4. ReactJS-HOL

Objectives

- Explain the need and Benefits of component life cycle
- Identify various life cycle hook methods
- List the sequence of steps in rendering a component

In this hands-on lab, you will learn how to:

- Implement componentDidMount() hook
- Implementing componentDidCatch() life cycle hook.

Prerequisites

The following is required to complete this hands-on lab:

- Node.js
- NPM
- Visual Studio Code

Notes

Estimated time to complete this lab: **60 minutes.**

1. Create a new react application using *create-react-app* tool with the name as "blogapp"
2. Open the application using VS Code
3. Create a new file named as **Post.js** in **src folder** with following properties

```
JS Post.js  U ×
class Post {
    constructor(id, title, body){
        this.id=id;
        this.title=title;
        this.body=body;
    }
}
export default Post;
```

Figure 1: Post class

4. Create a new class based component named as **Posts** inside **Posts.js** file

```
JS Posts.js  U ×
class Posts extends React.Component {
    constructor(props){
        super(props);
    }
}
```

Figure 2: Posts Component

5. Initialize the component with a list of Post in state of the component using the constructor

6. Create a new method in component with the name as **loadPosts()** which will be responsible for using Fetch API and assign it to the component state created earlier. To get the posts use the url (https://jsonplaceholder.typicode.com/posts)

```
JS Posts.js  U ×
class Posts extends React.Component {
    constructor(props){
        super(props);
        //code
    }
    loadPosts() {
        //code
    }
}
```

Figure 3: loadPosts() method

7. Implement the **componentDidMount()** hook to make calls to **loadPosts()** which will fetch the posts

```
Posts.js U ×
class Posts extends React.Component {
    constructor(props){
        super(props);
        //code
    }
    loadPosts() {
        //code
    }
    componentDidMount() {
        //code
    }
}
```

Figure 4: componentDidMount() hook

8. Implement the **render()** which will display the title and post of posts in html page using heading and paragraphs respectively.

```
Posts.js U ×
class Posts extends React.Component {
    constructor(props) {…
    }
    loadPosts() {…
    }
    componentDidMount() {…
    }
    render() {
        //code
    }
}
```

Figure 5: render() method

9. Define a **componentDidCatch()** method which will be responsible for displaying any error happing in the component as alert messages.

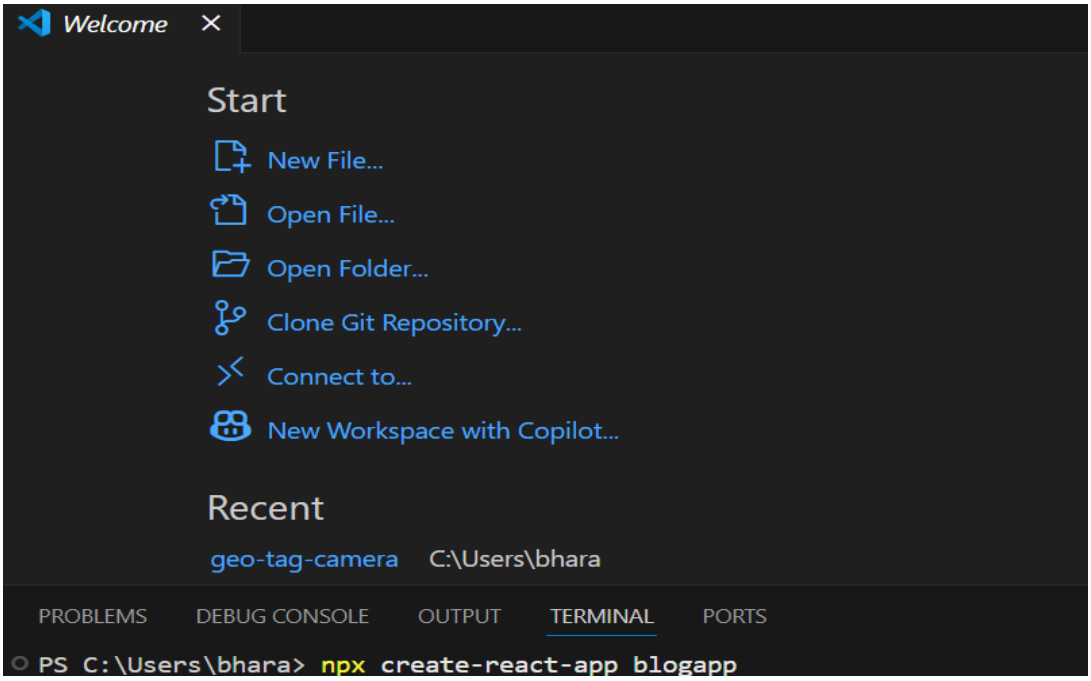
```
JS Posts.js U ×
1   class Posts extends React.Component {
2 >     constructor(props) {…
5       }
6 >     loadPosts() {…
8       }
9 >     componentDidMount() {…
11      }
12 >    render() {…
14      }
15      componentDidCatch(error, info) {
16          //code
17      }
18  }
```

Figure 6: componentDidCatch() hook

10. Add the Posts component to App component.

11. Build and Run the application using *npm start* command.

Create a New React Application



Create the Post.js File

In the src folder, create a new file named Post.js and add the following code:

```
class Post {
  constructor(id, title, body) {
    this.id = id;
    this.title = title;
    this.body = body;
  }
}
export default Post;
```

```
JS Post.js U ×   JS Posts.js U   JS App.js M
src > JS Post.js > ...
1   // src/Post.js
2   class Post {
3     constructor(id, title, body) {
4       this.id = id;
5       this.title = title;
6       this.body = body;
7     }
8   }
9
10  export default Post;
```

Create the Posts Component

In the src folder, create another file named Posts.js and create a class-based component:

```
import React, { Component } from 'react';
import Post from './Post';
```

```
class Posts extends Component {
  constructor(props) {
    super(props);
    this.state = {
      posts: [],
      error: null
    };
  }
  loadPosts = async () => {
    try {
      const response = await fetch('https://jsonplaceholder.typicode.com/posts');
      const data = await response.json();
      const posts = data.map(p => new Post(p.id, p.title, p.body));
      this.setState({ posts });
    } catch (error) {
      this.setState({ error });
    }
  }
  componentDidMount() {
    this.loadPosts();
  }

  componentDidCatch(error, info) {
    alert("Something went wrong: " + error.toString());
  }
  render() {
    return (
      <div>
```

```
      <h1>All Posts</h1>
      {this.state.posts.map(post => (
        <div key={post.id}>
          <h3>{post.title}</h3>
          <p>{post.body}</p>
        </div>
      ))}
    </div>
  );
 }
}
export default Posts;
```

```
JS Posts.js > ...
import React, { Component } from 'react';
import Post from './Post';
class Posts extends Component {
  constructor(props) {
    super(props);
    this.state = {
      posts: [],
      error: null
    };
  }
  loadPosts = async () => {
    try {
      const response = await fetch('https://jsonplaceholder.typicode.com/posts');
      const data = await response.json();
      const posts = data.map(p => new Post(p.id, p.title, p.body));
      this.setState({ posts });
    } catch (error) {
      this.setState({ error });
    }
  }

  componentDidMount() {
    this.loadPosts();
  }

  componentDidCatch(error, info) {
    alert("Something went wrong: " + error.toString());
  }

  render() {
    return (
      <div>
        <h1>All Posts</h1>
        {this.state.posts.map(post => (
          <div key={post.id}>
            <h3>{post.title}</h3>
            <p>{post.body}</p>
          </div>
        ))}
      </div>
    );
  }
}

export default Posts;
```

App.js:

```
import React from 'react';

import './App.css';

import Posts from './Posts';

function App() {

  return (

    <div className="App">

      <Posts />

    </div>

  );

}
```

export default App;

Run the Application:

npm start

OUTPUT:

---

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