Hans-on 4

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

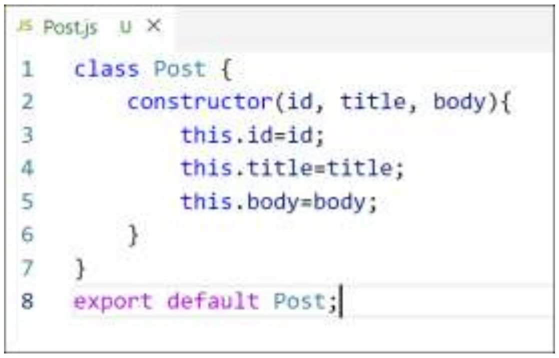
The following is required to complete this hands-on lab:

- 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

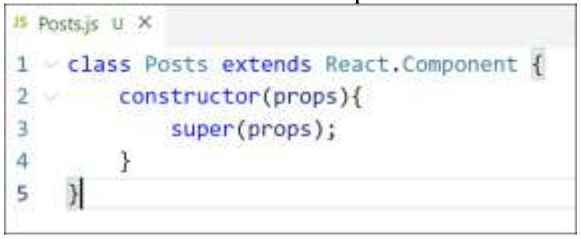


Post.js U ×

```
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



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)

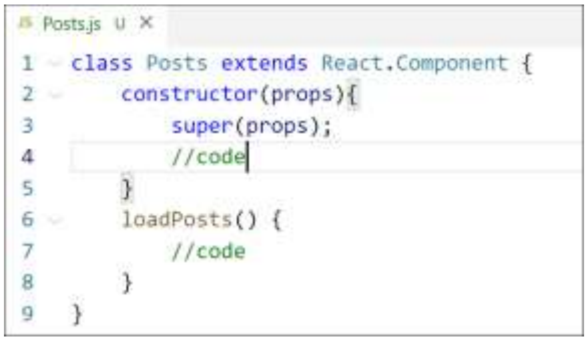

Posts.js U ×
```
class Posts extends React.Component {
    constructor(props){
        super(props);
        //code
    }
    loadPosts() {
        //code
    }
}
```

Figure 3: loadPosts() method

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

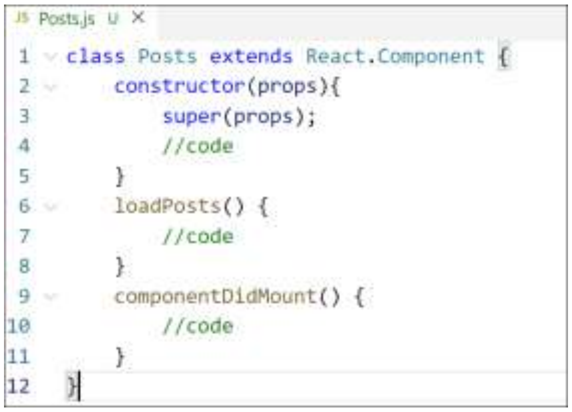

Posts.js U ×
```
class Posts extends React.Component {
    constructor(props){
        super(props);
        //code
    }
    loadPosts() {
        //code
    }
    componentDidMount() {
        //code
    }
}
```

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.

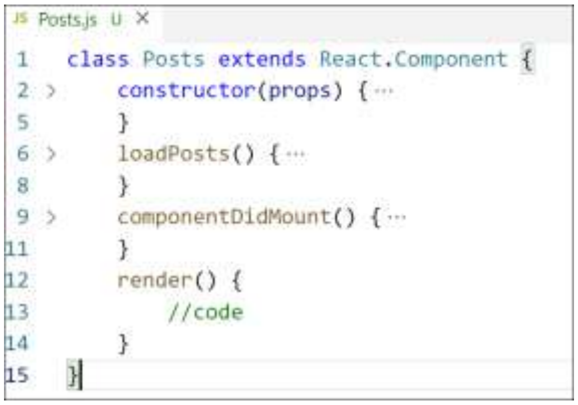
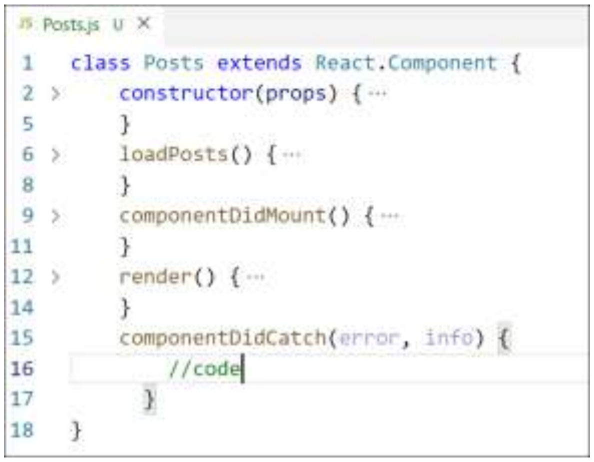

Posts.js U ×
```
class Posts extends React.Component {
    constructor(props) {···
    }
    loadPosts() {···
    }
    componentDidMount() {···
    }
    render() {
        //code
    }
}
```

Figure 5: render() method

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

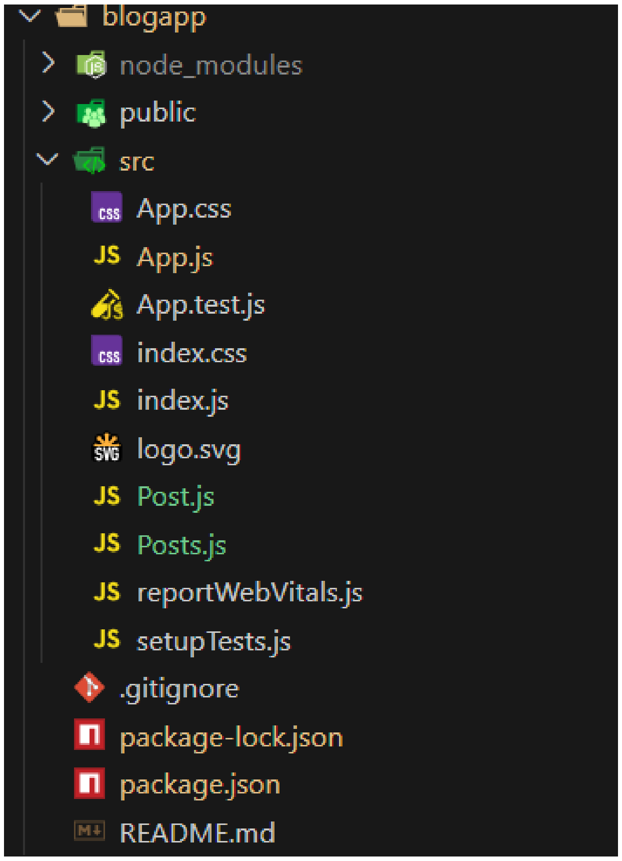


```
class Posts extends React.Component {
    constructor(props) {···
    }
    loadPosts() {···
    }
    componentDidMount() {···
    }
    render() {···
    }
    componentDidCatch(error, info) {
        //code
    }
}
```

Figure 6: componentDidCatch() hook

10. Add the Posts component to App component.
11. Build and Run the application using *npm start* command.

Implementation



```
blogapp
  node_modules
  public
  src
    App.css
    App.js
    App.test.js
    index.css
    index.js
    logo.svg
    Post.js
    Posts.js
    reportWebVitals.js
    setupTests.js
  .gitignore
  package-lock.json
  package.json
  README.md
```

App.js

```
import logo from './logo.svg';
import './App.css';
import Posts from './Posts';

function App() {
  return (
    <div className="App">
      <Posts/>
    </div>
  );
}

export default App;
```

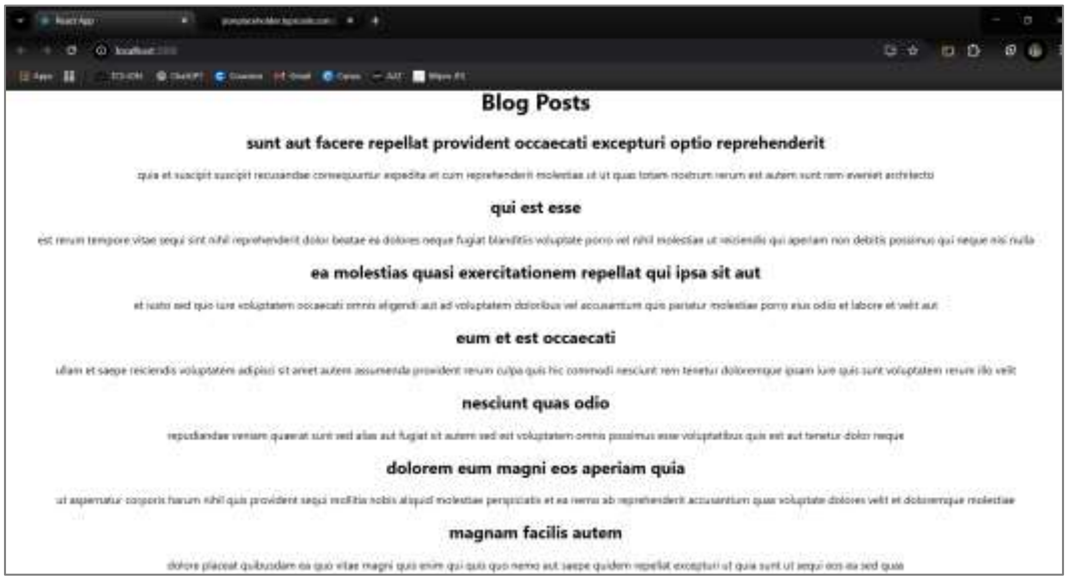
Post.js

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

export default Post;
```

Posts.js

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

class Posts extends Component {
  constructor(props) {
    super(props);
    this.state = {
      posts: []
    };
  }

  loadPosts = () => {
    fetch('https://jsonplaceholder.typicode.com/posts')
      .then(response => response.json())
      .then(data => {
        const postList = data.map(post => new Post(post.id, post.title, post.body));
        this.setState({ posts: postList });
      })
      .catch(error => {
        console.error('Error fetching posts:', error);
        throw error;
    });
  }

  componentDidMount() {
    this.loadPosts();
  }

  componentDidCatch(error, info) {
    alert("An error occurred in Posts component: " + error.message);
  }

  render() {
    return (
      <div>
        <h1>Blog Posts</h1>
        {this.state.posts.map(post => (
          <div key={post.id}>
            <h2>{post.title}</h2>
            <p>{post.body}</p>
          </div>
        ))}
      </div>
    );
  }
}

export default Posts;
```

<u>Output:</u>



Blog Posts

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