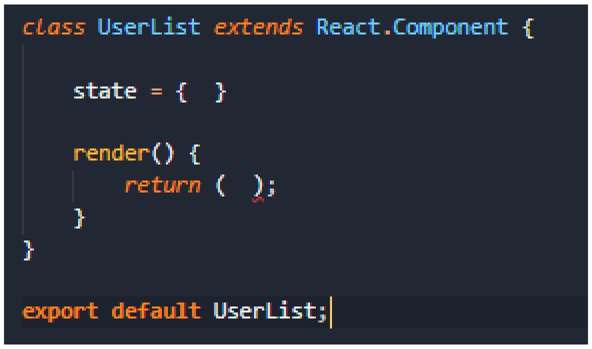
GET Request

1. Install Axios using npm install command.



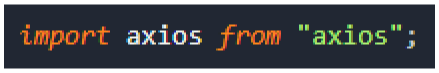
```
npm install axios --save
```

2. Create a file StudentList.js and use the React snippet command cc + tab to create the following Class component.



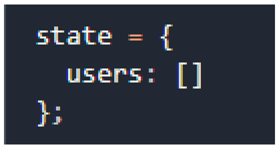
```
class UserList extends React.Component {

    state = {  }

    render() {
        return (  );
    }
}

export default UserList;
```

3. Import the the axios library in the ***UserList*** class component.



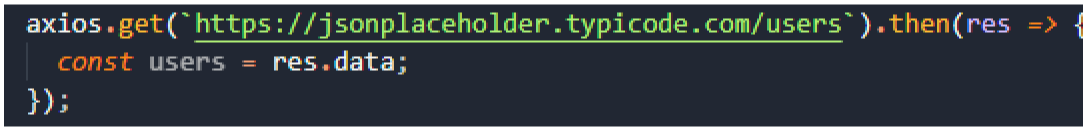
```
import axios from "axios";
```

4. Update the components internal state to store an array of Users.



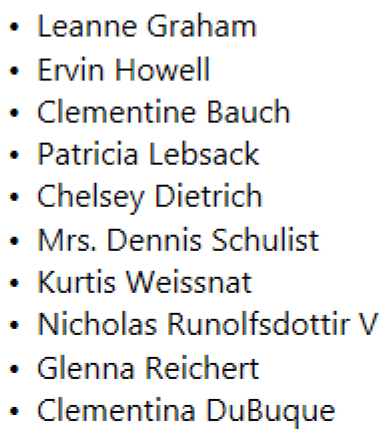
```
state = {
  users: []
};
```

5. Add an internal Component LifeCycle method to make a ***HTTP GET*** request to jsonplaceholder and get a list of User to display after the component has been rendered.
    - Add ***componentDidMount()*** method and make the following call.
    - In the response of the GET request update the users in State using ***this.setState***



```
axios.get(`https://jsonplaceholder.typicode.com/users`).then(res => {
  const users = res.data;
});
```

6. In the render method of the component, iterate over the list of users in state and output the user names.
7. In the ***App.js***, remove the starter code from ***react-create-app***. Import the ***StudentList*** component and render it with the following expected output.



```
• Leanne Graham
• Ervin Howell
• Clementine Bauch
• Patricia Lebsack
• Chelsey Dietrich
• Mrs. Dennis Schulist
• Kurtis Weissnat
• Nicholas Runolfsdottir V
• Glenna Reichert
• Clementina DuBuque
```

POST Request

1. Create a Component class named ***AddStudent*** and import the Axios library

2. Add a State object that contains the user name we wish to Add

```
state = {
  name: ""
};
```

3. Add two events ***handleChange*** and ***handleSubmit***.

```
handleChange = event => { };

handleSubmit = event => { };
```

4. Add the following form markup to the Control's render method.

```
render() {
  return (
    <div>
      <form onSubmit={this.handleSubmit}>
        <label>
          Person Name:
          <input type="text" name="name" onChange={this.handleChange} />
        </label>
        <button type="submit">Add</button>
      </form>
    </div>
  );
}
```

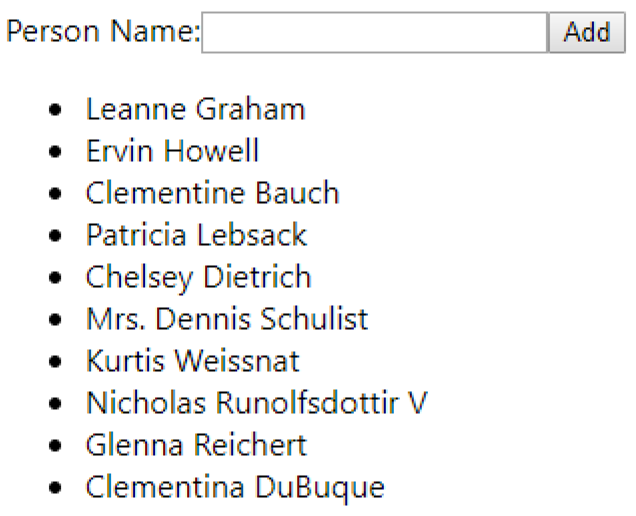
5. Update the ***handleChange*** method to update the user name in the Component state object.
6. Update the ***handleSubmit*** method to send a **POST** request to the url below with the user name to add. The response should be outputted to the console.

```
https://jsonplaceholder.typicode.com/users
```

Note: in the ***<u>handleSubmit</u>*** we use the ***event.preventDefault*** as the first line in the method, to override the default behavior of the click event.

```
event.preventDefault();
```

7. Import the ***AddStudent*** component in the ***App.js*** and render it so that the following is visible in the browser.



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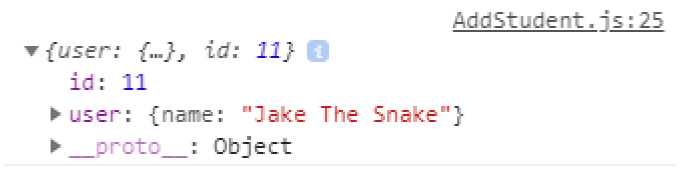
8. The following response should be logged to the console after a ***POST*** call to add the person name.

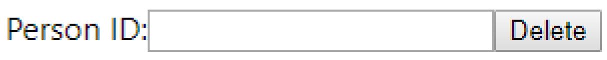


```
                                          AddStudent.js:25
▼{user: {…}, id: 11} ℹ
   id: 11
  ▶user: {name: "Jake The Snake"}
  ▶__proto__: Object
```

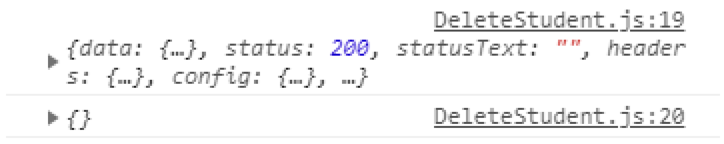
<u>DELETE Request</u>

1. Create a Component class named ***DeleteStudent.*** Copy the code from the **<u>AddStudent.js</u>** and modify the ***POST*** request to be a ***DELETE*** request to the following url. The internal state object will track the user Id to delete, not the name. Place this in the App.js render method for testing.

```
https://jsonplaceholder.typicode.com/users/${this.state.id}
```

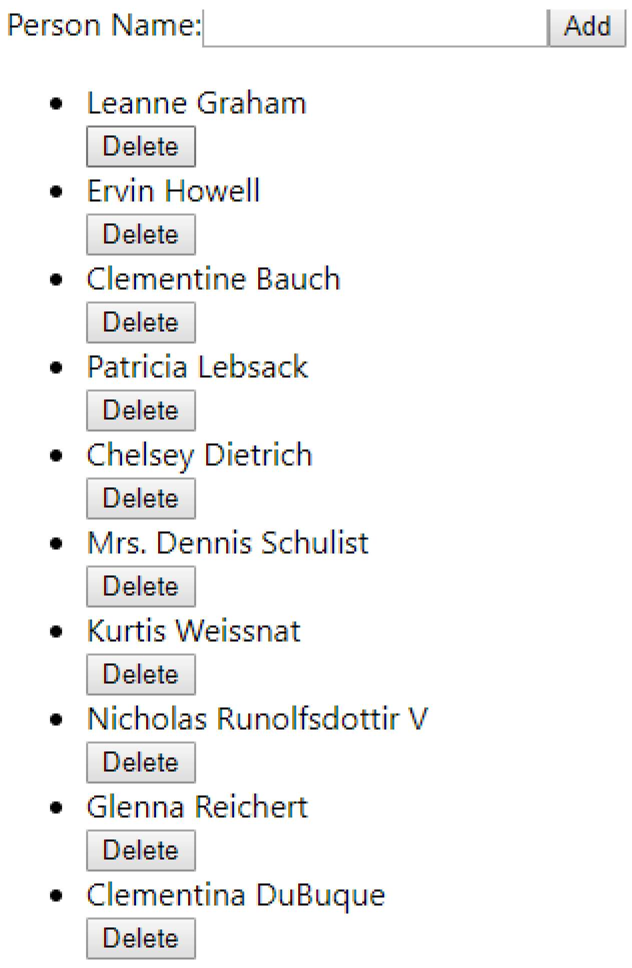


Output



```
                                    DeleteStudent.js:19
▶{data: {…}, status: 200, statusText: "", header
 s: {…}, config: {…}, …}
▶{}                                 DeleteStudent.js:20
```

2. Once the ***DeleteStudent*** component is working, add it as a child component in the ***StudentList*** component. It will be passed the user id as it's props and handle the Delete action by calling the ***DELETE*** Request with the given id.



Homework

Add the ***AddUser*** component as a nested child component in the ***StudentList*** component. Once a new User has been added trigger a refresh GET Request in the parent ***StudentList***.

Hint: This can be done by passing a event handler reference in the props to the child AddUser component. There will be some extra binding to be done to the function handler to make this work.

Challenge

Implement the Delete user to update the list of Students after the student has been deleted from the list.