Lesson-End Project
Create a React Application Using Event Handler and Components

Objective: To create a notes application so that when the user types in the text and clicks on Add notes, the text gets added

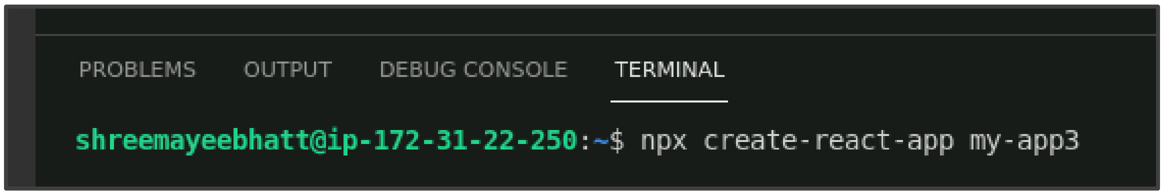
Tools Required: Node terminal, React app, and Visual Studio Code

Prerequisites: Knowledge of creating a React app and understanding of the folder structure

Steps to be followed:
1. Create a new **React** project
2. Implement the **Notes** Component
3. Implement the **Default** Component
4. Add **State** and **Functionality** to the Component
5. Run the app

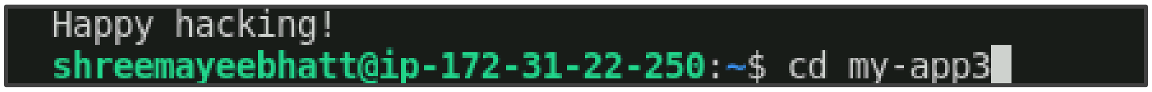
Step 1: Create a new React project

1.1 Create a new React project by using the command given below:
npx create-react-app my-app3



```
shreemayeebhatt@ip-172-31-22-250:~$ npx create-react-app my-app3
```

1.2 Move to the newly created directory by running the command **cd my-app3**

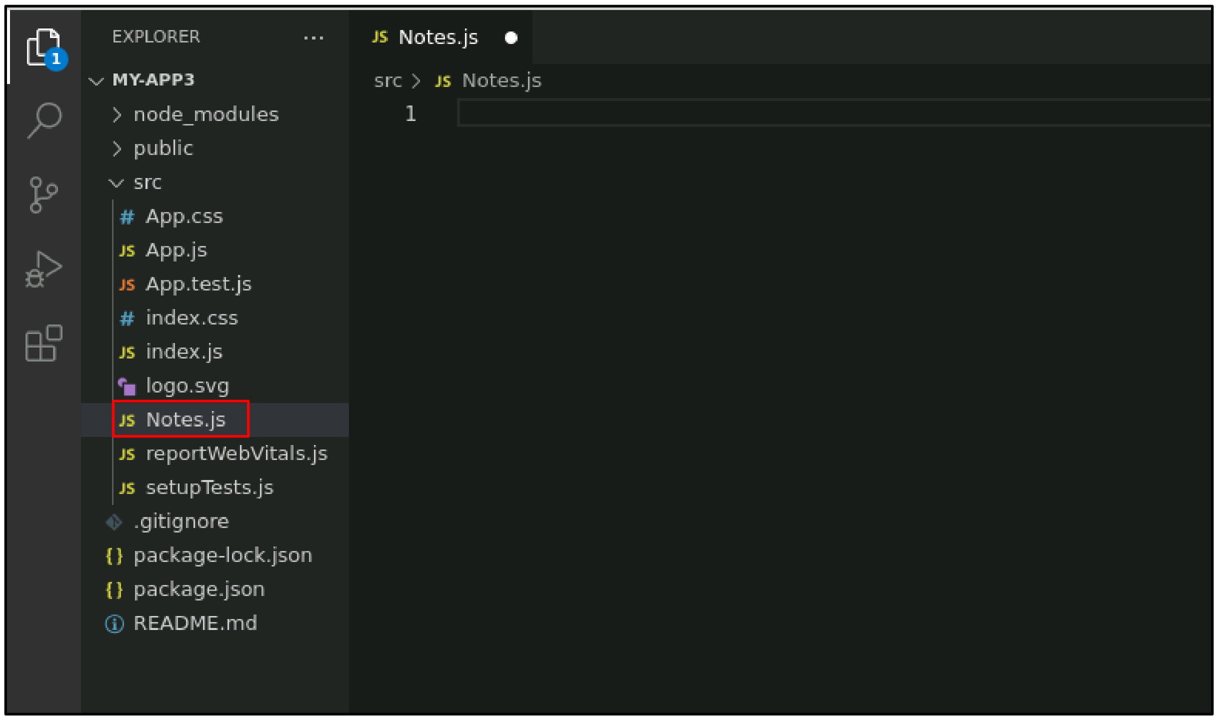


```
Happy hacking!
shreemayeebhatt@ip-172-31-22-250:~$ cd my-app3
```

1.3 Open **Visual Studio Code** and navigate to the project directory

Step 2: Implement the Notes Component

2.1 In the **src** directory, create a new file called **Notes.js**



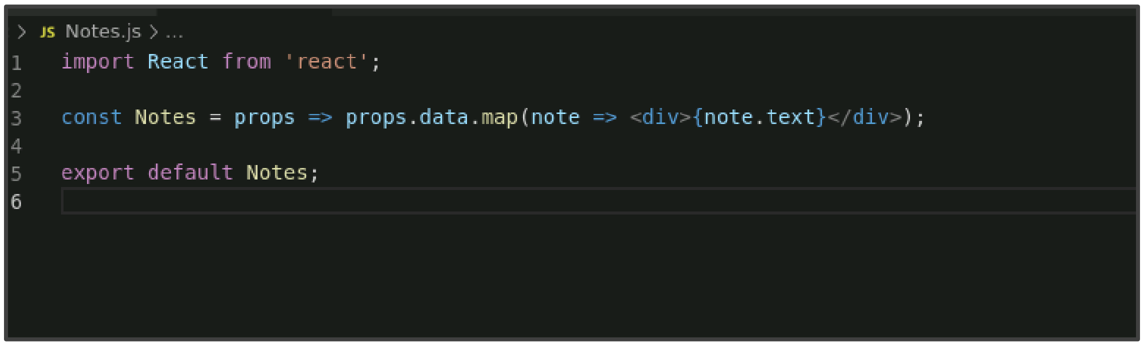
2.2 In **Notes.js** file, import React and define a functional component called **Notes** that accepts **props**

2.3 Implement the **Notes** component to map over the **props.data** array and return a **div** for each note's text:

const Notes = props => props.data.map(note => <div>{note.text} </div>);

2.4 Export the **Notes** component using the below command:

export default Notes;



Notes.js > ...

```
import React from 'react';

const Notes = props => props.data.map(note => <div>{note.text}</div>);

export default Notes;

```

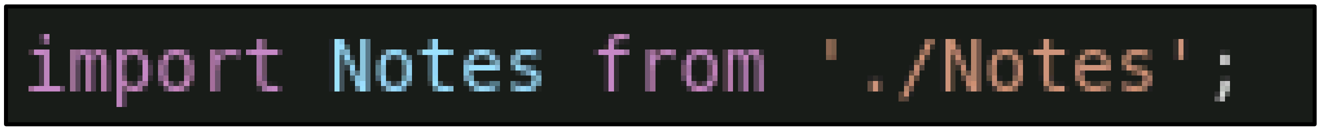
//Notes.js:

```
import React from react;
const Notes = props => props.data.map(note => <div>{note.text}</div>);
export default Notes;
```

Step 3: Implement the Default Component

3.1 In the src directory, open the **App.js** file and modify the code as below

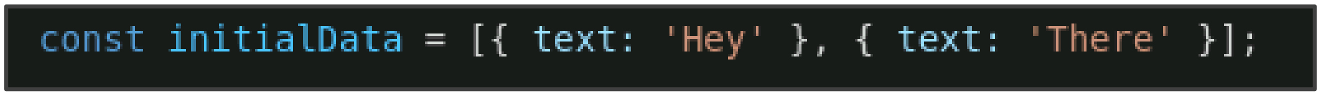
3.2 Import the **Notes** component from **./Notes**



```
import Notes from './Notes';
```

3.3 Create an array called **data** that contains objects representing notes:

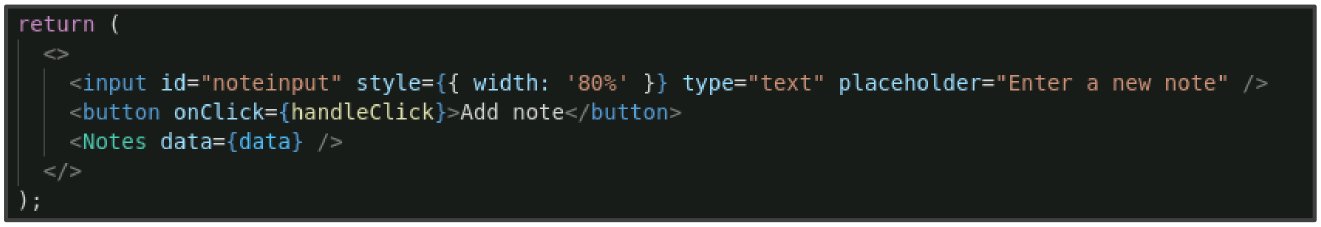
const data = [{ text: 'Hey' }, { text: 'There' }];



```
const initialData = [{ text: 'Hey' }, { text: 'There' }];
```

3.4 Implement a functional component using an arrow function and export it as the default component

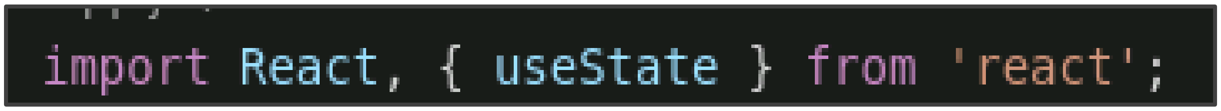
```
return (
<>
<input id="noteinput" style={{ width: '80%' }} type="text"
placeholder="Enter a  new note" />
 <button onClick={() => handleClick()}>Add note</button>
<Notes data={data} />
</>
);
```



```
return (
  <>
    <input id="noteinput" style={{ width: '80%' }} type="text" placeholder="Enter a new note" />
    <button onClick={handleClick}>Add note</button>
    <Notes data={data} />
  </>
);
```

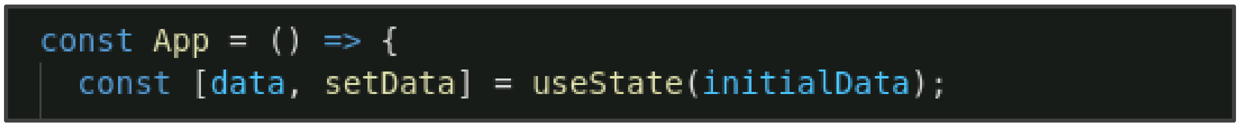
Step 4: Add State and Functionality to the Component

4.1 Import the **useState** Hook from **React**



```
import React, { useState } from 'react';
```

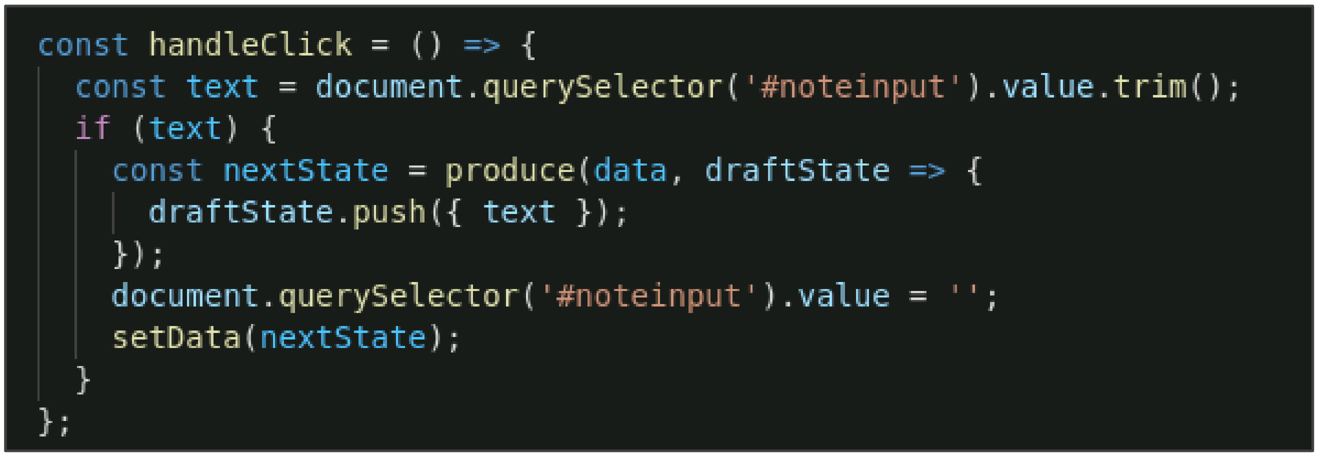
4.2 Inside the functional component, declare the **data** state variable and the **setData** function using **useState**
const [data, setData] = useState(initialData);



```
const App = () => {
  const [data, setData] = useState(initialData);
```

4.3 Implement the **handleClick** function to handle the button click event follow the below code:

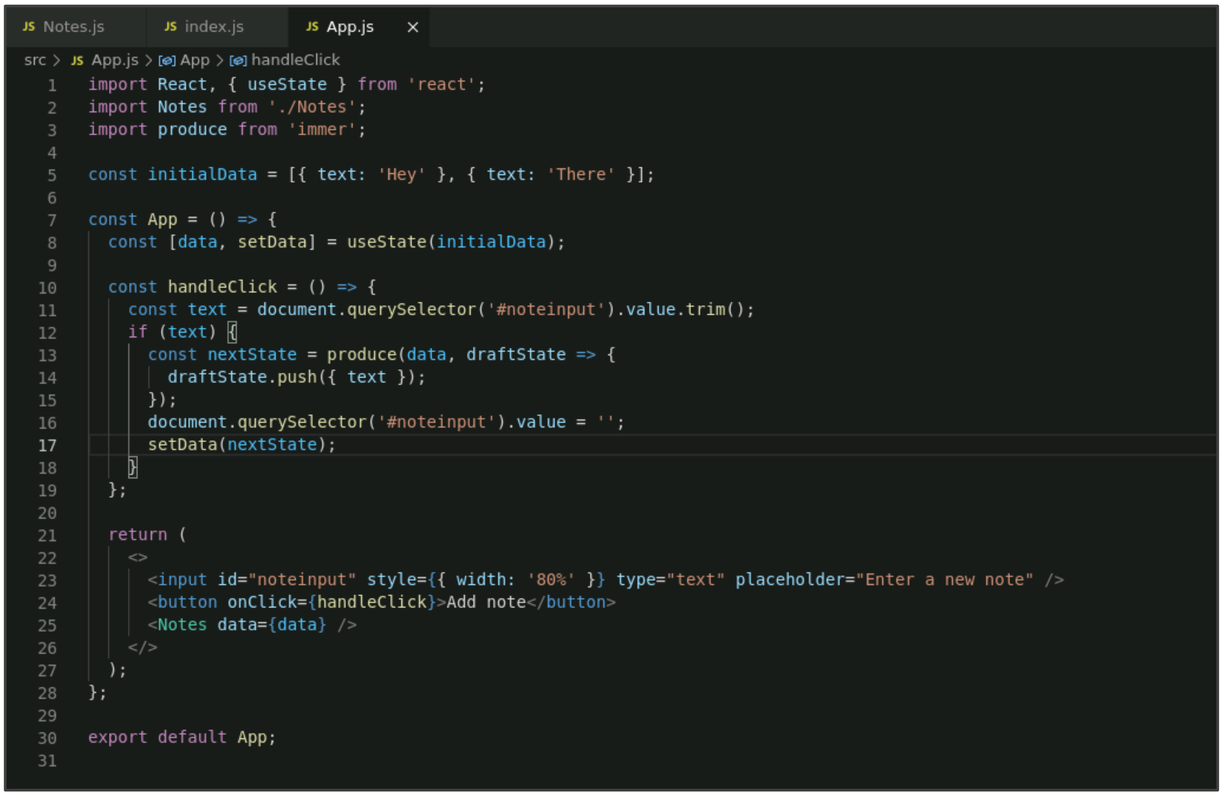
```
const handleClick = () => {
const text = document.querySelector('#noteinput').value.trim();
if (text) {
const nextState = produce(data, draftState => {
draftState.push({ text });
});
document.querySelector('#noteinput').value = '';
setData(nextState);
 }
};
```



```
const handleClick = () => {
  const text = document.querySelector('#noteinput').value.trim();
  if (text) {
    const nextState = produce(data, draftState => {
      draftState.push({ text });
    });
    document.querySelector('#noteinput').value = '';
    setData(nextState);
  }
};
```

4.4 Modify the **JSX** to include an input field, button, and the **Notes** component:

```
return (
 <>
<input id="noteinput" style={{ width: '80%' }} type="text" placeholder="Enter a
    new note" />
 <button onClick= {() => handleClick()}>Add note</button>
<Notes data={data} />
</>
 );
```



```
import React, { useState } from 'react';
import Notes from './Notes';
import produce from 'immer';

const initialData = [{ text: 'Hey' }, { text: 'There' }];

const App = () => {
  const [data, setData] = useState(initialData);

  const handleClick = () => {
    const text = document.querySelector('#noteinput').value.trim();
    if (text) {
      const nextState = produce(data, draftState => {
        draftState.push({ text });
      });
      document.querySelector('#noteinput').value = '';
      setData(nextState);
    }
  };

  return (
    <>
      <input id="noteinput" style={{ width: '80%' }} type="text" placeholder="Enter a new note" />
      <button onClick={handleClick}>Add note</button>
      <Notes data={data} />
    </>
  );
};

export default App;
```

//App.js

```
import React, { useState } from 'react';
import Notes from './Notes';
import {produce} from 'immer';

const initialData = [{ text: 'Hey' }, { text: 'There' }];
const App = () => {
  const [data, setData] = useState(initialData);
```

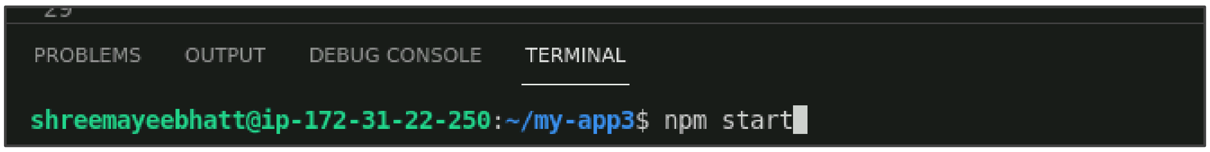
```
 const handleClick = () => {
  const text = document.querySelector('#noteinput').value.trim();
  if (text) {
   const nextState = produce(data, draftState => {
    draftState.push({ text });
   });
   document.querySelector('#noteinput').value = '';
   setData(nextState);
}
 };
 return (
  <>
   <input id="noteinput" style={{ width: '80%' }} type="text"
placeholder="Enter a new note" />
   <button onClick={handleClick}>Add note</button>
   <Notes data={data} />
  </>
 );
};

export default App;
```

Step 5: Run the app

5.1 In your terminal, navigate to the project's root directory

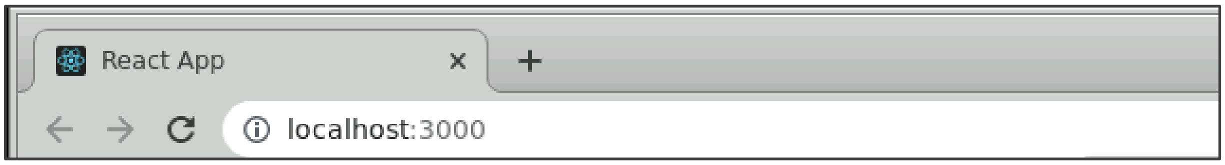
5.2 Run the command **npm start** to start the development server



```
shreemayeebhatt@ip-172-31-22-250:~/my-app3$ npm start
```

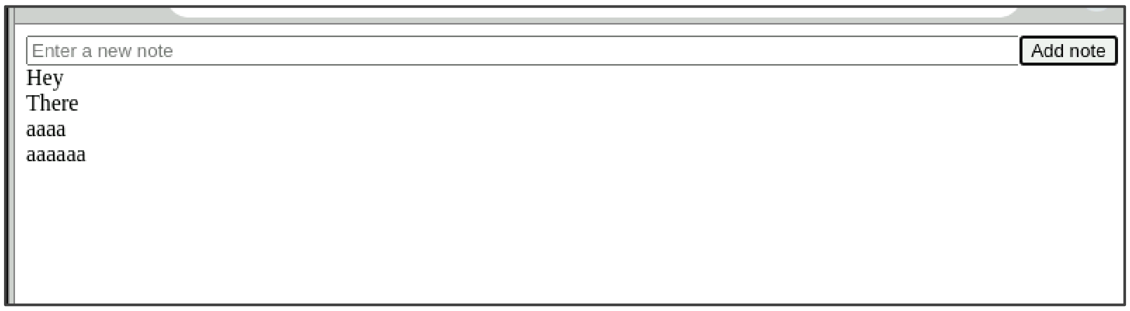
5.3 Open your browser and navigate to **http://localhost:3000**

You should see the app with the initial notes displayed and an input field and button to add more notes



5.4 Enter text in the input field

5.5 Click the **Add note** button to add new notes



Hey
There
aaaa
aaaaaa