1. Create a new application
   Create-react-app namecruddemo
2. Install bootstrap and react-bootstrap
   Npm install bootstrap react-bootstrap
3. Add following entry in app.css
   Import bootstrap/dist/css/bootstrap.min.css

4. Create a folder in src folder by name components.
5. Add 2 functional components inside the folder.

const NameForm=(props)=>{
 	
return(
<div>
<h1> in NameForm component
</div>
)
}
export default NameForm;
	const NameList=(props)=>{
	
	return(
	<div>
	<h1> in NameListcomponent
	</div>
	)
	}
	export default NameForm;

6. Add call to the component in App.js

```
import logo from './logo.svg';
import './App.css';
import 'bootstrap/dist/css/bootstrap.min.css'
import NameList from './components/NameList';
import NameForm from './components/NameForm';
import {useState} from 'react';
function App() {
 //create a array as state to store names of friends
 const [names,setnames]=useState(['Rajan','Revati','Atharva']);

 return (
  <div>
  {/* display names array in unordered list format */}
    <NameList namearr={names}></NameList>
    <NameForm insertname={addnameinarr}></NameForm>
  </div>
 );
}

export default App;
```

7. In NameList component display array contents in unordered list format

```
const NameList=(props)=>{
  let renderList=props.namearr.map((nm,index)=><li key={index}>{nm}</li>)
  return(
    <div>
    <h1>Friend's Name list</h1>
    <ul>
      {renderList}
    </ul>
    </div>

  )
}

export default NameList;
```

8. Design NameForm component

```
import {useState} from 'react';
const NameForm=(props)=>{
  //create a stet to store the value of the textbox
  const [name,setname]=useState("");
//change event on the textbox to change the value of name state, as soon as user changes
the textbox contents
  const handlechange=(event)=>{
    setname(event.target.value);
  }
//add click event to add name in to the array in App component
//insername property should be added in Nameform component inside App.js
  const addname=()=>{
     //it will call addnameinarr function in App.js, name also will be passed as parameters
    props.insertname(name);
    //clear the text box contents
    setname("");
   }
 return(
 <div>
 <hr></hr>
 Name: {name}
  <form>
 <div class="form-group">
  <label for="name">Name : </label>
  <input type="text" name="name" class="form-control" id="name"
    value={name}
    onChange={handlechange}
  />

 </div>

 <button type="button" class="btn btn-primary" name="btn" id="btn"
onClick={addname}>Add</button>
</form>
 </div>
 )
}
export default NameForm;
```

To delete the name from names array in App.js

1. Add delete button in NameForms.js, and add click event
   ```
   <button type="button" class="btn btn-primary" name="btn" id="btn"
   onClick={delname}>Delete</button>
   ```
2. Add delname function in NameForm.js
   ```
   const delname=()=>{
       props.deletename(name);
       setname("");
     }
   ```
3. In App.js add deletename property in NameForm component call
   ```
   <NameForm insertname={addnameinarr} deletename={removename}></NameForm>
   ```
4. Then add removename function in App.js to delete the name
   ```
   const removename=(name)=>{
     //keep all the names other than name
      let newarr=names.filter(nm=>nm!==name);
      //change the names array to newarr
      setnames(newarr)
    }
   ```

To modify name

1. Add following button in NameForm.js
   ```
   <button type="button" class="btn btn-primary" name="btn" id="btn"
   onClick={updatename}>update</button>
   ```

2. Add function updatename in NameForm.js
   ```
   const updatename=()=>{
       var newname=prompt("Enter new name");
       props.updatedata(name,newname);
       setname("");
     }
   ```
3. Add updatedata property in NameForm component call in App.js
   ```
    <NameForm insertname={addnameinarr} deletename={removename}
   updatedata={modifyname}></NameForm>
   ```
4. Add modifyname in App.js
   ```
   const modifyname=(nm,newnm)=()=>{
      //it will replace matching name by newname
      //and all other names will remain as it is
     let newarr=names.map(ob=>ob===nm?newnm:ob)
     setnames(newarr);
    }
   ```

To do form validation

1. Add errmsg as state in NameForm.js
   ```
   const [errmsg,seterrmsg]=useState("");
   ```
2. Add following code in addname function.
   ```
   const addname=()=>{
       if(name===""  || name.trim().length===0){
   ```

```
          //alert("name cannot be blank")
          seterrmsg("name canot be blank");
          return;
       }
       props.insertname(name);
       seterrmsg("")
       //clear the text box contents
       setname("");
     }
```

3. To show the error message beside text box add span tag

```
<input type="text" name="name" class="form-control" id="name"
       value={name}
       onChange={handlechange}
   /><span>{errmsg}</span>
```