



Web App Design with React Week 3 Coding Assignment

Points possible: 70

| Category | Criteria | % of Grade |
|---------------|---|------------|
| Functionality | Does the code work? | 25 |
| Organization | Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear. | 25 |
| Creativity | Student solved the problems presented in the assignment using creativity and out of the box thinking. | 25 |
| Completeness | All requirements of the assignment are complete. | 25 |

Instructions: In VS Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

Coding Steps:

1. Using the Houses API, or any open API of your choice you can find online, create a single page that allows for all 4 crud operations to be performed on a resource from that API. Create a React component (or more, if needed) to represent the resource. Make all forms and other necessary UI pieces their own components as reasonable.

Screenshots of Code:



PROMINEO TECH

```
src > # index.js
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import './node_modules/bootstrap/dist/css/bootstrap.css';
4 import './index.css';
5 // Import App from './App';
6 import HouseList from './components/HouseList';
7 import reportWebVitals from './reportWebVitals';
8
9 ReactDOM.render(
10   <React.StrictMode>
11     <HouseList />
12   </React.StrictMode>,
13   document.getElementById('root')
14 );
15
16 // If you want to start measuring performance in your app, pass a function
17 // to log results (for example: reportWebVitals(console.log))
18 // or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
19 reportWebVitals();
```

```
src > # index.css > # card
1
2 body {
3   margin: 0;
4   font-family: -apple-system, BlinkMacSystemFont, 'Segoe UI', 'Roboto', 'Oxygen',
5     'Ubuntu', 'Cantarell', 'Fira Sans', 'Droid Sans', 'Helvetica Neue',
6     sans-serif;
7   -webkit-font-smoothing: antialiased;
8   -moz-osx-font-smoothing: grayscale;
9   background-color: #f0f0f0;
10 }
11
12
13 code {
14   font-family: source-code-pro, Menlo, Monaco, Consolas, 'Courier New',
15     monospace;
16 }
17
18 ul {
19   list-style-type: none;
20 }
21
22
23 .navbar {
24   display: flex;
25   background-color: #f0f0f0;
26   height: 275px;
27   justify-content: center;
28   color: #f0f0f0;
29   margin: 20px;
30   padding: 10px;
31   border: 4px solid #f0f0f0;
32 }
33
34 .navbar h1 {
35   font-size: 80px;
36 }
37
```



ROMINEO TECH

```
File Edit Selection View Go Run Terminal Help
index.css - my app - Visual Studio Code

EXPLORER
src
  > node_modules
  > public
  > src
    > components
      House.js
      HouseList.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logo.svg
      reportWebVitals.js
      setupTests.js
      > .gitignore
      package-lock.json
      package.json
      README.md

OUTLINE
TIMELINE

src > # index.css > .card
18 .navbar .addhouseform {
19   font-style: italic;
20   font-size: 20px;
21   justify-content: center;
22   align-items: center;
23 }
24
25 .card {
26   background-color: #f0f0f0;
27   color: #333;
28   margin: 20px;
29   padding: 10px;
30   font-family: sans-serif;
31   border: 1px solid #ccc;
32 }
33
34 .card-header {
35   background-color: #f0f0f0;
36   color: #333;
37   text-align: center;
38   font-size: 1.2em;
39   font-family: sans-serif;
40 }
41
42 .card-body {
43   background-color: #f0f0f0;
44   text-align: left;
45   font-size: 1em;
46   font-family: sans-serif;
47 }
48
49 .card-footer {
50   font-style: italic;
51   font-family: sans-serif;
52 }
```

```
File Edit Selection View Go Run Terminal Help
index.css - my app - Visual Studio Code

EXPLORER
src
  > node_modules
  > public
  > src
    > components
      House.js
      HouseList.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logo.svg
      reportWebVitals.js
      setupTests.js
      > .gitignore
      package-lock.json
      package.json
      README.md

OUTLINE
TIMELINE

src > # index.css > .card
48 .card {
49   background-color: #f0f0f0;
50   color: #333;
51   margin: 20px;
52   padding: 10px;
53   font-family: sans-serif;
54   border: 1px solid #ccc;
55 }
56
57 .card-header {
58   background-color: #f0f0f0;
59   color: #333;
60   text-align: center;
61   font-size: 1.2em;
62   font-family: sans-serif;
63 }
64
65 .card-body {
66   background-color: #f0f0f0;
67   text-align: left;
68   font-size: 1em;
69   font-family: sans-serif;
70 }
71
72 .card-footer {
73   font-style: italic;
74   font-family: sans-serif;
75   background-color: #f0f0f0;
76   color: #fff;
77 }
```

```
File Edit Selection View Go Run Terminal Help
HousesApi.js - my app - Visual Studio Code

EXPLORER
src
  > node_modules
  > public
  > src
    > components
      House.js
      HouseList.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logo.svg
      reportWebVitals.js
      setupTests.js
      > .gitignore
      package-lock.json
      package.json
      README.md

OUTLINE
TIMELINE

src > REST > # HousesApi.js > create
1 const HOUSES_ENDPOINT_2 = 'https://ancient-talga-31359.herokuapp.com/api/houses';
2
3 class HousesApi {
4   create = async (house) => {
5     console.log("inside");
6     console.log("right now house is: " + house);
7     try {
8       const resp = await fetch(`${HOUSES_ENDPOINT_2}`, {
9         method: 'POST',
10        headers: {
11          'Content-Type': 'application/json'
12        },
13        body: JSON.stringify(house)
14      });
15      return resp;
16    } catch(e) {
17      console.log("error with create", e);
18    }
19  }
20
21  get = async () => {
22    try {
23      const resp = await fetch(HOUSES_ENDPOINT_2);
24      const data = await resp.json();
25      return data;
26    } catch(e) {
27      console.log("Problem with fetch", e);
28    }
29  }
30
31  put = async (house) => {
32    try {
33      const resp = await fetch(`${HOUSES_ENDPOINT_2}/${house.id}`, {
34        method: 'PUT',
35        headers: {
36          'Content-Type': 'application/json'
37        },
38      });
39    } catch(e) {
40      console.log("Problem with put", e);
41    }
42  }
43 }
```



PROMINEO TECH

```
File Edit Selection View Go Run Terminal Help
HousesApi.js - my app - Visual Studio Code

EXPLORER
MY_APP
  > src
  > node_modules
  > public
  > src
    > components
      Houses.js
      HousesList.js
      NewHouseForm.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logging.js
      reportWebVitals.js
      setupTests.js
    > .gitignore
    > package-lock.json
    > package.json
    > README.md

src > REST > HousesApi.js > create
28 }
29 }
30
31 put = async (house) => {
32   try {
33     const resp = await fetch(`${HOUSES_ENDPOINT_2}/${house_id}`, {
34       method: 'PUT',
35       headers: {
36         'Content-Type': 'application/json'
37       },
38       body: JSON.stringify(house)
39     });
40     return await resp.json();
41   } catch(e){
42     console.log("problem with update", e);
43   }
44 }
45
46 delete = async (house) => {
47   try {
48     const resp = await fetch(`${HOUSES_ENDPOINT_2}/${house_id}`, {
49       method: 'DELETE',
50       headers: {
51         'Content-Type': 'application/json'
52       },
53       body: JSON.stringify(house)
54     });
55     return await resp.json();
56   } catch(e){
57     console.log("problem with delete", e);
58   }
59 }
60
61 export const housesApi = new HousesApi();
62
```

```
File Edit Selection View Go Run Terminal Help
App.js - my app - Visual Studio Code

EXPLORER
MY_APP
  > src
  > node_modules
  > public
  > src
    > components
      Houses.js
      HousesList.js
      NewHouseForm.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logging.js
      reportWebVitals.js
      setupTests.js
    > .gitignore
    > package-lock.json
    > package.json
    > README.md

src > App.js > App
1 import logo from './logo.svg';
2 import './App.css';
3
4 function App() {
5   return (
6     <div className="App">
7       <header className="App-header">
8         <img src={logo} className="App-logo" alt="logo" />
9         <p>
10           Edit <code>src/App.js</code> and save to reload.
11         </p>
12       </header>
13       <div>
14         <a href="https://reactjs.org"
15           className="App-link"
16           target="_blank"
17           rel="noopener noreferrer">
18           Learn React
19         </a>
20       </div>
21     </div>
22   );
23 }
24
25 export default App;
26
```

```
File Edit Selection View Go Run Terminal Help
House.js - my app - Visual Studio Code

EXPLORER
MY_APP
  > src
  > node_modules
  > public
  > src
    > components
      Houses.js
      HousesList.js
      NewHouseForm.js
      NewHouseForm.js
    > REST
      HousesApi.js
      App.css
      App.js
      App.test.js
      index.css
      index.js
      logging.js
      reportWebVitals.js
      setupTests.js
    > .gitignore
    > package-lock.json
    > package.json
    > README.md

src > components > House.js > ...
1 import React from 'react';
2 import { housesApi } from '../REST/HousesApi';
3 import { NewHouseForm } from './NewHouseForm';
4
5 export const House = (props) => {
6   const {house, updateHouse} = props;
7
8   const deleteHouse = async (houseId) => {
9     await housesApi.delete(houseId);
10     updateHouse(house);
11   }
12
13   const deleteRoom = (roomId) => {
14     const updateHouse = {
15       ...house,
16       rooms: house.rooms.filter(x => x._id !== roomId)
17     };
18     updateHouse(updateHouse);
19   }
20
21   const addNewRoom = (room) => updateHouse({...house, rooms: [...house.rooms, room]});
22
23   const rooms = () => {
24     (
25       <div>
26         {house.rooms.map((room, index) => {
27           <div className="row">
28             <div className="col-6">
29               <label>{`${room.name}`}</label>
30             </div>
31             <div className="col-6">
32               <label>{`${room.area} sq. ft.`}</label>
33               <button type="button" className="btn btn-info float-end" onClick={() => deleteRoom(room_id)}>Delete</button>
34             </div>
35           </div>
36         )}
37       </div>
38     )
39   }
40 }
41
```

[illegible]

The screenshot shows a VS Code editor with a React application. The Explorer sidebar on the left shows a file tree with folders like 'node_modules' and 'src', and files like 'index.css', 'App.js', and 'HouseList.js'. The main editor area displays the code for 'HouseList.js', which is a functional component using React hooks (useState, useEffect, useCallback) to fetch and display a list of houses from a REST API. The code includes a constructor, componentDidMount, fetchHouses, updateHouse, and render methods. The render method uses JSX to display a form and a list of houses.

The screenshot shows a VS Code editor with a React application. The Explorer sidebar on the left displays the file structure, including folders for src, components, and a REST client. The main editor area shows the src/index.js file, which contains a React component with state management for fetchhouses and updatehouse, and a render method using JSX to display a list of houses. The REST client on the right shows a GET request to /houses and a PUT request to /houses/1.



PROMINEO TECH

```
File Edit Selection View Go Run Terminal Help
NewHouseForm.js - my-app - Visual Studio Code

EXPLORER
src > components > NewHouseForm.js > NewHouseForm
1 import React, {useState} from 'react';
2 import { houseApi } from '../API/HouseApi';
3
4 export const NewHouseForm = (props) => {
5   const [name, setName] = useState('');
6
7   const onSubmit = (e) => {
8     if (name) {
9       houseApi.create({name})
10      setName('');
11      console.log(name);
12    } else {
13      console.log('invalid input');
14    }
15    e.preventDefault();
16    setTimeout(() => {
17      props.getHouse();
18    }, 1000);
19  };
20
21  return (
22    <nav className="navbar">
23      <div>
24        <h1>HOUSE CREATOR</h1>
25        <form className="addhouseform d-flex" onSubmit={onSubmit}>
26          <h2>Add a New House: <input type="text"
27            type="text"
28            placeholder="House Name"
29            onChange={e => setName(e.target.value)}
30            value={name} />
31            <button type="submit" className="btn btn-info">Add House</button>
32          </form>
33        </div>
34      </nav>
35    )
36  );
37
```

```
File Edit Selection View Go Run Terminal Help
NewHouseForm.js - my-app - Visual Studio Code

EXPLORER
src > components > NewHouseForm.js > NewHouseForm
1 import React, {useState} from 'react';
2 import { houseApi } from '../API/HouseApi';
3
4 export const NewHouseForm = (props) => {
5   const [name, setName] = useState('');
6
7   const onSubmit = (e) => {
8     if (name) {
9       houseApi.create({name})
10      setName('');
11      console.log(name);
12    } else {
13      console.log('invalid input');
14    }
15    e.preventDefault();
16    setTimeout(() => {
17      props.getHouse();
18    }, 1000);
19  };
20
21  return (
22    <nav className="navbar">
23      <div>
24        <h1>HOUSE CREATOR</h1>
25        <form className="addhouseform d-flex" onSubmit={onSubmit}>
26          <h2>Add a New House: <input type="text"
27            type="text"
28            placeholder="House Name"
29            onChange={e => setName(e.target.value)}
30            value={name} />
31            <button type="submit" className="btn btn-info">Add House</button>
32          </form>
33        </div>
34      </nav>
35    )
36  );
37
38
```

```
File Edit Selection View Go Run Terminal Help
NewHouseForm.js - my-app - Visual Studio Code

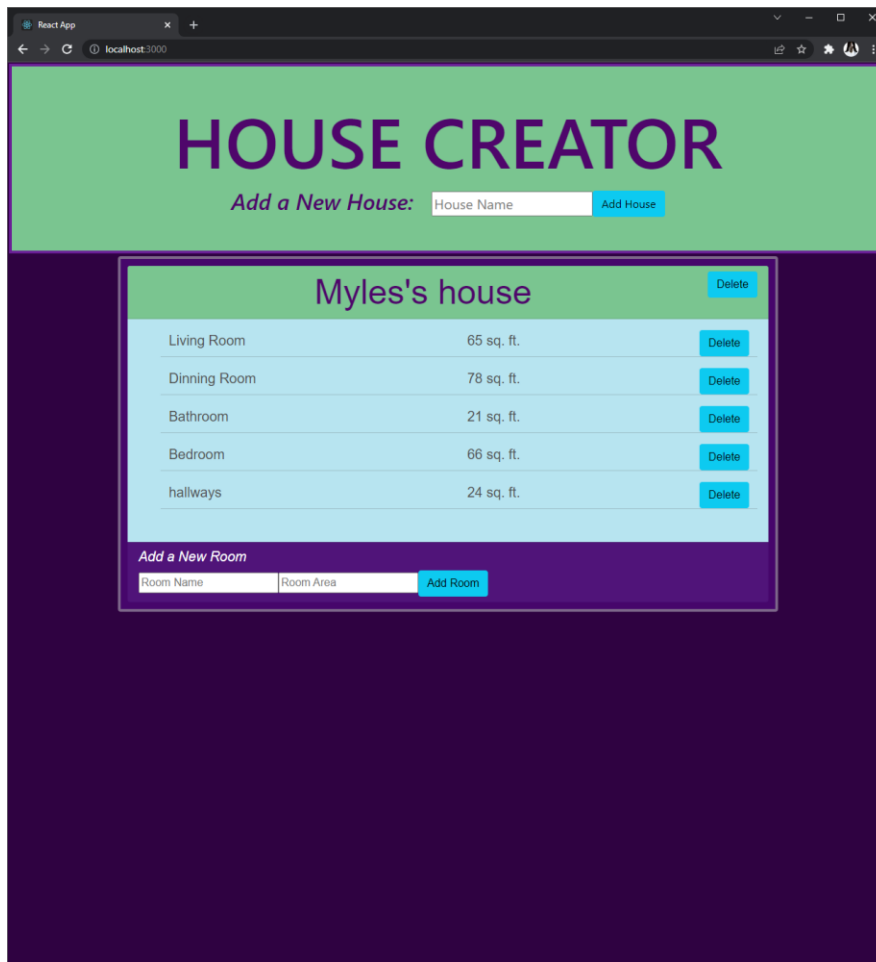
EXPLORER
src > components > NewHouseForm.js > NewHouseForm
1 import React, {useState} from 'react';
2 import { houseApi } from '../API/HouseApi';
3
4 export const NewHouseForm = (props) => {
5   const [name, setName] = useState('');
6   const [area, setArea] = useState('');
7
8   const handleAreaInput = (e) => {
9     const int = parseInt(e.target.value, 10);
10    setArea(int >= 0 ? int : '');
11  };
12
13  const onSubmit = (e) => {
14    e.preventDefault();
15    if (name && area) {
16      props.addNewRoom({name, area});
17      setName('');
18      setArea('');
19    } else {
20      console.log('invalid input');
21    }
22  };
23
24  return (
25    <div>
26      <form onSubmit={onSubmit}>
27        <h3>Add a New Room</h3>
28        <input type="text"
29          type="text"
30          placeholder="Room Name"
31          onChange={e => setName(e.target.value)}
32          value={name} />
33        <input type="text"
34          type="text"
35          placeholder="Room Area"
36          onChange={handleAreaInput}
37          value={area} />
38      </form>
39    </div>
40  );
41
```



PROMINEO TECH

```
11 const onSubmit = (e) => {
12   e.preventDefault();
13   if (name && area) {
14     props.addNewRoom({name, area});
15     setName("");
16     setArea("");
17   } else {
18     console.log("Invalid input");
19   }
20 };
21
22 return (
23   <div>
24     <form onSubmit={onSubmit}>
25       <h3>Add a New Room</h3>
26       <input
27         type="text"
28         placeholder="Room Name"
29         onChange={(e) => setName(e.target.value)}
30         value={name}
31       />
32       <input
33         type="text"
34         placeholder="Room Area"
35         onChange={handleAreaInput}
36         value={area}
37       />
38       <button type="button" className="btn btn-info" type="submit">Add Room </button>
39     </form>
40   </div>
41 );
42
43
44 };
```

Screenshots of Running Application:





PROMINEO TECH

Creating a new house

The screenshot shows a web browser window with the address bar displaying 'localhost:3000'. The page title is 'React App'. The main content area has a green header with the text 'HOUSE CREATOR' in large, bold, black letters. Below the header, there is a form to 'Add a New House' with a text input field containing 'Testing' and a blue 'Add House' button. Below this, there is a section titled 'Myles's house' with a blue 'Delete' button. This section contains a table with five rows of room information. Each row has a room name, its area in square feet, and a blue 'Delete' button. At the bottom of the section, there is a form to 'Add a New Room' with two text input fields labeled 'Room Name' and 'Room Area', and a blue 'Add Room' button.

| Myles's house | | |
|---------------|------------|--------|
| Living Room | 65 sq. ft. | Delete |
| Dinning Room | 78 sq. ft. | Delete |
| Bathroom | 21 sq. ft. | Delete |
| Bedroom | 66 sq. ft. | Delete |
| hallways | 24 sq. ft. | Delete |

Add a New Room

Room Name Room Area Add Room



PROMINEO TECH

React App

localhost:3000

HOUSE CREATOR

Add a New House: Add House

Myles's house

Delete

| | | |
|--------------|------------|--------|
| Living Room | 65 sq. ft. | Delete |
| Dinning Room | 78 sq. ft. | Delete |
| Bathroom | 21 sq. ft. | Delete |
| Bedroom | 66 sq. ft. | Delete |
| hallways | 24 sq. ft. | Delete |

Add a New Room

Add Room

Testing

Delete

Add a New Room

Add Room



PROMINEO TECH

Deleting the newly made house

React App localhost:3000

HOUSE CREATOR

Add a New House: Add House

Myles's house Delete

| | | |
|--------------|------------|-------------------------|
| Living Room | 65 sq. ft. | <button>Delete</button> |
| Dinning Room | 78 sq. ft. | <button>Delete</button> |
| Bathroom | 21 sq. ft. | <button>Delete</button> |
| Bedroom | 66 sq. ft. | <button>Delete</button> |
| hallways | 24 sq. ft. | <button>Delete</button> |

Add a New Room

Add Room

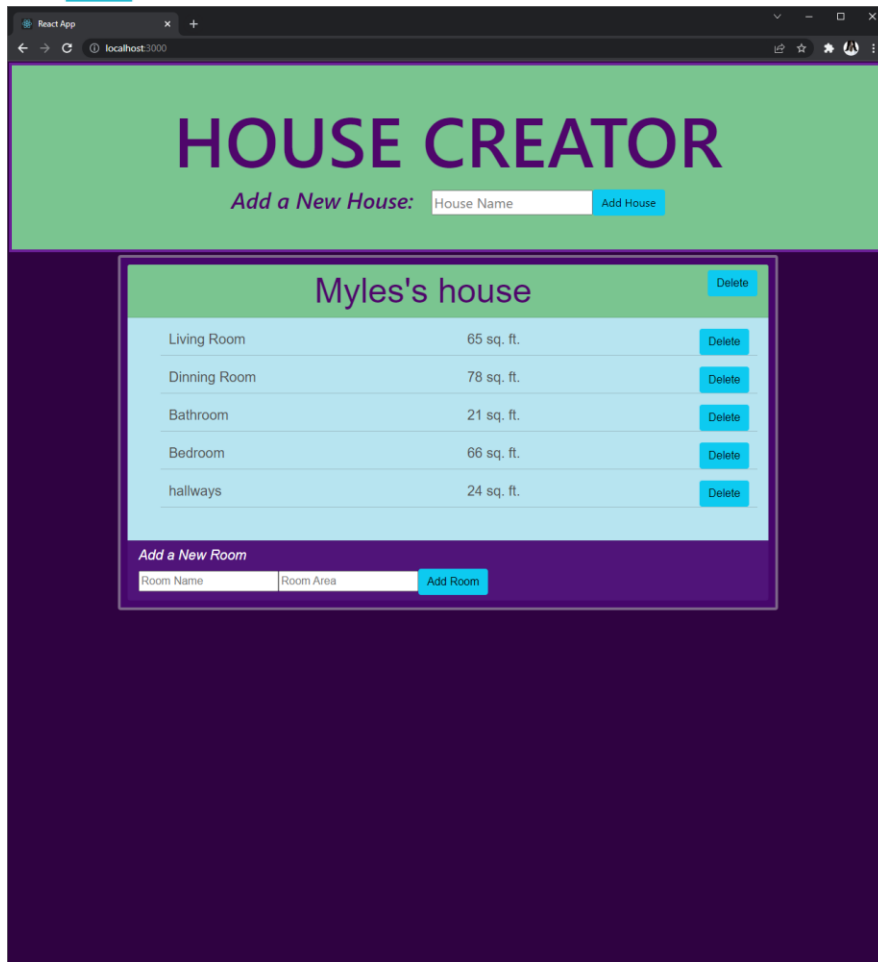
Testing Delete

Add a New Room

Add Room



PROMINEO TECH



Deleting hallways



PROMINEO TECH

React App

localhost:3000

HOUSE CREATOR

Add a New House: Add House

Myles's house

Delete

| | | |
|--------------|------------|--------|
| Living Room | 65 sq. ft. | Delete |
| Dinning Room | 78 sq. ft. | Delete |
| Bathroom | 21 sq. ft. | Delete |
| Bedroom | 66 sq. ft. | Delete |
| hallways | 24 sq. ft. | Delete |

Add a New Room

Add Room



PROMINEO TECH

React App localhost:3000

HOUSE CREATOR

Add a New House: Add House

Myles's house

| | | |
|--------------|------------|-------------------------|
| Living Room | 65 sq. ft. | <button>Delete</button> |
| Dinning Room | 78 sq. ft. | <button>Delete</button> |
| Bathroom | 21 sq. ft. | <button>Delete</button> |
| Bedroom | 66 sq. ft. | <button>Delete</button> |

Add a New Room

| | | |
|--|--|---------------------------|
| <input type="text" value="Room Name"/> | <input type="text" value="Room Area"/> | <button>Add Room</button> |
|--|--|---------------------------|

Creating a brand new Hallway



PROMINEO TECH

React App

localhost:3000

HOUSE CREATOR

Add a New House:

| Myles's house | | <input type="button" value="Delete"/> |
|---------------|-------------|---------------------------------------|
| Living Room | 65 sq. ft. | <input type="button" value="Delete"/> |
| Dinning Room | 78 sq. ft. | <input type="button" value="Delete"/> |
| Bathroom | 21 sq. ft. | <input type="button" value="Delete"/> |
| Bedroom | 66 sq. ft. | <input type="button" value="Delete"/> |
| Hallways | 149 sq. ft. | <input type="button" value="Delete"/> |

Add a New Room

URL to GitHub Repository:

<https://github.com/trepvox/React-Week-3.git>